

**Islamic Republic of Pakistan
Government of Sindh
Livestock and Fisheries Department**

**Project on Sustainable Livestock
Development for Rural Sindh
in the Islamic Republic of Pakistan**

**Project Completion Report
(Appendix 3)**

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**Project on Sustainable Livestock Development for Rural Sindh
in the Islamic Republic of Pakistan**

**Project Completion Report
(Appendix 3)**

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1. Introduction

One of the new and big challenges for the Livestock Department as well as the Project is to establish an extension system through which appropriate technologies are effectively disseminated to farmers. The Project aims to establish a sustainable extension system which should be functional even after the Project is completed.

To establish a sustainable extension system, rural society needs to be understood. With Participatory Rural Appraisal (PRA) survey method, we have deepened our insight regarding how information is disseminated in a village, among villages, between a village and other areas; how key decisions are made, who the decision makers are; and how communication flows in a village. In addition, we have attempted to identify an opportunity when technology transfer would be triggered from farmers to farmers in a village, and also main factors which accelerate or hinder the technology transfer.

2. Objective of the survey

- To obtain the knowledge on society in rural Sindh to effectively disseminate appropriate livestock technology developed and verified by the Project.

3. Village Selection

3.1 Classification of the Pilot Villages

Ten (10) pilot villages selected by the Project were sorted according to the number of Biradari and religion of the people in the villages as shown in Table 1. There are 2 villages in Matiari District; 3 villages in Badin District; 1 village in Hyderabad District; 2 villages in Tando Allahyar (TA) District; and 2 villages in Tando Muhammad Khan (TMK) District (each village is given a number).

Table 1 Classification of pilot villages to select target villages for the PRA survey

Number of Biradari \ Religion	1	2	3	4	5	6	7	8	1+α
Muslim	Matiari II TMK I	Badin I Badin III	Hyderabad I	TMK II	-	-	-	-	Matiari I
Muslim and Hindu	-	-	Badin II	TA II	-	-	-	TA I	-

3.2 Selection of the villages

Two villages, Matiari II and TMK I which are composed of only Muslim with one Biradari, were selected for the Survey. The other two villages, Badin II and TA I which are composed of both Muslim and Hindu with plural number of Biradaris, were selected. The selected villages are shown in Table 2.

Table 2 Villages selected for the Survey

	Name of the village	Religion	Number of Biradari
Matiari II	Gul Muhammad Gumbeer	Muslim only	1
TMK I	Peerani Wasi	Muslim only	1
Badin I	Tayab Sand	Muslim and Hindu	Plural
TA I	Maso Bozdar	Muslim and Hindu	Plural

4. Survey Itinerary

The PRA survey had been conducted at four selected villages as shown in Tables 3 to 6.

Table 3 Survey schedule at Gul Muhamad Gumbeer village, Matiari District

Date	Place	Activities
15 th September 2014	Field	1. Social Mapping 2. Transect Walk
16 th September 2014	Field	3. Historical Transect 4. Flow Chart 5. Venn Diagram
17 th September 2014	Field	6. Seasonal Calendar 7. Daily Routine 8. Pie Diagram 9. Main Issue in Technology Transfer
18 th September 2014	Office	Discussion among the team members
19 th September 2014	Office	Report writing

Table 4 Survey schedule at Tayab Sand village, Badin District

Date	Place	Activities
22 nd September 2014	Field	1. Social Mapping 2. Transect Walk
23 rd September 2014	Field	3. Historical Transect 4. Flow Chart 5. Venn Diagram
24 th September 2014	Field	6. Seasonal Calendar 7. Daily Routine 8. Responsibility of Livestock Activities 9. Pie Diagram 10. Main Issue in Technology Transfer
25 th September 2014	Office	Discussion among the team members
26 th September 2014	Office	Report writing

Table 5 Survey schedule at Peerani Wassi village, Tand Muhammad Khan District

Date	Place	Activities
30 th September 2014	Field	1.Social Mapping 2. Transect Walk
1 st October 2014	Field	3.Historical Transect 4. Flow Chart 5. Venn Diagram
2 nd October 2014	Field	6. Seasonal Calendar 7. Daily Routine 8. Responsibility of Livestock Activities 9. Pie Diagram 10. Main Issue in Technology Transfer
3 rd October 2014	Office	Discussion among the team members
4 th October 2014	Office	Report writing

Table 6 Survey schedule at Maso Bozdar village, Tand Allahyar District

Date	Place	Activities
9 th October 2014	Field	1.Social Mapping 2. Transect Walk
10 th October 2014	Field	3.Historical Transect 4. Flow Chart 5. Venn Diagram
11 th October 2014	Field	6. Seasonal Calendar 7. Daily Routine 8. Pie Diagram 9. Responsibility of Livestock Activities 10. Main Issue in Technology Transfer
13 th October 2014	Office	Discussion among the team members
14 th October 2014	Office	Report writing

5. Members of the Survey

1. Mr. Hiroshi Okabe, Project Team Leader/Institutional development (First village only)
2. Mr. Gopal Das Malhi, Facilitator
3. Ms. Mika Kawamoto, Expert of Livestock extension services/Gender
4. Dr. Rukhsana Vighio, Counterpart of the Project in charge of Training/Extension
5. Mr. Pelaj, Sociologist
6. Ms. Manisha, the Survey assistant

6. Methodology

6.1 Social Mapping

Social Mapping aimed to understand what kinds of facilities the village has and where those facilities, paras, and households are located in the village. The map was drawn by the participants using the floor of Autaq as a canvas. Then, household-related data such as population, number of livestock, and land tenure were asked. The map copied to a paper in each village is attached as Appendix I-1, II-1, III-1, and IV-1.

6.2 Transect Walk

Transect Walk aimed to verify the information obtained during the Social Mapping by walking with the participants in the village. The Survey team observed the living style of the villagers and confirmed the locations of the facilities and paras.

6.3 Historical Transect

Historical Transect aimed to grasp the historical changes of livestock related activities of the villagers. It covered 15 to 18 items such as number of livestock, milk production, milk utilization, etc. A few old men mainly told the team the village history. The table of the historical transect in each village is shown in Appendix I-2, II-2, III-2, and IV-2.

6.4 Venn Diagram

Venn Diagram aimed to grasp the relations in decision making at household, para, village, and Union Council levels. The result of the Venn Diagram in each village is summarized in Table 11, 16, 22, and 30.

6.5 Flow Chart

Flow Chart aimed to obtain information on the markets for milk selling as well as livestock selling and purchasing. The result of the Flow Chart in each village is summarized in section 7.1.6, 7.2.6, 7.3.6, and 7.4.6.

6.6 Seasonal Calendar

Seasonal Calendar aimed to grasp the monthly activities of the villagers. It covered 9 items such as milk production, income, expenditure, fodder availability, social events, etc. The Seasonal Calendar in each village is shown in Appendix I-3, II-3, III-3, and IV-3.

6.7 Daily Routine Work

Daily Routine Work aimed to grasp the daily activity of the villagers, by dividing participants into Group A and Group B. The list of grouping is shown in Table 7.

Table 7 List of Group A and Group B for Daily Routine Work in each village

Name of the village	Group	Category
Gul Muhammad Gumbeer	A	Farmers who has 5 livestock or less
	B	Farmers who has 6 to 10 livestock
Tayab Sand	A	Farmers (Agriculture +Livestock)
	B	Farmers (Agriculture +Livestock Sharing)
Peerani Wassi	A	Landowners
	B	Tenant Farmers
Maso Bozdar	A	Landowners
	B	Tenant Farmers

The result of the Daily Routine Work in each village is shown in Appendix I-4, II-4, III-4, and IV-4.

6.8 Responsibility of Livestock Activities

Responsibility of Livestock Activities aimed to clarify who, men or women, is decision maker of the livestock related activities. It was conducted except Gul Muhammad Gumbeer village. The result of the Responsibility of Livestock activities in each village is shown in Table 18, 25, and 34.

6.9 Pie Diagram

Pie Diagram aimed to grasp income and expenditure of the villagers, by divides participants into Group A and Group B. The list of the groups is same as Table 7. The result of the Pie Diagram in each village is shown in Appendix I-5, II-5, III-5, and IV-5.

6.10 Main Issues in Technology Transfer

Main Issues in Technology Transfer aimed to grasp fears and expectations of the villagers when they are asked to adopt appropriate technologies developed by the Project. The result of the Main Issues in Technology Transfer in each village is summarized in section 7.1.8, 7.2.9, 7.3.9, and 7.4.9.

7. Result of Survey

7.1 Gul Muhammad Gumbeer village, Matiari District

7.1.1 Village Profile

Location

Gul Muhammad Gumbeer village is located in Bhannot Union Council, Taluka Hala in Matiari district. It is located 60km from Hyderabad.

Religion and Para

The village comprises one muslim biradari. There are in 5 paras i.e. Ghulam Hussain, Ghulam Shabir, Muhammad Rahim, Muhammad Tayyab, and Wadero Najjumdin. Muhammad Rahim para comprises only tenant farmers.

Population and Number of Household

The population and number of household and household distribution by land tenure are shown in Table 8 and Table 9, respectively.

Table 8 Population of Gul Muhamad Gumbeer Village

Name of Para	Number of Household	Number of Population	Number of Livestock	Land in Acre
Ghulam Hussain	17	105	72	16
Ghulam Shabir	13	77	33	23
Muhammad Rahim	8	48	6	0
Muhammad Tayyab	23	149	78	26
Wadero Najjumdin	11	63	101	70
Total	72	442	290	135

Note: Number of livestock includes both large and small animals.

Table 9 Household distribution by land tenure in Gul Muhamad Gumbeer Village

Name of Para	Number of Household				
	Non farmer	Tenant	Marginal	Small	Medium
Ghulam Hussain	6	2	7	2	0
Ghulam Shabir	2	1	6	4	0
Muhammad Rahim	1	7	0	0	0
Muhammad Tayyab	4	5	11	3	0
Wadero Najjumdin	0	0	1	4	6
Total	13	15	25	13	6

Note: Non farmer and tenant = no land, Marginal = up to 2.5 acres, Small = more than 2.5 to 5 acres,

Medium= more than 5 to 20 acres

Facilities of the village

The facilities of the village are shown in Table 10.

Table 10 Facilities of Gul Muhammad Gumber Village

Facility	Number	Note
Grocery Shop	6	
Mosque	1	
Primary School	1	
Autaq	4	Autaq is the meeting place for the men.

- Gas and Electricity are available in the village.
- Ground Water is available with electric pump (60 feet depth) and hand pump (50 feet depth).

Major crops in the village

Agriculture is the main income source of the villagers. Major crops of the village are cotton and wheat. The villagers also grow chili.

Livestock activities in the village

The total number of cattle/buffaloes including goat and donkey is 290 and there are 9 livestock sheds in the village.

7.1.2 Decision Making Process

Summary of the decision making process in the village is shown in Table 11.

- At the household level, women make some decision for household issues, milk selling in the village, and marriage especially for girls. Other decisions are mainly made by men.
- At the para level, there are 5 type of decisions such as sacrifice, work responsibilities in marriage, conflicts, land purchasing and outside marriage, and the men make decisions except marriage issues.
- At the village level, all decisions are made by men.

It was observed that there was neither proper joint decision making process in the village nor link of the paras for decision-making. This indicates the lack of leadership in the village. If they have problems which beyond the control of villagers, they do not have reliable persons. On the other hand, the participants nominated three persons whom they can trust for livestock technology transfer; Najumidin, Ghulam Mujataba, Ghulam Shabir.

Table 11 Summary of decision making at each level

Level	Issues	Decision made by
Household	1) Marriage	Men 50% Women50%
	2) Purchasing	Men 30% Women70%
	3) Education	Men 70% Women30%
	4) Livestock sell	Men 90% Women10%
	5) Crop growing	Men only
	6) Business	Men only
Para	1) Land Purchasing	Men only
	2) Sacrifice	Men only
	3) Work responsibilities in marriage	Men 80% Women20%
	4) Conflicts	Men only
	5) Outside marriage	Men 50% Women50%
Village	1) Electricity	Men only
	2) Education	Men only
	3) Communication other organizations	Men only
	4) Mosques	Men only
	5) Vote	Men only
	6) Purchasing land by outsiders	Men only

7.1.3 Relationship among Surrounding Village

Six villages around Gulmuhamad Gumbeer village are the same biradari. The people of Hindu Biradari was separated from Gul Muhammad Gumbeer village in the past. The Hindu people gave the agricultural land and livestock to the villagers of Gul Muhammad Gumber when the Hindu people shifted from the village.

7.1.4 History of Livestock activities in the village

(1) Number of Livestock

Since the grazing area is decreasing, the number of animals has been decreasing. However, the number of donkey has been increasing for carriage use.

(2) Milk production

In 1990, milk production was lower than now because livestock was reared by open area. At present, most of the land has been cultivated, and livestock is given concentrate feed. This is the reason why the volume of milk production has been increasing.

As milk production is increased, the price of milk is increased because the feed becomes more expensive. In addition, the villagers gave 3 teats out of 4 teats to the calves for sucking and use only 1 teat for selling milk in the past, while at present only 1 teat to a calve for sucking and use 3 teats for selling milk.

(3) Livestock management

There is no permanent grazing land in the village. However, the villagers use some agricultural

land as the grazing land after they harvest crops. Land rent for grazing is Rs. 500 per acre. Production of natural grass has been decreasing due to residual agricultural chemicals. Cultivation of fodder has been increasing due to lack of grazing land. The price of milking buffaloes is increasing because the villagers can identify good breeds.

7.1.5 Villagers activities

(1) Annual activities

Milk Production

Milk production depends on fodder availability. The high production periods of milk are from March to April and from September to October when fodder is available. The peak of milk production is in March to April because air temperature is suitable for milk production. The low production periods of milk are from December to February and from June to July due to the lack of fodder.

Agriculture

For wheat cultivation, the villagers buy seed, prepare the land in November, and harvest in April. For cotton cultivation, the villagers buy cotton seed in April and May, and harvest in September. As for fodder, the villagers cultivate berseem from February to April.

(2) Daily activities

There are no clear differences in daily activities between the farmers who have 5 livestock or less and those who have 6 to 10 livestock. The daily activities include milking, milk selling, grass cutting, grass chopping and feeding, and watering to livestock. They have free time after the dinner for social gathering.

7.1.6 Market of Livestock products

(1) Milk selling

There are 6 middlemen from the village and 1 middleman from outside. The quality of milk is not checked when the villagers sell to the market or middlemen. One middleman buys only 1 or 2 kg of milk at Rs. 50 per kg in cash. This is convenient for the villagers because they can sell milk even if it is small amount. However, the villagers mix water into milk when they sell small amount because they get only lower price than the market one. If they sell milk at the market by themselves, the price is Rs. 70 per kg. However, they have to produce a large amount of milk to sell. They received money at weekly basis and at least 8kg are required to sell to the market.

(2) Livestock selling and purchasing

In 1990 there were more buffaloes than now because its milk contains more fat and was thicker than cow's milk. Cattle were also in large number than now for sacrificing at Eid-ul-azha and using male cattle for plowing.

In 1990, the villagers were not used to sell their livestock. However, livestock selling and purchasing are common for the villagers at present. The changes of livestock price is shown in Table 12.

Table 12 The changes of buffalo price

Year	Price of buffaloes/head
1990	Rs. 4,000 to Rs. 5,000
2000	Rs. 3,5000 to Rs. 45,000
2010	Rs. 60,000 to Rs. 90,000
2014	Rs.80,000 to Rs. 150,000

- Hala and Shadadpur are good markets for the purchase of milking buffaloes.
- Tando Adam is a good market for selling animals to slaughter. It opens on Saturday.
- The market at Hara opens every Monday.
- Hyderabad is a good market for purchasing dry animals. It opens on Wednesday.
- Villagers sell and purchase cow bulls, buffaloes (female), buffalo bulls, goats (bucks) and heifer at meat markets.

7.1.7 Income and Expenditure

(1) Income and expenditure in the year

There is seasonal variation of income which derives from its sources. In April, income rises because there are two income sources; milk and wheat. Their income also rises in September from milk and cotton. October is the difficult month for the villagers because expenditure is high while income is low.

(2) Income and expenditure of the focus group

The Group A, a focus group of farmers who has 5 livestock or less, shows that the proportion of agricultural and livestock incomes in the total income are 60% and 30%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in the total expenditure are 40% and 35%, respectively.

The Group B, a focus group of farmers who has 6 to 10 livestock, shows that the proportion of agricultural and livestock incomes in the total of income are 50% and 30%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in the total expenditure are 40% and 30%, respectively.

7.1.8 Expectations and Concerns

(1) Expectations

The participants show their expectations when they are asked to adopt appropriate technologies as follows:

- It will help to generate more income.
- It will save their time for livestock management.
- It will help to obtain more benefit from livestock activities.
- It will improve the hygiene condition of livestock farms.
- It will introduce a new breed.
- It will be easier to rear livestock.
- It will reduce the cost for livestock rearing.
- It will help to prevent disease of livestock.
- The villagers will obtain new experience for livestock farming.
- Other villages will learn from us.

(2) Fears

The participants also show their fears when they are asked to adopt appropriate technologies as follows:

- They are not sure if their livestock are able to absorb new technology.
- The villagers might have to pay tax, if the benefit increases drastically as the result of adoption of appropriate technology.
- They might fail in implementation.
- There might be some difficulties to use machinery or misuse of machinery.
- It might be difficult to manage time.

7.1.9 Gender

Decision making

- Regarding to marriage ceremony and purchase of livestock, women make some decisions at household and para levels.

Livestock Activities

- Men cut grass to support female's work.
- Outside grazing is done by men.

7.2 Tayab Sand village, Badin District

7.2.1 Village Profile

Location of the Village

Tayab Sand village belongs to Peeru Lashari Union Council, Talher Taluka in Badin district. The village is located 88 km from Hyderabad and 14 km from the center of Badin.

Religion and Para

The village comprises 2 Muslim biradaris, i.e. Sand and Malha, and 1 Hindu biradari, i.e. Kolhi.

There are in 3 paras for Muslim biradaris, i.e. Malha, John Mohammad, and Tahir, and 1 para for Hindu biradari, i.e. Kolhi.

Population and Number of Household

The population and number of household and household distribution by land tenure are shown in Table 13 and Table 14, respectively.

Table 13 Population of Tayab Sand Village

Name of Para	Number of Household	Number of Population	Number of Livestock	Land in Acre
Malha	15	134	14	27
John Mohammad	14	142	68	85
Tahir	15	107	130	243
Kolhi	28	162	39	0
Total	72	545	251	355

Note: Number of livestock includes large and small animals.

Table 14 Household distribution by land tenure in Tayab Sand Village

Land Tenure Name of Para	Number of Household				
	Landless	Marginal	Small	Medium	Large
Malha	5	8	1	1	0
John Mohammad	12	0	1	0	1
Tahir	3	0	3	4	5
Kolhi	28	0	0	0	0
Total	48	8	5	5	6

Note: Marginal = up to 2.5 acres, Small = more than 2.5 to 5 acres, Medium= more than 5 to 20 acres, Large= more than 20 acres

Facilities of the village

The facilities of the village are shown in Table 15.

Table 15 Facilities of Tayab Sand Village

Name of Para Facility	Malha	John Mohammad	Tahir	Kohli	Total
Mosque	1	1	1	0	3
Temple	0	0	0	1	1
Autaq	0	1	1	1	3

Grocery Shop	1	2	1	0	4
Flour Mill	0	1	0	0	1
Primary School	0	0	1	0	1
Livestock Shed	0	3	2	1	6

*Autaq is the meeting place for men.

Major crops in the village

Agriculture is the main income source of the villagers. Major crops of the village are cotton and rice. The villagers also grow wheat and sugar cane.

Livestock activities in the village

The total number of cattle/buffaloes is 251, and there are 6 livestock farms in the village.

7.2.2 Decision Making Process

They have a leader in each para. Mr. Tahir is the leader of the village. If there is a conflict, at first the villagers try to solve it at para level. If they cannot solve it, the para leaders go to the village leader at Tahir Para. They sit together and make some decision. If they cannot agree even at village level, the village leader calls a respected person of the village and form an independent committee for solving the problem. The issues are mostly solved in the village.

Summary of decision making at each level is shown in Table 16.

Table 16 Summary of decision making at each level

Level	Issues	Decision made by
Household	1) Marriage	Men and women
	2) Conflict	Men
	3) Education	Men
	4) Construction of house	Men and women
	5) Purchase	Men and women
	6) Sale	Men and women
Para	1) Support poor	Men and women
	2) Conflict	Men and women
	3) Marriage mate	Men and women
	4) Development scheme	Men
	5) Thief	Men
Village	1) Development scheme	Men
	2) Conflict	Men
	3) Purchases and sale of land	Men
	4) Outside village issue	Men
	5) Vote	Men and women
Union Council	1) Irrigation water supply	Men
	2) Resident certification	Men

	3) Vote	Men
	4) Education,	Men
	5) Birth certificate	Men
	6) Road,	Men
	7) Development scheme	Men

7.2.3 Relationship among the Surrounding Village

There are nearby 16 villages which have social relationship with Tayab Sand village. Three villages, i.e. Peero Mandaro, Karo Kohli, and Wakiyo Mehghwar come and ask an advice to Tayab Sand village when they have a problem on decision making. Two villages have very close relationship with Tayab Sand village, i.e. Mohammad Mosa Sand and Ibrahim Sand because they belong to the same biradari and are related by marriage.

7.2.4 History of Livestock activities in the village

(1) Number of livestock

Buffaloes occupy 60% of total number of livestock since 24 years ago. The number of goat has been increasing because it is easy to reproduce and sell. The villagers do not have sheep anymore because it is weak for disease while goat does not need special care for disease and protection. The villagers also do not have horse and donkey.

(2) Milk production

Villagers collect milk twice a day, in the morning and evening. Milk yield was 4kg/day/head 24 years ago, and now is 10 kg/day/head.

(3) Livestock management

- (Fodder) Rice straw is used as dry fodder in October and November while wheat straw is used in April. Green grass, i.e. berseem, is used in February and March. Sugarcane leave and wheat straw are used in July. The villagers buy fodder from outside from May to July due to lack of fodder. The price of rice straw is Rs. 200 per 40kg and wheat straw is Rs. 300 to 400 per 40kg.
- (Vaccination) The villagers do not have enough knowledge about vaccination. Some villagers ask advice to doctor and buy vaccine.
- (Grazing land) There are 2 types of land, government land and private land. Both of the lands were used for grazing in 1990. At present, the government land is used for agriculture purpose only because agriculture bring much income than grazing. The private land is basically used as agricultural land, however, it is used as seasonal grazing land after harvesting.
- (Breed) The villagers have been using the same breed, Kundhi & Mix Kundhi since 24 years ago.
- (Disease) In 1990, there was less disease but the mortality rate was high because of lack of treatment. In 2002, the disease increased but mortality rate was down because treatment was available. In 2010, the disease further increased but mortality rate was still down because treatment was

available. In 2014, it was the same tendency as 2010. The number of dying animal is decreasing year by year because the imported medicine is effective.

- (Livestock farm) In 1990, the villagers reared animals near their houses, however, they started to separate animals from their houses since 2002. At present, the number of livestock farms increased 50% from 2002.
- (Bathing) The villagers use the river in front of the village for bathing livestock. Same practice has been seen since 24 years ago.
- (Watering) In 1990, the villagers gave water to livestock at their houses during dry season. At present, they give water at both their houses by hand pump and river.
- (Salt) Salt has been used to livestock from 1990 to help digestion.

7.2.5 Villagers activities

(1) Annual activities

Milk Production

The peak of milk production is in September to October. The low milk production is in January.

Agriculture

For cotton cultivation, the villagers buy cotton seed in April and May, and harvest in September to November. For rice cultivation, the villagers buy rice seed in April and May, and harvest in September to December. For sugarcane cultivation, the villagers buy sugar cane seed in September and October, and harvest in January to February.

(2) Daily activities

The Group A is a group of farmers who have 5 livestock or less. The activities of the Group A are animal feeding, milking, selling milk, field work, watering to animal and cutting grass. The farmers who have livestock from 6 to 10 have almost the same activities as the Group A.

The Group B is a group of farmers who are engaged in farming, but not livestock owners. They do not have enough money to buy milking animals. The activities of the Group B are irrigation water distribution, weeding rice field, and feeding to the animal.

Both of the groups have free time for social gathering in the evening.

7.2.6 Market of Livestock products

(1) Milk selling

The villagers started to sell milk at Rs. 2 to 5 per kg in 2002. The price of milk has been increasing, gradually, Rs.25 to 30 per kg in 2010 and Rs.40 in 2014. Four middlemen buy milk from villagers.

At present, milk sales per buffalo.day is equal to Rs. 400, because a buffalo produces 10 kg of milk per day and it is sold at Rs. 40 per kg. According to the villagers, they spend Rs. 200 per buffalo.day as the cost for rearing. The benefit from milk sales is therefore Rs. 200 per buffalo.day.

(2) By-products selling

The villagers sold gee at Rs. 20 to 50 per kg in 1990 and Rs. 100 to Rs.150 per kg in 2002. However, they stopped selling by-products due to lack of milk to produce gee. The villagers need 1kg of milk to produce 100g of Gee.

(3) Livestock selling and purchasing

In 1990, only 25% of livestock in total were sold while 75% at present. In 1990, grazing land was available and there was no big market for meat. As the grazing land decreased, the number of animal also decreased. However, demand of meat market was high. The villagers have been keeping the number of buffaloes at 60% of total number of livestock for 24 years to maintain feeding capacity for them.

The villagers sell milking buffaloes and cow in September and October at high price because animals are healthy and tend to have small calves. July and August are off season of milking; however, they sell milking animals because they need money even at low rate. In May to August they sell animals for slaughtering. The change in the prices of Buffalo and goat are shown in Table 17.

Table 17 Change in the prices of buffalo and goat

	Buffalo (Rupees per head)	Goat (Rupees per head)
1990	10,000 to 12,000	1,000 to 1,500
2002	20,000 to 25,000	2,000 to 2,500
2010	50,000 to 80,000	3,000 to 4,000
2014	80,000 to 150,000	5,000 to 8,000

The markets for animals are as follows:

- Market for animal purchase :1) Talhar, 2) TMK, 3) Villages
- Market for animal selling:1)Talhar, 2) Villages 3) TMK
- Market for selling and purchase: Talhar on Saturday, Tand sindad on Sunday
- Milk Market:1) Village, 2) Badin, 3)Talhar
- Meat market: From Talhar to TMK, Karachi and Hyderabad
- Priority for the villagers to sell animals for meat: 1) bull 2) cow 3) goat 4) buffalo (female)
- The villagers do not sell cattle because they are used for plowing.
- For the Eid festival, goats and young cows are mainly sold.

7.2.7 Income and Expenditure

(1) Income and expenditure in the year

The villagers get income from selling livestock in September to October. Income from cotton is brought from September to November and rice is from September to December. In January to February, they get income from sugarcane. In March and April, they get income from wheat.

The expenditure is high in April and May because of sowing cotton and rice, buying wheat straw for fodder, and plowing land. In October, the villagers have little amount of expenditure for sugarcane sowing. In July and August, the villagers spend money for fertilizer and pesticide for rice.

(2) Income and expenditure of the villagers

The Group A, a group of farmers who have 5 livestock or less shows that the proportion of agricultural and livestock incomes in the total income are 70% and 25%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in the total expenditure are 50% and 15%, respectively.

The Group B, a group of farmers who have no livestock shows that the proportion of income from agriculture and from taking care of livestock for its owner in total income are 75% and 10%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in total expenditure are almost null because all of cost is covered by landowners.

7.2.8 Responsibility of Livestock Activities

Men are responsible for most of the livestock activities except by-product making. There are some joint works by men and women. The result of Responsibility of Livestock activities is shown in Table 18.

Table 18 Responsibility of Livestock Activities of Tayab Sand Village

Activity	Male	Female	Children	Joint(M-F)
1. Animal Sale & Purchase	✓	-	-	-
2. Grazing	✓	-	1	-
3. Milking	✓	✓	-	✓
4. Feeding	✓	✓	✓	✓
5. Watering	✓	✓	✓	✓
6. Tie & Release	✓	✓	✓	✓
7. Cleaning of shed	✓	✓	-	✓
8. Treatment of Disease	✓	-	-	-
9. Milk Sale	✓	-	-	-
10. Preparation of Shed	✓	-	✓	-
11. By-products Making	-	✓	-	-
12. Dehousing & Trimming	✓	-	-	-
13. Grass Chopping	✓	-	-	-

7.2.9 Expectations and Concerns

(1) Expectations

The participants show their expectations when they are asked to adopt appropriate technologies as follows:

- Milk production will be increased.
- All of the villagers get benefit from technology transfer.

- The villagers will learn about new technology.
- The treatment of disease will be done timely.
- The number of animals will be increased.
- It will help to employ free people.
- New model of farm will be established.
- New seeds will be introduced for new fodder.
- The villagers will learn about Japan.

(2) Fears

The participants also show their fears when they are asked to adopt appropriate technologies as follows:

- The villagers might not be allowed to sell animals after technology transfer.
- The Project activities might not be conducted as scheduled.
- Financial support might not be given.
- The villagers are unaware for the benefit in future.

7.3. Peerani Wassi village, Tando Muhammad Khan District

7.3.1 Village Profile

Location of the Village

Peerani Wassi village belongs to Mulakatiar Union Council, Bulri Shah Taluka in Tando Mohammad Khan district. The village is located at 37 km from Hyderabad and about 12 km away from the main road of Hyderabad to Tand Mohammad Khan.

Religion and Para

The village comprises mainly one Muslim biradari, i.e. Lakho, with 6 households from 3 different biradaris, i.e. 1 household of Lohar (Muslim), 2 households of Soomro (Mulim), and 3 households of Manghwar (Hindu). There is only 1 para for Lakho biradari in the village. Six households of the other biradaris live beside Lakho para.

Population and Number of Household

The population and number of household and household distribution by land tenure are shown in Table 19 and Table 20, respectively.

Table 19 Population of the Peerani Wassi Village

Name of Biradari	Number of Household	Number of Population	Number of Livestock	Land in Acre
Lakho	21	180	117	134
Soomro	2	14	21	0

Lohar	1	8	2	4
Manghwar	3	29	3	0
Total	27	231	143	138

Note: All of biradarries live in same para. Number of livestock includes both large and small animals.

Table 20 Household distribution by land tenure in Peerani Wassi Village

Land Tenure Name of Biradari	Number of Household				
	Landless	Marginal	Small	Medium	Large
Lakho	13	0	1	5	2
Soomro	2	0	0	0	0
Lohar	0	0	1	0	0
Manghwar	3	0	0	0	0
Total	18	0	2	5	2

Note: Marginal = up to 2.5 acres, Small = more than 2.5 to 5 acres, Medium= more than 5 to 20 acres, Large= more than 20 acres

Facilities of the village

The facilities of the village are shown in Table 21. The villagers go to one of the neighboring villages, i.e. Seleman Soomro for shopping and medical service because there is neither shop nor hospital in the village.

Table 21 Facilities of Peerani Wasi Village

Facility	Total
Mosque	1
Autaq	2
Primary School	1
Livestock Farm	15

*Autaq is the meeting place for men.

- Electricity is available in the village.
- Gas is not available in the village.

Major crops in the village

Agriculture is the main income source of the villagers. Major crops of the village are cotton and rice. The villagers also grow sugarcane.

Livestock activities in the village

The total number of livestock is 143 such as buffalo, cow, goat, and donkey. There are 15 livestock farms in the village. One of the livestock farm is jointly managed by 4 farmers.

7.3.2 Decision Making Process

Mr. Wahero Umar in the village, is the leader in decision making. He and some people sit together and make decisions. If there is a dispute, Mr. Umar will listens every opinion. If there is an issue which is difficult to decide by the villagers, Mr. Umar ask advice to the other villages, i.e. Washi Malok Shar, Saheed Pur, and Asgharaabad.

In addition, the villagers have experience that men and women worked together every month for the community organization organized by NGO. This organization is not functioning at present.

Table 22 shows the issues that are discussed in the village, and decisions are made by either men or women at the different levels of the community..

Table 22 Summary of decision making at each level

Level	Issues	Decision made by
Household	1) Shopping	Men 50% and women50%
	2) Mating for marriage	Men 50% and women50%
	3) Conflict	Men 50% and women50%
	4) Education	Men 70% and women 30%
	5)Animal purchase and sale	Men 50% and women50%
	6) House construction	Men 50% and women50%
	7) Marriage ceremony	Men 70% and women 30%
Village	1) Irrigation water distribution	The village leader
	2) Grazing conflict	The village leader
	3) Land purchase and sale	Men 100%
	4) Development scheme	Men 100%
	5) Vote	Men 100%
	6) Thief	Men 100%
Union Council	1) Legal document,	Men 100%
	2) Vote	Men 100%

7.3.3 Relationship with the surrounding villages

There are 6 villages within 2.5 km from Peerani Wasi village. They have social relationship with Peerani Wassi village.

The villagers sell milk at 2 villages, i.e. Seleman Soomro, and Washi Malook Shar. Two villages, i.e. Haji Daud Lakho and Habib Lakho belong to the same biradari. Haji Daud Lakho village is related with Peerani Wassi village by marriage.

7.3.4 History of Livestock activities in the village

(1) Number of Livestock

Buffaloes occupy 70% of total number of livestock in 1900 and reached to 80% in 2000. It is still the same ratio at present. The villagers started rearing cow from 2000. The proportion of cow to total number of livestock has been same at 5% because it is difficult to control cows than buffaloes.

(2) Milk production

The villagers collect milk twice a day; in the morning and evening. Milk yield of a buffalo was 8kg per day in 24 years ago and now 15 kg per day.

7.3.4.3 Livestock management

- (Fodder) The villagers use several fodders along the season as shown in Table23.

Table 23 Kind of fodder along the season

Kind of Fodder	Month
Wheat Straw	May to July
Natural Grass	August
Rice Straw	September to January
Sugarcane	October to January
Berseem	December to February

- (Vaccination) The villagers do not have enough knowledge about vaccination.
- (Grazing land) In 1990, the villagers had grazing land; however, no grazing land is available at present.
- (Breed) The villagers keep using pure Kundhi breed since 24 years ago.
- (Disease) In 1990, there was less disease but the mortality rate was higher than now because of lack of treatment. The number of disease increased year by year, however, mortality rate has been kept low because of treatment.
- (Livestock farm) From 1990 to 2000, the villagers kept livestock under shed only in the winter season. At present, the villagers rear livestock at livestock farms. Their houses and livestock farms are closely built.
- (Bathing and watering) In 1990, the villagers used the Indus River for bathing and watering livestock. However, agricultural land has been expanding, a path to the Indus River was blocked. In 2010, the villagers used small natural pond instead. At present, the villagers give a bath and water to livestock at their houses.
- (Salt) The villagers buy a lump of good quality salt and place it near to livestock. Livestock can take salt anytime when they want.

7.3.5 Villagers activities

(1) Annual activities

Milk Production

The peak of milk production continues from February to September for 8 months. The low milk production period is from November to December.

Agriculture

Agriculture is the main income source of the villagers. Major crops of the village are sugarcane and rice.

(2) Daily activities

The villagers have the same activities regardless of the status of livestock holding and land tenure. Such activities include animal feeding, milking, selling milk, field work, watering to animal, and cutting grass. The villagers have free time for shopping and social gathering in the evening.

7.3.6 Market of Livestock products

(1) Milk selling

The villagers sold milk at Rs. 5 per kg in 2000. The price of milk has been increasing gradually; Rs.25 per kg in 2000, Rs. 35 in 2010 and Rs. 60 in 2014. Twelve villagers sell milk at Seleman Soomro village, and Washi Malook Shar village. They mix cow milk with buffalo milk.

(2) Livestock selling and purchasing

In 1990, the villagers were not interested in selling livestock; however, they sell and purchase livestock actively now. The cycle of selling and purchasing is within 1 year. In 1990, calves were reared for 4 to 5 months; however, it is reduced to 1.5 months at present.

The changes in the selling prices of buffalo, cow and goat are shown in Table 24.

Table 24 Changes in the selling prices of buffalo, cow and goat

	Buffalo (Rupees per head)	Cow (Rupees per head)	Goat (Rupees per head)
1990	7,000 to 10,000	1,200	300 to 400
2002	25,000 to 30,000	8,000 to 9,000	1,200 to 1,500
2010	60,000 to 65,000	25,000 to 30,000	4,000 to 5,000
2014	100,000 to 150,000	50,000 to 60,000	10,000 to 15,000

The market for animals are as follows:

- Market for animal purchase : 1) Tand sindad 60%, 2) next village 30%, 3) in village 10%
- Market for selling animals: 1) Tand sindad 50%, 2) middleman (outsider) 50%
- *Tand sindad is 18km far from the village.
- Milk market: 1) Seleman Soomro village 70% (2km), 2) Wasi markshar 30% (2km)
- Meat market: From Tand sindad to Karachi, Hyderabad, Quetta, TMK, Badin and Mirphurkas.
- Priority for the villagers to sell animals: 1) buffalo (female), 2) calf of buffalo and cow, 3) buffalo bull, 4) cattle bull, 5) heifer
-

7.3.7 Income and Expenditure

(1) Income and Expenditure in the year

The villagers get income from rice in November. Sugarcane is brought income from December to March.

(2) Income and Expenditure of the Villagers

The Group A, a group of landowners regardless of livestock holding numbers shows that the proportion of agricultural and livestock incomes in the total income are 70% and 30%, respectively. On the other hand, the proportions of agricultural and livestock expenditures in the total expenditure are 40% and 20%, respectively.

The Group B, a group of tenant farmers shows that the proportion of agricultural and livestock incomes in the total income are 60% and 30%, respectively. On the other hand, the proportions of agricultural and livestock expenditures in the total expenditure are 60% and 20%, respectively.

7.3.8 Responsibility of Livestock Activities

The result of Responsibility of Livestock activities is shown in Table 25. Men are responsible for most of the livestock activities except by-product making. There are some joint works by men and women.

Table 25 Responsibility of Livestock activities of Peerani Wassi village

Activity	Male	Female	Children	Joint(M-F)
1. Animal Sale & Purchase	✓	✓	-	✓
2. Grazing	✓	-	✓	-
3. Milking	✓	-	-	-
4. Watering	✓	-	✓	-
5. Tie & Release	✓	-	✓	-
6. Caring Animal	✓	✓	✓	✓
7. Cleaning of shed	-	✓	-	-
8. Treatment of Disease	✓	-	-	-
9. Milk Selling	✓	-	-	-
10. Preparation of Shed	✓	-	✓	-
11. By-products Making	-	✓	-	-
12. Dehousing & Trimming	✓	-	-	-
13. Grass Chopping	✓	✓	✓	✓

7.3.9 Expectations and Concerns

(1) Expectations

The participants show their expectations when they are asked to adopt appropriate technologies as follows:

- Appropriate technology will improve their livestock activities.
- The project will teach the villagers how to make an animal shed.

- Milk production will be increased.
- Veterinary services will be provided.
- The villagers can obtain new information.
- A new breed will be introduced.

(2) Fears

- The Project just continue to visit the village regularly; however, nothing happens on the ground.
- The villagers' livestock might be occupied only for the project purpose.

7.4 Maso Bozdar village, Tando Allahyar District

7.4.1 Village Profile

Location of the Village

Maso Bazdar village belongs to Dad Jarwar Union Council, Chamber Taluka in Tando Allahyar district. The village is located at 49 km from Hyderabad.

Religion and Para

Maso Bozdar was selected as a sample of the village which comprises multiple biradaris and religions. According to the result of pre-survey which conducted by the C/P of the Project, 8 biradaris were recognized, i.e. Bozdar, Laghari, Mirani, Soomro, Samoon, Lohar, Thebo, and Kohli. The PRA survey team chose 3 biradaris, i.e. Bozdar, Laghari, and Kohli as the target of the PRA survey. Then, it was found that 5 paras are formed by 5 biradaris, i.e. Bozdar, Laghari, Kolhi, Mirani, and Shadi in the village. The other biradaris are all minor, living within the other biradaris' para. Bozdar and Laghari are two major biradaris, influential to decision making at the village level. They have at least 10 sub-paras. The list of para and biradaris are shown in Table 26.

Table 26 List of para and biradaris in Mazo Bozdar village

Name of Para	Name of Biradari
Bozdar	Bozdar, Shah, Samar, Kumber, Manghwar
Laghari	Laghari, Theba, Lohar
Kohli	Kohli, Shivi
Shadi	Shadi
Mirrani	Mirrani

Population and Number of Household

The population and number of household are shown in Table 27.

Table 27 Population of the Maso Bozdar Village

Name of Para	Number of Household	Number of Population	Number of Livestock	Land in Acre
Bozdar	96	787	248	629
Lagari	66	491	170	117
Kolhi	16	93	24	0
Total of Three Paras	178	1,371	442	746

Note: Number of livestock includes large and small animals both.

The household distribution by land tenure are shown in Table 28.

Table 28 Household distribution by land tenure in Maso Bozdar Village

Land Tenure Name of Para	Number of Household				
	Landless	Marginal	Small	Medium	Large
Bozdar	43	17	9	20	7
Lagari	36	18	6	5	1
Kolhi	16	0	0	0	0
Total of Three Paras	95	35	15	25	8

Note: Marginal = up to 2.5 acres, Small = more than 2.5 to 5 acres, Medium= more than 5 to 20 acres, Large= more than 20 acres

Facilities of the village

The facilities of the village are shown in Table 29.

Table 29 Facilities of Maso Bozdar Village

Facility	Number	Facility	Number
Mosque	3	Livestock Farm	2
High School	1	Dispensary	1
Primary School	2	Water Filtering Plant	1
Post Office	1	Bazaar	3
Branch of Bank for utility bill payment	1	Cotton collection shop	4

- Electricity, gas and petrol pump are available for the village.
- Bazaar is a group of shops such as grocery, sweets, vegetable, mobile phone, barber, and tea.
- There are no autaq in the village. The villagers use a school as a meeting venue.

Major crops in the village

Agriculture is the main income source of the villagers. Major crops of the village are cotton, wheat, and sugarcane. The villagers also grow barley, sorghum, millet, and berseem for fodder.

Livestock activities in the village

The total number of livestock of the 3paras surveyed by the PRA Team is 442 such as buffalo, cow, goat, sheep, camel and donkey.

7.4.2 Decision Making Process

Since each para is almost the same size as a small village, at least 10 people from each para gather when the villagers make a decision at the village level. Bozdar and Laghari, two major biradaris, are influential to make a decision.

At the household level, women have a major role in decision making for some issues unlike the other villages surveyed by the PRA Team. Summary of decision making at each level is shown in Table 30.

Table 30 Summary of decision making at each level

Level	Issues	Decision made by
Household	1) Conflict inside house	Women100%
	2) Land	Men 100%
	3) Education	Men 50% and women50%
	4) Marriage	Men 50% and women 50%
	5) Animal purchase and sale	Men 50% and women50%
	6) Household management	Women100%
Village	1) Development scheme	Majority of representatives from each para
	2) Vote	Majority of representatives from each para
	3) Injustice	Representatives from each para
	4) Marriage	Representatives from each para
	5) Theif	Representatives from each para

7.4.3 Relationship among the Surrounding Village

There are 11 surrounding villages. Four villages are as the same biradari as Bozdar while 3 villages as Laghari. Six villages, i.e. Gul Mohammad, Khan Laghari, Jamali Bozdar, Gayano Bozdar, Ahmed Bozdar, and Haji Abdul Rahim Bozdar are closely related with Maso Bozdar socially, economically, and politically.

7.4.4 History of Livestock activities in the village

(1) Number of Livestock

Buffaloes occupy only 10% of total number of livestock in 1900 and increased gradually to 60% in 2014. Cows decreased from 30% in 1900 to 5% in 2014 because grazing land is not available and the milk price is lower than buffalo milk. As for small livestock, goat decreased from 40% in 1900

to 10% in 2014 due to lacking of grazing land and trees. Donkey increased from 5% in 1900 to 18% in 2014 because the villagers have to manage to feed them at their houses. As for transportation, the villagers used to have horse, however, they do not use it anymore. They still have some camel for transportation.

(2) Milk production

The villagers collect milk twice a day, in the morning and evening. Milk production increased for both buffalo and cow with three reasons such as fodder planting for livestock, concentrate, and improvement of livestock management. Buffalo milk production increased 6kg per day.head in 1990 to 9 kg per day.head in 2014 while cow milk increased 4 kg per day.head in 1990 to 6 kg per day.head in 2014.

(3) Livestock management

- (Fodder) The villagers use several kinds of fodder depending on the season, such as maize, millet, sorghum, sugarcane leave, berseem, and dry grass.
- (Vaccination) The villagers do not have enough knowledge about vaccination. If they have a problem, they call a doctor.
- (Grazing land) In 1990, the villagers had grazing land; however, no grazing land has been available since 2010.
- (Breed) The villagers use mixed breeds for both buffalo and cow.
- (Disease) Though no disease in 1990, the number of disease is increasing year by year. Vaccination and disease treatment are available; however, livestock are still dying. The villagers are not sure whether this is brought by chemical poison such as pesticide.
- (Livestock farm) The villagers are aware of the importance of livestock farms and started introducing it into the village.
- (Bathing and watering) In 1990, the villagers used an open canal for bathing and a natural pond for watering livestock. In 2000, the natural pond was used for both bathing and watering; however, the villagers have started bathing and watering livestock at their houses from 2010.
- (Salt) Livestock is seldom given salt because the villagers are not aware of its necessity to livestock.

7.4.5 Villagers activities

(1) Annual activities

Milk Production

The peak of milk production is from September to October. The low milk production period is from June to July.

Agriculture

For cotton cultivation, the villagers buy cotton seed in April and May, and harvest in September

to November. For wheat cultivation, the villagers buy wheat seed in November and harvest in March to May.

(2) Daily activities

The Group A is a group of landowners regardless of livestock holding number. The activities of the Group A are animal feeding, milking, selling milk, field work, watering to animal, and cutting grass.

The Group B is a group of tenant farmers. The activities of the Group B are animal feeding, field work, watering to animal and cutting grass. Both of the group have free time for social gathering in the evening.

7.4.6 Market of Livestock products

(1) Milk selling

The villagers started selling milk at Rs. 5 to 6 per kg in 1990. The price of milk increased gradually at Rs.10 per kg in 2000, and Rs. 30 in 2010. At present, they sell milk, mixed with water, at Rs.50 per kg, and cow milk at Rs. 60 per kg.

The middlemen are in the village and sell milk at Tand Allahyar, which is the main market for milk. Some villagers sell milk directly to tea shops in the village. Some milk is sold in Hyderabad through middlemen.

(2) Livestock Selling and Purchasing

In 1990, the villagers were not interested in livestock selling; however, they sell and purchase livestock actively now. The villagers sell milking animals at late pregnant period because market price is high. For calves, the villagers sell male calves just after its birth while the villagers rear female calves until it starts milking. The change in the selling prices of adult buffalo and cow are shown in Table 31.

Table 31 Change in the selling prices of adult buffalo and cow

	Buffalo (Rupees per head)	Cow (Rupees per head)
1990	10,000 to 12,000	5,000 to 6,000
2002	30,000 to 40,000	9,000 to 15,000
2010	50,000 to 60,000	20,000 to 30,000
2014	80,000 to 150,000	60,000 to 80,000

The markets for animals are as follows:

- Market for animal purchase : 1) Chamber, 2) Other villages, 3) Tand Allahyar
- Market for animal selling: 1) Chamber, 2) Inside village, 3) Tand Allahyar, 4) Tand Adam, 5) Tand Mohammad Khan
- Meat market: From Chamber and Tand Adam to Karachi, Balouchistan, and Hyderabad

7.4.7 Income and Expenditure

(1) Income sources and expenditure items

The villagers get their incomes as shown in Table 32.

Table 32 Income source and month

Income source	Month
Animal selling (High rate)	February to April
Animal selling (Low rate)	May to June
Cotton	September to November
Wheat	March to May

The villagers spend money for following purposes and periods as shown in Table33.

Table 33 Expenditure item and month

Expenditure item	Month
Wheat and Berseem Seed	November
Fertilizer and Pesticide	December to February
Cotton	April to May
Fertilizer	June
Fertilizer & Pesticide	July

(2) Proportions of income and expenditure of the villagers

The Group A, a group of landowners, regardless of the number of their livestock holdings shows that the proportion of agricultural and livestock incomes in the total income are 60% and 30%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in the total expenditure are 40% and 20%, respectively.

The Group B, a group of tenant farmers shows that the proportion of agricultural and livestock incomes in the total income are 25% and 50%, respectively. On the other hand, the proportion of agricultural and livestock expenditures in the total expenditure are 40% and 20%, respectively. The tenant farmers share the cost of seed, fertilizer, and pesticide with land owners.

7.4.8 Responsibility of Livestock Activities

The result of Responsibility of Livestock activities is shown in Table 34. Men are responsible for most of the livestock activities except by-product making. There are some joint works by men and women.

Table 34 Responsibility of Livestock activities

Activity	Male	Female	Children	Joint (M-F)
1. Animal Sale & Purchase	✓	-	-	-
2. Animal feeding	✓	✓	✓	✓
3. Milking	✓	✓	-	-
4. Grazing	✓	-	✓	-
5. Tie & Release	✓	✓	✓	✓

6.Caring Animal	✓	✓	✓	✓
7.Cleaning of shed	✓	✓	-	-
8.Treatment of Disease	✓	-	-	-
9.Milk Selling	✓	✓	-	-
10. Preparation of Shed	✓	✓	✓	✓
11.By-products Making	-	✓	-	-
12.Dehousing &Trimming	✓	-	-	-
13.Grass Chopping	✓	✓	✓	✓

7.4.9 Expectations and Concerns

(1) Expectations

The participants show their expectations when they are asked to adopt appropriate technologies as follows:

- Animal disease will be prevented.
- Milk production will be increased.
- The villagers succeed to keep livestock healthy and get them fattened.
- The villagers will obtain new information and become aware of livestock activities.
- The appropriate technology will reduce workload of the villagers.
- The villagers will learn how to produce silage.
- The appropriate technology will be practiced properly.
- A productive breed for milking will be introduced to the village.

7.4.9.2 Fears

- The villagers cannot have direct profit from the project.
- The Project will not implement activities as announced.
- The Project choose only favorite persons.
- In the past, the villagers invested for a gender project; however, the project disappeared before the villagers could see the benefit. They lost their investment. They are afraid that same story happens again by this project.

8. Conclusion

To disseminate appropriate technology to the target area, an effective and efficient way of delivering information needs to be devised according to the situations of rural Sindh. Matters necessary to consider in extension activities are summarized in relation to each village as below.

8.1 Gul Muhammad Gumbeer village, Matiari

8.1.1 Village structure

Gul Muhammad Gumbeer village comprises of one Muslim biradari which called Gumbeer. Seventy two households live in 5 paras. Each para is separated from the other paras by wall, but there is no wall in the para. Men and women can attend training together, if it is held in the para.

8.1.2 Ways to disseminate information

There is no leader in this village according to the participants of the PRA survey. The survey team asked the participant how we can disseminate information and who the responsible persons are in the village. As the result, the participants selected 3 villagers as the representatives for technology transfer in the village. One of them is the pilot farmer. Therefore, the Project will access those three representatives as an entry point to disseminate the information to each para.

Men in the village gather at Autaq, a meeting place for the village, every night and have a chat. The Project will try to use this facility for information dissemination.

When the Project conducts training in the village, it should be confirmed whether participants are selected from each para, or the training should be conducted at each para. One para is comprised of landless farmers. There might be some disparity among the paras by landholding status, and therefore close attention is needed when conducting the training.

8.1.3 Gender consideration

When the Project delivers information to the villagers, special attention will be needed for women. According to the participants, women can visit the pilot farmer's demonstration plot if the other men do not attend that visit. The Project will organize a field day especially for women to provide an opportunity to learn appropriate technologies there.

Women and men can attend training together if it is conducted at their own para. As mentioned earlier, the Project will organize the training at each para and observe how effective it is.

For the PRA survey at this time, all of the participants were men. Therefore, the Project will conduct another PRA survey for women to listen their opinions, confirm their decision making process, and how information flows for women, and then the way to disseminate information to women will be considered again.

8.1.4 Sensitization for quality milk

Some farmers in the village sell milk mixed with water since they can produce only small amount of milk and therefore have to sell it to the middlemen who come to the village. In that case the price of milk is cheaper than that in town. This practice was found also in the other villages such as Peerani Wassi village, Tando Muhammad Khan district and Maso bozdar village, Tando Allahyar district. To improve this situation and produce hygienic and a good quality of milk, the Project will include sensitization activities to the farmers for this matter in its activities.

8.2 Tayab Sand village, Badin

8.2.1 Village structure

There are both Muslim and Hindu in this village. There is one biradari for each religion. Names of Muslim and Hindu biradaris are Sand and Kolhi, respectively. Sand forms 3 paras while Kolhi lives in one para. These 4 paras are located in a row along the river. There is some distance among the paras, and natural trees are the borders. The distance is 1km from end to end. There is no wall in the para. According to the participants, although this village is a mixed village of Muslim and Hindu, they have a good relationship, and the difference of religion does not cause any issue.

8.2.2 Ways to disseminate information

(1) In the village

In Tayab sand village, the way to make decision has been inherited from their fathers. In addition to the village leader, they have a leader for each para. Internal issues for para are solved by the para leaders, and if an issue cannot be solved within para, the village leaders and the para leaders are responsible. Thus, the Project should consult them when appropriate technologies are to be disseminated.

(2) Outside the village

According to the participants of the PRA survey, the leader of Tayab sand, Mr. Tahir receives respect from the surrounding villages. Other village leaders come and ask his advice to solve their problems if they cannot find a solution by themselves. In addition, the villagers of Tayab Sand go to the neighboring villages and sell milk. Therefore, there is a possibility to introduce appropriate technology to the surrounding villages by inviting their representatives or the whole villagers at Tayab Sand village.

8.2.3 Gender consideration

Women play an important role for livestock management such as milking, feeding, watering, and cleaning livestock shed. Women also make by-products. There is no problem if the Project organizes a meeting or training for women in the village. However, since most of the decisions are made by men at the para and the household levels, it is necessary to make sure who could take an initiative to disseminate appropriate technologies to women.

8.3 Peerani Wassi village, Tando Muhammad Khan

8.3.1 Village structure

This village is comprised of 27 households with 4 biradaris. The majority of the households, 21 out of 27, belong to Lakho biradari which is Muslim. The other biradaris are Manghwar (Hindu), Soomro (Muslim), Lohar (Muslim), and the numbers of the households are 3, 2, 1, respectively. Lakho forms one para and the other biradaris live at the side of Lakho's para. There is little interaction between Lakho and the other biradaris though they are geologically very close. Marriage ceremony is one of the most important social events for the villagers; however, Lakho and the other biradaris cannot attend it each other without an invitation letter which is hardly issued.

It is observed that Lakho is divided into 2 residential areas; landowners and landless farmers. However, there is no wall between them. Though there is a significant difference in house condition, it is easy for them to go and come between the 2 residential areas. There are 11 livestock sheds in the village where several farmers can use for their livestock. This number of the livestock sheds is larger than the other villages. The houses and livestock sheds are very closely located in the para, and therefore people and livestock are close. It is assumed that this environment is an advantage for extension activities because demonstration activities by the pilot farmers and training will be easily recognized by the other villagers.

8.3.2 Ways to disseminate information

(1) In the village

For Lakho biradari, it is expected that the village leader disseminate information to the villagers. As mentioned before, men in the village gather at Autaq every night. The Project will also use this opportunity as a trial for disseminating the information.

There might be a disparity between landowners and landless farmers in Lakho biradari. When the Project delivers information, it is necessary to confirm whether the information reaches both the landowners and the landless farmers. The Project will pay close attention that both the landowners and the landless farmers attend training in the village.

Except Lakho biradari, 3 households of Hindu are not engaged in livestock farming; however, the Project should confirm occupation of the other 3 households of Muslim. If they are livestock farmers, the Project should consider a way to disseminate information for them because there is little interaction between Lakho and them.

(2) Outside the village

Lakho biradari does not have close interaction with the other biradaris, but do interact with the surrounding villages. If Lakho cannot make a decision for any village issue, they ask an advice to the surrounding villages. The villagers in Peerani Wassi sell milk and purchase daily necessities at the neighboring villages because there is no shop in the village. Therefore, the Project will consider whether it is possible to disseminate information from Peerani Wassi village as a starting point to the surrounding

villages.

(3) Community Organization

Some years ago, a NGO, National Rural Support Program (NRSP) conducted a project in the village, and the Community Organization (CO) was organized. The CO does not function at present. Although the detail of the project activities and the members at that time were uncovered in the PRA survey, it is confirmed that men and women worked together at that time. According to the participants, it is possible to call the ex-CO members to organize the CO again. The Project will consider whether such CO function as an extension agent.

8.3.3 Gender consideration

According to the participants, decisions at the household level such as shopping, marriage, conflict resolution, education, livestock selling and purchasing, and house construction, are made by men and women together though the participants were only men for this PRA survey. This is different from the other villages.

Women are engaged in livestock related activities such as caring livestock, cleaning shed, by products making, and chopping fodder. However, it is possible that the real scope of livestock activities for women is wider than the result of the survey. During the transect walk, the survey team directly observed that a woman was watering livestock, which was not mentioned as women's role in this village. To confirm to what extent decision are made and livestock related activities are carried out by women, the Project will conduct another PRA survey for women. Then, the direction of gender related activities in relation to extension will be planned.

8.4 Maso Bozdar village, Tando Allayah

8.4.1 Village structure

According to the result of the pre-survey done by the C/P, the village had more than 200 households; Mulim and Hindu live together in the village; and at least 8 biradaris, such as Bozdar, Laghari, Mirani, Soomro, Samoon, Lohar, Thebo, and Kohli, had been recognized. The PRA survey team chose 3 biradaris, i.e. Bozdar, Laghari, and Kohli, as the target of the survey. Then, it was found that 5 paras are formed by 5 major biradaris, i.e. Bozdar, Laghari, Kolhi, Mirani, and Shadi in the village. There are also 7 other biradaris, i.e. Shah, Samar, Kumber, Manghwar, Theba, Lohar, Shivi. They are all minors, and live within one of the major biradaris' paras. After all, the total number of biradaris was found to be 12. Kolhi and Manghwar are Hindu while the other 10 biradaris are Mulsim. Bozdar and Laghari are two major biradaris and they have at least 10 sub-paras.

Decisions at the village level are made by at least 10 villagers including the representatives of the major 5 paras. Two of them, Bozdar and Laghari, have a big influence on the village level decision making. Decisions are sometimes made only by them. At the para level decisions are made by each para even if multiple biradaris live in a para. However, it should be observed if the Project disseminates

information to the para leader, all of the residents including the other biradaris in the same para can receive it smoothly.

Though there is no wall between the paras, houses are separated by wall in the village. Livestock are reared in the premise of each house. For that reason, it is difficult to know from outside how livestock is reared in each house. Although the villagers have recently started jointly using the livestock sheds, there are only 2 sheds. The number is too small compared with the size of the village. Under this environment, appropriate technologies may not be easily disseminated from the farmers to the neighbors. The Project should therefore consider this environment and devise a suitable approach of extension.

8.4.2 Ways to disseminate information

(1) In the village

The village leader is not engaged in livestock activities. Among the 5 paras, Bozdar para and Lagari para have a big influence to the village. To make sure that a message from the Project is delivered to every resident of every para, it is necessary to communicate with not only the village leader but also the 5 para leaders.

This 2 main biradaris have an active interaction each other; however, the relationship with the other biradaris remains to be surveyed. As an example during the PRA survey, the participants from Bozdar and Lagari actively expressed their opinions, but the participants from Kohli never spoke out until the facilitator requested them to speak. Then, those from Kohli did not support the opinions from Bozdar and Laghari. Kohli is originally the group of migrant workers and has recently settled in this village. They are poor and their status is not as high as the others in the village. It is not yet verified by the PRA survey at this time if there was any influence from the difference in religion or financial power on to what extent the villages were able to speak out.

To consider the village size and avoid skewed transfer of information, the Project should carefully confirm that information is evenly delivered within the para or the sub-paras, and training participants are selected properly.

In addition, part of villagers have other jobs than agriculture and livestock. When the Project conducts training, the participants should carefully be selected by paying attention to land tenure, livestock holding status, occupation, income, etc.

It seems that the villagers are interested in livestock business, more than the other villages, because they sell livestock throughout the year. On the other hand, the amount of daily milk production per buffalo is less than the other villages. There is an expectation that appropriate technologies are disseminated among the villages easier than the other villages if they are really interested in business.

There are 3 bazaars and some cafés in the village. As one of the ways to disseminate information, the Project will consider to put up a poster or set an information board at those places.

(2) Outside the village

Two major biradaris of the village, Bozdar and Laghari, have close interactions with the surrounding villages which belong to the same biradari group. This village functions as a town or a center of the villages because there are bazaars and shops where many people gather from outside. Therefore, the Project will disseminate information into this village first, then expand extension activities to the surrounding villages.

8.4.3 Gender consideration

Women seem to carry more roles in livestock-related activities than those in the other villages although they are restricted in the sphere of activity as the other villages. Nevertheless, it is possible to organize training in public place as long as a training venue is in the village. The Project should conduct a survey to verify how far in the village the women are allowed to come out of their houses freely and how they can receive information because the size of this village is very big. The distance is 2 km from an end of the village to the center of the village. The Project will consider a training venue and method, and a way to disseminate information in due consideration of the limitations for the women.

Appendix

I Gul Muhammad Gumbeer village, Matiari District

- I-1 Social Map
- I-2 Historical Transect
- I-3 Seasonal Calendar
- I-4 Daily Routine Work
- I-5 Pie Diagram

II Tayab Sand village, Badin District

- II-1 Social Map
- II-2 Historical Transect
- II-3 Seasonal Calendar
- II-4 Daily Routine Work
- II-5 Pie Diagram

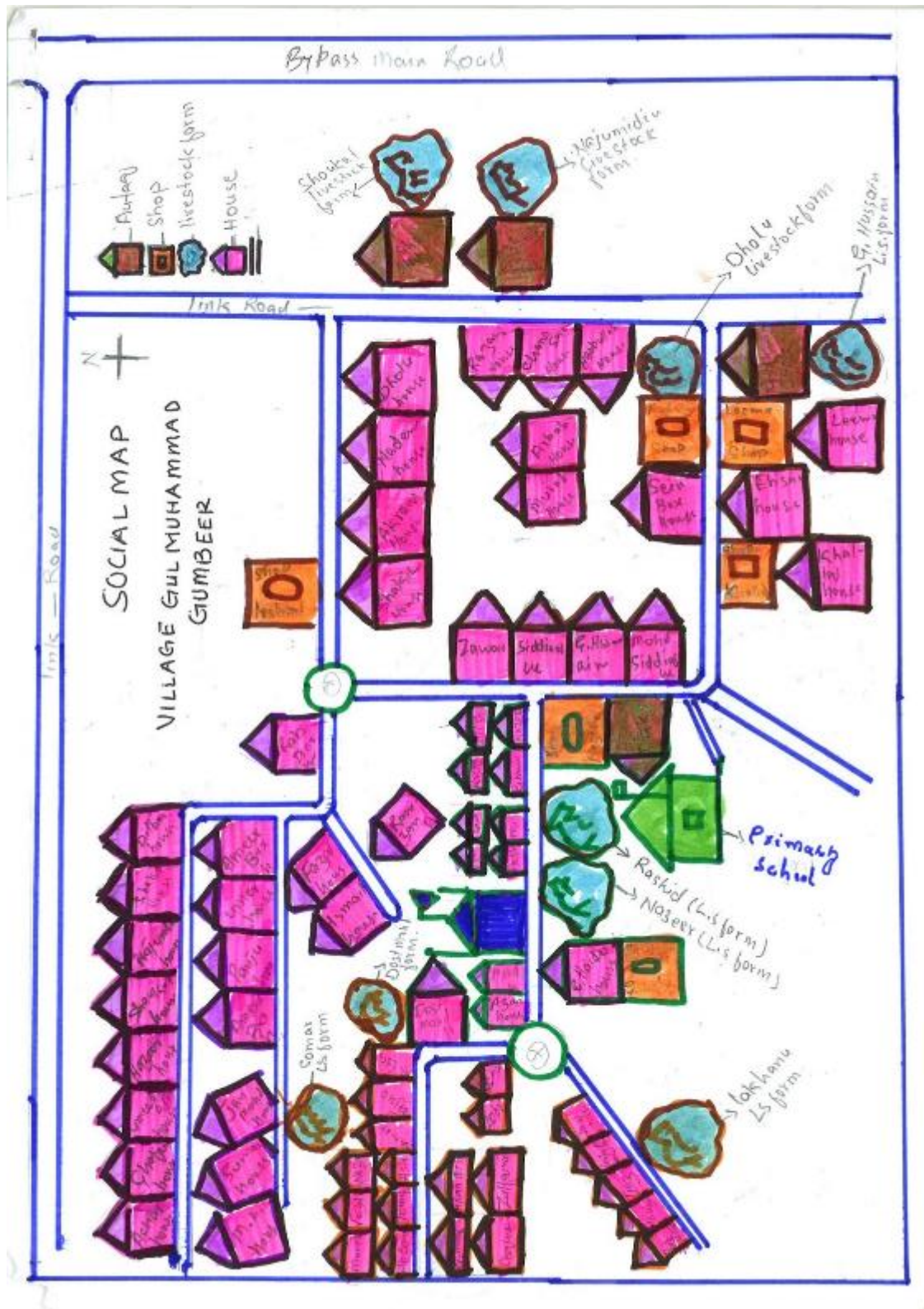
III Peerani Wassi village, Tando Muhammad Khan District

- III-1 Social Map
- III-2 Historical Transect
- III-3 Seasonal Calendar
- III-4 Daily Routine Work
- III-5 Pie Diagram

IV Maso Bozdar village, Tando Allahyar District

- IV-1 Social Map
- IV-2 Historical Transect
- IV-3 Seasonal Calendar
- IV-4 Daily Routine Work
- IV-5 Pie Diagram

Appendix I-1 Social map of Gum Muhammad Gumber village, Matiari District



Appendix I-2 Historical Transect of Gul Muhammad Gumber village, Matiari District

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1					Year	
														Fodder cultivation	Use of salt	Calf rearing	Watering	Livestock sheds		Rate of livestock
25%	20%	2teats milking			Rs.4,000 to Rs. 5,000 per buffalo	30%	spread	mill	Large area	25% for milk selling 5% for byproducts	Kundi, Boori	no	low	5%	10%	10%	10%	10%	70%	1990
50%	10%	1 teat milking	increased in 50%	increased in 50%	Rs.35,000 to Rs. 45,000 per buffalo	60%	60% decreased	increase in 50%	decreased to 50%	50% of milk for selling	Kundi kari, and Nilrabi	increase 50%	increased	20%	5%	5%	5%	5%	40%	2002
60%	10%	1 teat milking	80%	80%	Rs.60,000 to Rs. 90,000 per buffalo	80%	80% decreased	80%	decreased to 10%	80% of milk for selling no byproducts	Kundi mix	80%	increased	50%	-	3%	3%	3%	40%	2010
80%	25%	1 teat milking	100%	90%	Rs.80,000 to Rs. 150,000 per buffalo	90%	90% decreased	100%	decreased to 0%	90% of milk for selling	Kundi mix	90%	increased by 10%	80%	-	5%	2%	40%	2014	

Milking time is morning and evening. Twice per day.

Appendix I-3 Seasonal Calendar of Gul Muhammad Gumber village, Matiari District

	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct	Sep	
	↑↑↑	↑↑	↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑	↑↑	↑↑	↑↑↑	↑↑↑	↑↑↑	1. Milk production
	↑↑	↑	↑	↑	↑↑	↑↑	↑	↑	↑↑↑	↑↑↑	↑↑	↑↑	2. Heat Period
	↑↑	↑	↑	↑↑↑	↑↑↑	↑↑	↓	↓	↑↑	↑↑↑	↑↑↑	↑↑↑	3. Income
	↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑	↑↑↑	4. Expenditure
pay back	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	-	-	↑↑	-	-	-	-	5. Credit
	↑↑↑	↑↑↑	-	-	↑↑↑	↑↑	↑↑	↑↑↑	↑↑↑	-	-	-	6. Disease of Livestock
	↑↑↑	↑↑↑	↑↑	↓	↓	↑↑↑	↑↑↑	↓	↓	↑↑	↑↑↑	↑↑↑	7. Fodder
	↓					No knowledge							9. Vaccine
Ramzan and Eid			Eid	Shab-e-mehraj	-	-	-	12 Rabi awal Eid	Fair Shah Latif	Mohram & Saho Faqeer Fair	Eid & Peer Bilwaly Fair	pardal fakeer fair	10. Social Event

Legend

↑↑↑	number of allows are showing degree of weight which based on participants' sense
-	means nothing

Appendix I-4 Daily Routine of Gul Muhammad Gumber village, Matiari District

Group A: Farmers who has 5 livestock or less

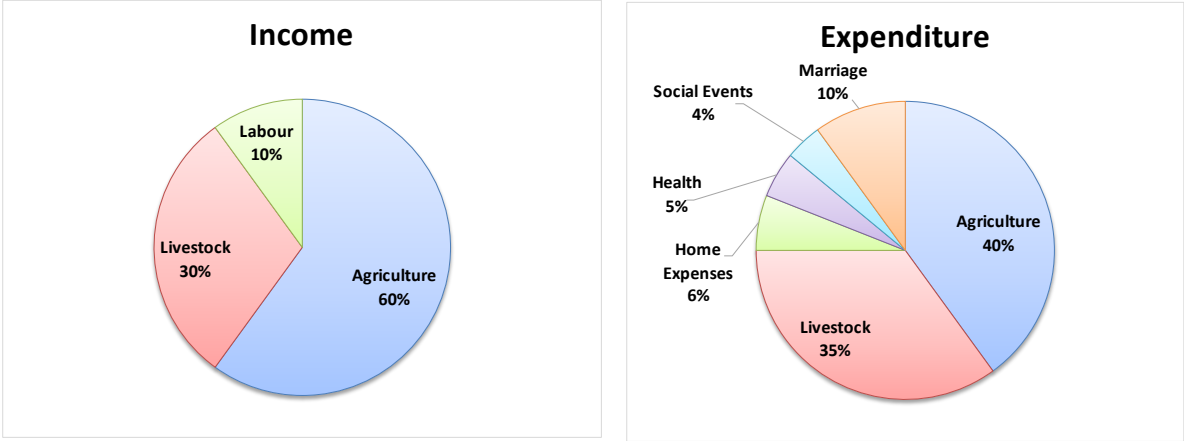
Time	6.00 AM	6.30 AM	7.00 to 7.30 AM	10.00 to 11.00 AM	11.30 AM	12.00 PM	15.00 PM	15.00 to 15.15 PM	16.00 PM	17.30 PM	18.00 to 18.30 PM	19.00 PM	19.15 PM	20.00 to 22.00 PM
Activity	Feeding livestock	Milking and milk selling	Grass cutting for Livestock at field	Grass chopping	Watering livestock	Lunch	Rest	Feeding livestock	Grass cutting for Livestock at field	Grass chopping	Diner and Washing of Livestock	Feeding livestock	Milking and milk selling	Watching T.V and Dinner

Group B: Farmers who has 6 to 10 livestock

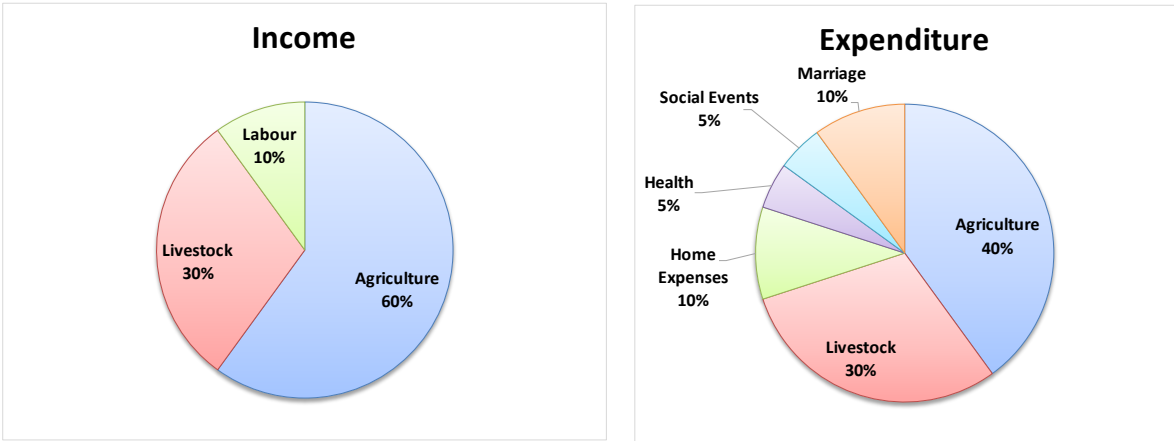
Time	5.00 to 6.00 AM	6.00 to 6.30 AM	7.00 AM	7.30 to 10.00 AM	10.00 to 11.00 AM	11.00 to 12.30 PM	12.30 to 14.30 PM	14.30 to 15.00 PM	15.30 to 16.30 PM	17.00 PM	18.30 PM	20.00 to 23.00 PM
Activity	Feeding livestock	Milking and milk selling	Washing	Grass cutting for Livestock at field	Watering livestock & grass chopping	Lunch	Rest	Feeding livestock	Grass cutting for Livestock at field	Washing & Watering livestock	Milking and milk selling	Dinner & Rest

Appendix I-5 Pie Diagram of Gul Muhammad Gumbeer village, Matiari

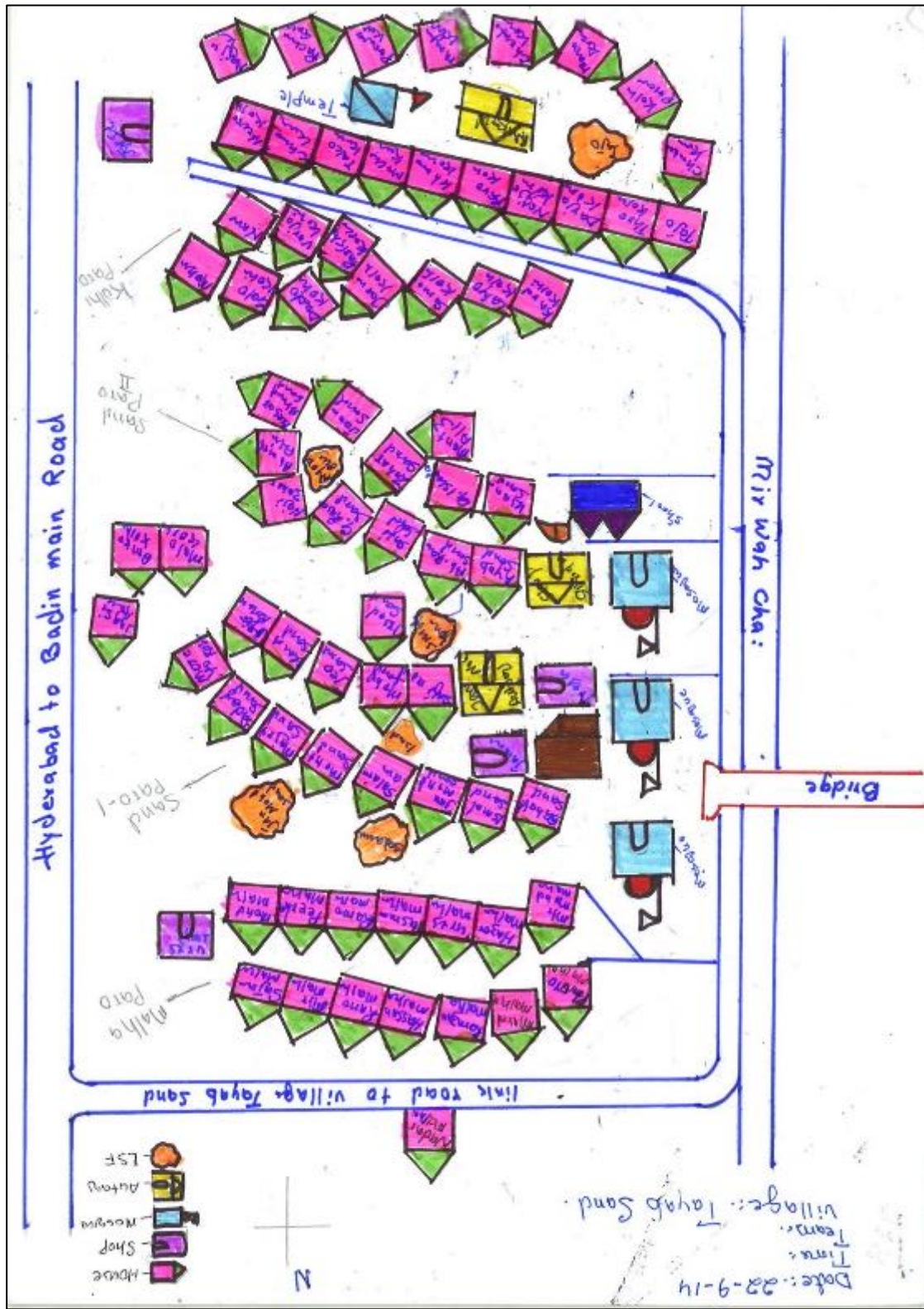
Group A: Farmers who has 5 livestock or less



Group B: Farmers who has 6 to 10 livestock



Appendix II-1 Social Map of Tayab Sand village, Badin District



Appendix II-2 Historical Transect of Tayab Sand village, Badin District

16	15	14	13	12	11	10		9	8	7	6	5	4	3	2	1							Year			
						Rate of Livestock										Livestock										
Fodder cultivation	Salt	Feeding Capacity of Mother Cow	Watering	Bathing	Livestock sheds	Goat/head	Buffalo/head	Animal sale	Disease	Milk utilization	Breed	Grazing land	Fodder Storage	Milk production benefit in rupee per head	Milk Production	Horse	Sheep	Donkey	Camel	Goat	Cow	Buffalo	1990	2002	2010	2014
100%	50%	1 head of calf	Hand pump & the river	at the river	Separation increased in 50%	Rs. 5,000 to Rs. 8,000	Rs. 80,000 to Rs. 150,000	75%	D ↑ T ↑ M ↓	No Gce selling Milk Rs.40/kg	Kundi & mix Kundi	0%	The villagers only keep fodder for necessary amount.	Rs.200	10kg/day	0%	0%	0%	0%	0%	10%	30%	60%	2010	2014	
50% to 60%	40%	1 head of calf	Hand pump & the river	at the river	more separation	Rs. 3,000 to Rs. 4,000	Rs. 50,000 to Rs. 80,000	75%	D ↑ T ↑ M ↓	No Gce selling Milk Rs.25 to 30/kg	Kundi & mix Kundi	20%		Rs.100	8kg/day	0%	1%	0%	0%	9%	30%	60%	2010	2014		
20 to 25%	25%	2 heads of calf	Hand pump & the river	at the river	Separated animal from the house	Rs. 2,000 to Rs. 2,500	Rs. 20,000 to Rs. 25,000	30%	D ↑ T ↑ M ↓	Gce Rs.100 to 150/kg Milk Rs.2 to 5/kg	Kundi & mix Kundi	50%		Rs.50	6kg/day	0%	2%	0%	0%	8%	30%	60%	2002	2014		
10%	25%	2 heads of calf	Off season at dug well on season at the river	at the river	Kept animal at the house	Rs. 1,000 to Rs. 1,500	Rs. 10,000 to Rs. 12,000	25%	Less disease No treatment	Gce Rs. 20 to 50 No milk selling /kg	Kundi & mix Kundi	100%		no sale	4kg/day	1%	2%	0%	0%	7%	30%	60%	1990	2014		

D = Disease
T=Treatment
M=Motility rate

Milking time is morning and evening. Twice per day.

Appendix II-3 Seasonal Calendar of Tayab Sand village, Badin District

Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct	Sep	
↑ ↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑	↑	↑ ↑	↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	1. Milk production
↑ ↑	↑	↑	↑	↑ ↑	↑ ↑	↑	-	-	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑	2. Heat Period
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑	↑	↑	↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	3. Livestock Selling
↑	-	-	-	↑ ↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	4. Income
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑ ↑	↑ ↑	↑ ↑	↑	↑ ↑	5. Expenditure
↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑	↑ ↑ ↑	↑ ↑	-	-	-	-	6. Credit
-	↑	↑	-	-	↑ ↑ ↑	-	-	↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	7. Disease of Livestock
↑ ↑	-	↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	8. Fodder
buy dry grass	buy dry grass			wheat straw	berseem	berseem						
↑ ↑ ↑ ↑	-	-	-	-	-	-	-	-	-	-	↑	9. Vaccine
by Gov												
✓ (both)	-	-	-	✓ (both)	-	✓ (both)	✓ (both)	✓ (both)	✓ (both)	✓ (both)	-	10. Social Event
-	-	-	-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	-	-	-	-	11. Free time

Legend

↑ ↑ ↑ ↑	number of allows are showing degree of weight which based on participants' sense
-	means nothing
✓ (both)	means that there are social events for Muslim and Hindu

Appendix II-4 Daily Routine of Tayab Sand village, Badin District

Group A: Farmers who has 5 livestock or less

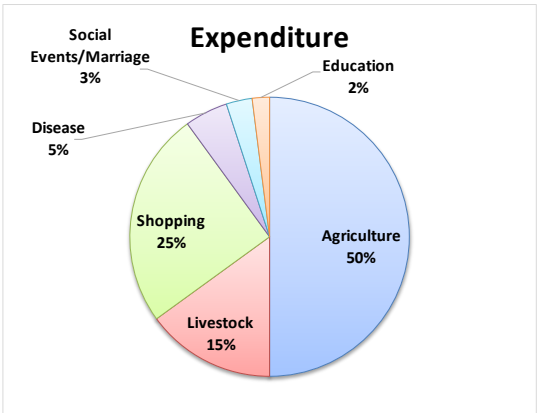
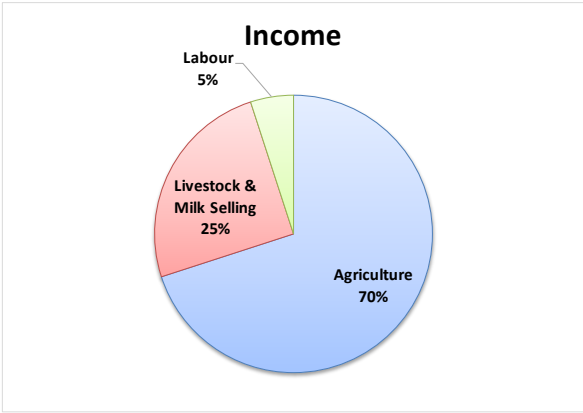
Time	6.00AM	6.30 AM	7.00 AM	7.30 to 8.00 AM	8.30 to 12.00 PM	12.30 PM	13.00 PM	13.30 to 14.30 PM	15.00 PM	15.00 to 17.00 PM	17.30 PM	18.00 PM	19.00 PM	20.00 PM	20.30 to 22.00 PM	22.00 PM
Activity	Feeding livestock	Milking	Tea time	Milk selling	Grass cutting	Watering	Lunch	Rest & Prayer	Tea time	Grass cutting	Prayer	Watering Feeding	Milking	Diner	Prayer & Gathering	Rest

Group B: Farmers who has no livestock

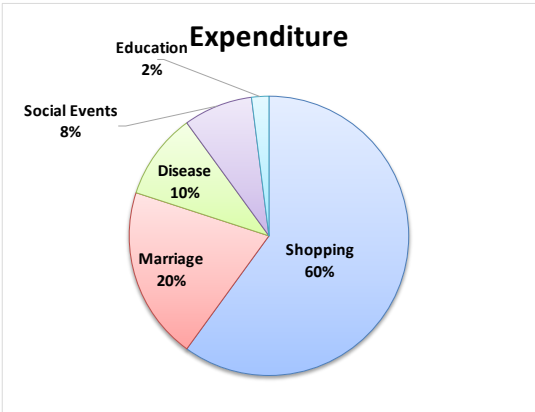
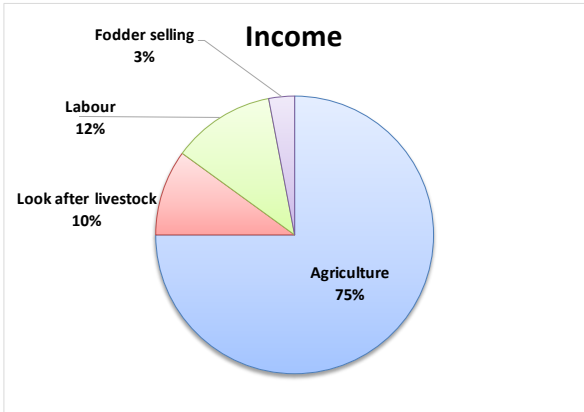
Time	6.00 AM	7.00 AM	8.00 to 11.00 AM	12.00 PM	13.00 PM	14.00 to 17.00 PM	18.00 to 20.00 PM	20.00 to 22.00 PM
Activity	Open irrigation water	Tea time	Weeding & feeding livestock	Close irrigation water	Lunch	Field Work	Diner	Gathering Rest

Appendix II-5 Pie Diagram of Tayab Sand village, Badin District

Group A: Farmers (Agriculture + Livestock)



Group B: Farmers (Agriculture + Livestock Sharing)



Appendix III-3 Seasonal Calendar of Peerani Wassi village, Tando Muhammad Khan District

	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct	
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑	↑ ↑ ↑	1. Milk production
↑ ↑ ↑ ↑	↑	↑	↑	↑	↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑	↑ ↑ ↑	2. Heat Period
↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑	↑	↑	↑	3. Livestock Selling
-	-	↑	↑	↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	4. Income
↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑ ↑	↑ ↑ ↑	5. Expenditure
-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	- saving	-	-	-	-	-	-	6. Credit
-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑	-	-	-	↑	↑	↑ ↑	7. Disease of Livestock
↑ ↑ ↑ ↑ rice straw	↑ ↑ ↑ ↑	↑	↑	↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	8. Fodder
	grass	wheat straw						berseem					9. Vaccine
													10. Social Events
							Marriage	Marriage	Marriage	Fairs	-	-	11. Free time
↑ ↑	↑ ↑ ↑ ↑	↑ ↑	↑ ↑	↑ ↑	-	-	-	-	-	-	-	-	

Legend

↑ ↑ ↑ ↑	number of allows are showing degree of weight which based on participants' sense
-	means nothing

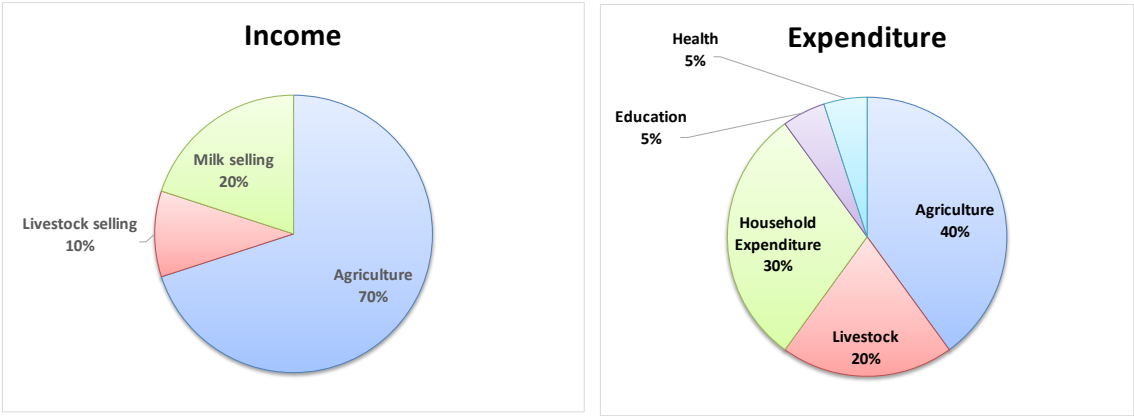
Appendix III-4 Daily Routine of Peerani Wassi village, Tando Muhammad Khan District

Both Landowners (Group A) and Tenant farmers (Group B)

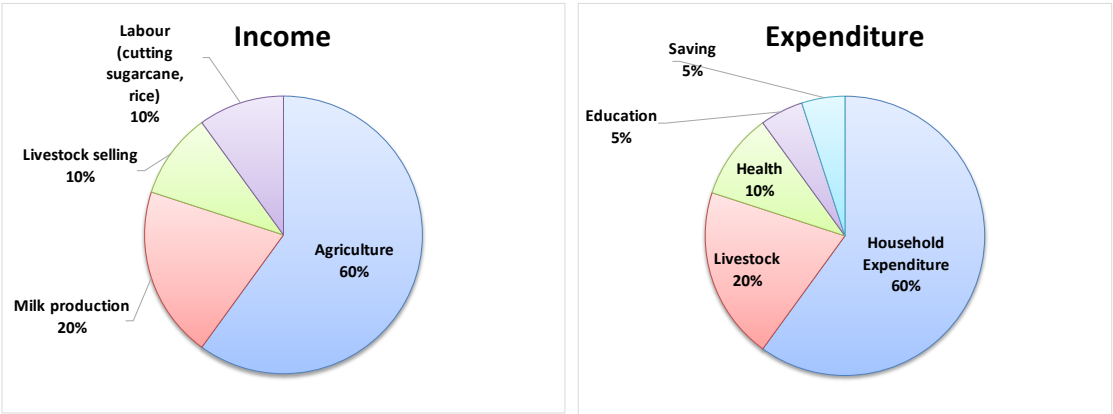
Time	3.00 to 5.00 AM	5.00 to 6.00 AM	6.00 to 7.00 AM	7.00 to 8.00 AM	8.00 to 12.00 PM	12.00 to 13.00 PM	13.00 to 14.00 PM	14.00 to 15.00 PM	15.00 to 17.00 PM	17.00 to 18.00 PM	18.00 to 19.00 PM	19.00 to 21.00 PM	21.00 to 22.00 PM	22.00 PM to 0.00 AM
Activity	Milking, Feeding	Watering and cleaning	Tea and breakfast	Take livestock to outside	Grass cutting and field work	Lunch	Grass chopping	Rest	Milking, feeding, and watering livestock & field work	Milk selling (some villagers)	Setting of mosquito net for livestock and feeding	Shopping	Diner	Gathering
	4.00AM to 6.00AM													
	Milk selling													

Appendix III-5 Pie Diagram of Peerani Wassi village, Tando Muhammad Khan District

Group A: Landowners



Group B: Tenant Farmers



Appendix IV-2 Historical Transect of Maso Bozdar village, Tando Allahyar District

18	17	16	15	14	13	12	11	10		9	8	7	6	5	4	3	2	1							Year					
								Rate of Livestock	Rate of Livestock									Donkey	Horse	Camel	Sheep	Goat	Cow	Buffalo						
↑	↑	↑	↑	↑	home	home	just started	Rs. 60,000 to 80,000	Rs. 20,000 to 30,000	100%	Disease increased	5% homouse	Buffalo : Mix	-	70%	Rs. 50 to 60/kg	Cow 6kg /day	18%	10%	5%	10%	5%	5%	5%	5%	5%	5%	5%	5%	1990
↑	↑	↑	↑	↑	home	home	just started	Rs. 60,000 to 80,000	Rs. 20,000 to 30,000	100%	Disease increased	5% homouse	Buffalo : Mix	-	30%	Rs. 30/kg	Cow 5kg /day	15%	2%	2%	28%	10%	5%	5%	5%	5%	5%	5%	5%	2010
↑	↑	↑	↑	↑	home	pond	pond	Rs. 9,000 to 15,000	Rs. 30,000 to 40,000	30%	Disease started	50% homouse	Buffalo : Mix Cow: Mix	25%	15%	Rs. 10/kg	Cow 5kg /day Buffalo 7kg/day	10%	2%	2%	35%	18%	5%	5%	5%	5%	5%	5%	5%	2002
↑	↑	↑	↑	↑	open canal	open canal	just started	Rs. 5,000 to 6,000	Rs. 10,000 to 12,000	10 to 20%	No disease	75% homouse	Buffalo : Kundi Cow: Mahi, Thahi	100%	10%	Rs. 5 to 6 /kg	Cow 4kg /day Buffalo 6kg/day	5%	5%	5%	40%	30%	5%	5%	5%	5%	5%	5%	5%	1990

Milking time is morning and evening. Twice per day.

Appendix IV-3 Seasonal Calendar of Maso Bozdar village, Tando Allahyar District

Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Dec	Nov	Oct	
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	1. Milk production
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	2. Heat Period
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	3. Livestock Selling
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	4. Income
↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	5. Expenditure
-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	-	-	-	-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	6. Credit
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	7. Disease of Livestock
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑	8. Fodder
↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	↑ ↑	9. Vaccine
-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	-	-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑	-	-	10. Free time
-	↑	-	-	-	-	-	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	↑ ↑ ↑ ↑	11. Social Events

Legend

↑ ↑ ↑ ↑	number of allows are showing degree of weight which based on participants' sense
-	means nothing

Appendix IV-4 Daily Routine of Maso Bozdar village, Tando Allahyar District

Group A: Landowners

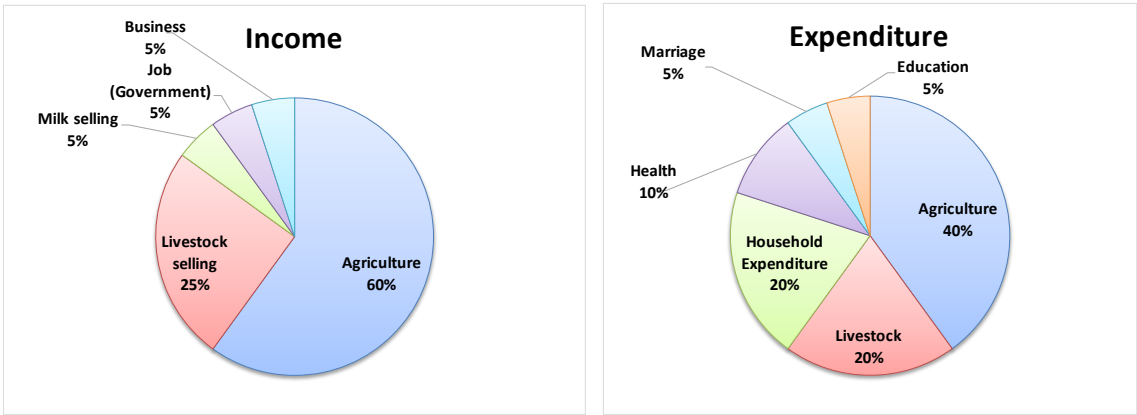
Time	5.00 to 8.00 AM	8.00 AM to 12.00PM	12.00 to 15.00 PM	15.00 to 17.00 PM	17.00 to 19.00 PM	19.00 to 22.00 PM
Activity	Milking, Feeding livestock, Milk selling	Field work	Lunch, prayer & rest	Tie & release of livestock, Bathing, Feeding livestock	Milking, Milk selling	Prayer & Gathering
						Rest

Group B: Tenant Farmers

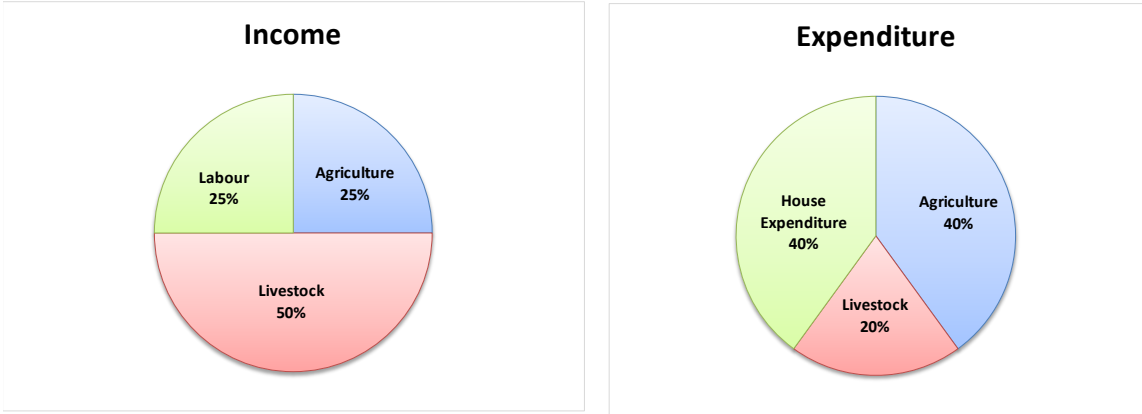
Time	5.00 to 10.00	10.00 AM to 15.00 PM	15.00 to 17.00 PM	17.00 to 18.00 PM	18.00 to 19.00PM	19.00 to 22.00 PM
Activity	Tea time, Grass cutting	Cotton picking, Lunch	Grass cutting	Feeding livestock	Dinner	Gathering
						Rest

Appendix IV-5 Pie Diagram of Maso Bozdar village, Tando Allayah District

Group A: Landowners



Group B: Tenant Farmers



Report of the Second Participatory Rural Appraisal (PRA) survey

September 2015

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1. Introduction

One of the major new challenges for the Livestock Department as well as the Project is to establish an extension system through which appropriate technologies can be effectively disseminated to farmers. The Project aims to establish a sustainable extension system which should be functional even after the Project is completed.

To establish a sustainable extension system, rural society needs to be understood. By using the Participatory Rural Appraisal (PRA) survey method, we have deepened our insight into how information is disseminated in a village, among villages, between a village and other areas; how key decisions are made and who the decision makers are; and how communication flows in a village. In addition, we have attempted to identify opportunities where technology transfer can be triggered from farmer to farmer in a village, and also the main factors that accelerate or hinder technology transfer.

The first PRA survey was conducted from September 2014 to October 2014. This is the second PRA survey. The first PRA survey conducted whole village workshops for four villages. In the second PRA survey five villages were selected as additional target villages; a survey was conducted for the whole village, as well as one for women considering gender issues. As an additional survey, the workshop for women was conducted in the four villages surveyed earlier. Finally, the Project had obtained information on nine villages, including information from both men and women. Based on the survey results, consideration of effective dissemination of livestock technologies is summarized in Chapter 7, and suggestions for extension activities are summarized in Chapter 8.

2. Objectives of the survey

- To obtain knowledge on society in rural Sindh in order to effectively disseminate appropriate livestock technology that has been developed and verified by the Project, and to recommend further extension activities

3. Selection of villages

Five of the 13 pilot villages in April 2015 were selected as target villages for the PRA survey. Workshops for both the whole village and women were conducted in the following five villages.

Table 1 List of newly selected target villages and reason for selection

	Name of village	Reason for selection
1	Haji Bahadur Daudani village, Tando Allayah District	<ul style="list-style-type: none">• This village includes both Muslims and Hindus with many biradaris.¹• The pilot farmer in this village is female.
2	Khan Mohammad Shoro village, Hyderabad District	<ul style="list-style-type: none">• This is a Muslim village, with one biradari.
3	Adur Faqir Noohpoto village, Matiari District	<ul style="list-style-type: none">• This is a Muslim village, with several biradaris.• Recommended by counterparts

¹ A biradari is a socially-bonded group based on consanguinity.

	Name of village	Reason for selection
		<ul style="list-style-type: none"> • There are 120 households.
4	Saleh Dal village, Hyderabad District	<ul style="list-style-type: none"> • This village includes both Muslims and Hindus with several biradaris. • Recommended by counterparts • There are 150 households. • This village is located in Hyderabad District (Note: villages in Hyderabad District were not selected as target villages for the first PRA survey.)
5	Haji Hussain Dal village, Tando Muhammad Khan District	<ul style="list-style-type: none"> • This village is located in Tando Muhammad Khan district.

Selection criteria are as follows:

- 1) Give priority to recommendations from counterparts
- 2) Avoid villages where marketing workshops were conducted by the marketing team
- 3) Number of households (not too big or too small)
- 4) Include at least one village that has only one religion and one biradari
- 5) Balance the number of villages included in the survey across the Project districts.

The following were the target villages in the earlier survey. Only the workshop for women was conducted in these four villages this time.

Table 2 List of previously selected target villages and reason for selection

	Name of village	Reason for selection
1	Gul Muhammad Gumber village, Matiari District	<ul style="list-style-type: none"> • This village is a Muslim village, with one biradari.
2	Tayab Sand village, Badin District	<ul style="list-style-type: none"> • This village includes both Muslims and Hindus, with one biradari for each religion.
3	Peerani Wasi village, Tando Muhammad Khan District	<ul style="list-style-type: none"> • This is a Muslim village with one biradari.
4	Maso Bozdar village, Tando Allayah District	<ul style="list-style-type: none"> • This village includes both Muslims and Hindus with several biradaris.

4. Duration of the Survey

From 11th May 2015 to 18th June 2015 (6 weeks)

5. Members of the survey team

Ms. Mika Kawamoto (Extension /Gender Expert)

Mr. Gopal Das (PRA Expert)

Dr. Rukhsana Vighio (Training and Extension Counterpart)
 Ms. Manisha Ropeta (Survey Assistant: from second week)
 Dr. Iqtadar Memon (Marketing Counterpart: first week only)
 Ms. Fumiko Ikegaya (Marketing Expert: first three weeks)

6. Survey tools

6.1 Survey for the whole village

Although ten PRA tools were used for the whole village survey in the first survey, only seven PRA tools were used in the second survey in order to focus more on the project objective within the limited time of the survey. The list of tools used and their purpose are shown in Table 3.

Table 3 Tools for whole village workshop

	Name of tools	Purpose
1	Social map	To grasp location of village facilities and paras ²
2	Transect work	To verify the results of the social map on foot
3	Venn diagram for decision making	To understand the decision-making system at the level of household, para, village and union council
4	Seasonal calendar	To grasp the activities of villagers throughout the year, including milk production, livestock purchase and sale, and income/expenditure. To understand on and off seasons for each activity
5	Network diagram	To focus on the relationship among paras/in the village/with the surrounding villages
6	Flow chart for market channel	To grasp the location of milk and livestock markets, transportation, distance, frequency of visit by the villagers, and role of middlemen and their services
7	Focus group discussion	To identify leaders at biradari and village level To identify obstacles to technology transfer

6.2 Survey of women

In general the role of women in livestock activities is very important, especially in the project area, Sindh Province in Pakistan. Most of the population are Muslim, and they traditionally have restrictions on women's activities - such as women cannot go out alone and women have a limitation on contact with men from outside. The Project conducted the workshop for women to collect detailed data about the role of livestock activities of women, access to resources such as cash, loans and training, and other information needed to plan extension activities. A list of tools used and their purpose are shown in Table 4.

² A para is an area where several households live together.

Table 4 Tools for women's workshop and purpose

	Name of tools	Purpose
1	Daily routine work	To understand the daily routine of women
2	Responsibility of livestock activities	To understand the role of men and women in livestock activities
3	Pie diagram for income and expenditure of household	To understand the ratio of income/expenditure for women
4	Network diagram	To understand social and cultural limitations on women when they have access to resources such as cash, credit and training opportunities, etc.
5	Focus group discussion	To identify female social workers

7. Consideration of effective dissemination of livestock technologies

7.1 Village structures (social and physical structures)

The table below indicates the structural characteristics of the nine surveyed villages.

Table 5 Structural Characteristics of Each Village

Village Name	Village Structure
Gul Muhammad Gumbeer village, Matiari district	<ul style="list-style-type: none"> Gumbeer biradari (Muslim) inhabit 5 quarters or paras (71 households in total). While each para is separated by a wall, individual households inside each para do not have walls. Some villagers do not regard the Hindu biradari living near the Muslim quarters as the same village. One of the five Gumbeer paras consists of landless farmers.
Tayab Sand village, Badin district	<ul style="list-style-type: none"> Sand biradari (Muslim) and Kolhi biradari (Hindu) consists of two paras each, four in total (57 households in total). Each para is separated by trees, with no wall being built.
Peerani Wasi village, Tando Muhammad Khan district	<ul style="list-style-type: none"> This small village has one para, with 27 households in the whole village. The majority of villagers belong to Lakho biradari (Muslim), and the remaining six households are from Soomro biradari and Lahar biradari (both Muslim), and Manghwar biradari (Hindu) (the biradaris in the village other than Muslim Lakho may be Muslim biradari Lahar and Samaja, and Hindu biradari Manghwar). Lakho biradari and other biradari have no inter-biradari exchange between them. Landless and land-holding residents live separately in Lakho biradari, although it is reportedly easy to visit each other.. There are 11 public sites where several villagers can tether their livestock inside and outside of the village, which may be useful for extension activity.
Maso Bozdar village, Tando Allayah district	<ul style="list-style-type: none"> The village has more than 200 households with 11 biradaris, which are both Muslim and Hindu. There are about five paras in the village, and several biradaris live in a para together. Each household is separated by walls inside the para. Livestock are kept within the household, making them invisible from outside. Of the 11 biradaris, Bozdar biradari and Laghari biradari are most influential.
Haji Bahadur Daudani village, Tando Allayah district	<ul style="list-style-type: none"> Four biradaris - Daudani biradari, Majeedano biradari, Chandiya biradari (all Muslim) and Kolhi biradari (Hindu) - live together, in six paras with 126 households. Although a wall separates some paras, visiting other paras is quite easy. However, reportedly Hindu males cannot enter Muslim quarters.
Khan Mohammad Shoro village, Hyderabad district	<ul style="list-style-type: none"> This small village has 27 households in total, consisting of Shoro (Muslim, 14 households) and Kolhi (Hindu, 13 households). The village can be roughly split into three quarters: 1) a quarter with three Muslim households and ten Hindu households living separated by farmland; 2) a quarter with seven Muslim households separated by farmland, and 3) a quarter with the

	<p>remaining Muslim households. The villagers believe the whole village consists of one para, although quarter 1) is far from the other quarters, separated by farmland.</p>
<p>Adur Faqir Noohpoto village, Matiari district</p>	<ul style="list-style-type: none"> • This is a wholly Muslim village, with each of seven biradaris, Khyber, Chohan, Jat, Noohpoto, Khaskeli, Solangi (or Machi) and Soomro having their own para (137 households in total). All households as well as paras are separated by a wall. Khyber biradari, Noohpoto biradari and Somoro biradari appear wealthy with their own large farms, while most of the other four biradaris are landless. • Reportedly, although the wealthier biradaris never enter the para of the poorer biradaris, the poorer biradaris may visit the houses of the wealthier biradaris regardless of gender.
<p>Saleh Dal village, Hyderabad district</p>	<ul style="list-style-type: none"> • The village has nine paras with three Muslim biradaris (Dal, Hajam and Wadha) and two Hindu biradaris (Kolhi and Manghwar), 102 households in total. All households as well as paras are separated by a wall. All Hindu biradaris are landless (19 households), and Hajam biradari and Wadha biradari are either landless or small farmers. Dal biradari has various households, from landless to large-scale farmers.
<p>Haji Hussain Dal village, Tando Muhammad Khan district</p>	<ul style="list-style-type: none"> • Six biradaris, with Dal biradari, Dars biradari, Kandel biradari, Mangrya biradari, Gharno biradari (all Muslim) and Manghwar biradari (Hindu) each having a para (131 households). • Relationships between the six biradaris are good, although when someone from a higher social status biradari visits a house of a lower social status biradari, s/he does not take any food or drink served by the host (this custom is normal in rural areas according to the project local staff).

Based on the social structure of the surveyed villages, the characteristics of the village structure and points to consider when conducting extension activity of livestock technology are as follows.

1) Function of para

- Villagers live in separate quarters called paras in villages of a certain size.
- A para functions as a minimum community unit. Para leaders lead decision-making processes for conflicts between villagers, issues that need solving and mutual aid. Each para tends to have an autaq, which is a meeting space for male members. Autaqs are used for hosting visitors from outside, and for men to meet at night to chat and share information. While movement of female members tends to be restricted, especially for Muslims, there is no problem with movement between each household inside the para. Considering the smooth information flow, adequate number of households, ease of movement between households, and functions of mutual aid and

decision-making processes, extension activities should be conducted at the level of the para.

- The definition of para appears vague to outsiders: for instance, a total of 27 households, both Muslims and Hindus, inhabit three physically-separated quarters in Khan Mohammad Shoro village, Hyderabad district, but the villagers regard the whole village as one para. Therefore, the Project Team will clarify the unit for extension activity, and the definition of para through social mapping.

2) Physical wall between para and households

- There are several structural patterns of different paras as follows: paras separated by high walls (Adur Faqir Noohpoto village, Matiari district, and Saleh Dal village, Hyderabad district); with trees providing a border (Tayab Sand village, Badin district); and paras with no distinctive walls (Peerani Wasi village, Tando Muhammad Khan district).
- Some paras have walls to separate each household (Maso Bozder village, Tando Allayah district), while others (Gul Muhammad Gumbeer village, Matiari district, some paras of Haji Bahadur Daudani village, Tando Allayah district) have no walls.
- Livestock tend to be reared in the residential area of each household. If there are walls to separate the para and household, there is little chance to witness the rearing of livestock. Also, as mentioned in 8.4 Religion and Biradari, sharing information and visits to paras may be restricted between paras and biradaris. When conducting extension activity, the Project Team will assess who (which group) to train in the appropriate technology, and who should be core farmers considering physical/social division.
- Of the households with a number of livestock, some rear their animals in open areas, not in their quarter (Khan Mohammad Shoro village, Hyderabad district). Some villages, like Tayab Sand village, Badin district and Peerani Wasi village, Tando Muhammad Khan district, have public areas for several farmers to tether their livestock. One suggestion for selecting core farmers is to deliberately select farmers who rear their livestock in places that are relatively open to other people.

3) Barriers from religion and biradari

- Although there are some villages, like Peerani Wasi village, Tando Muhammad Khan district, Khan Mohammad Shoro village, Hyderabad district and Haji Bahadur Daudani village, Tando Allayah district, where Muslim and Hindu residents form one para, most paras consist of same religion and same biradari. The above-mentioned three villages have walls to separate Muslims and Hindus, effectively dividing them into different living spaces despite sharing the same para. This means that there can be differences in information flow even within the same para. Therefore, the Project Team will monitor intra-village information flow. If some people appear not to receive information, the Project Team will decide who is to receive the information and use printed materials and other methods to spread information.

4) Difference in landholding and disparity in wealth

- The PRA survey identified some of the nine surveyed villages where certain biradaris have no landholdings (Chandiya biradari and Kolhi biradari of Haji Bahadur Daudani village, Tando Allayah district; Jat biradari, Khaskeli biradari, Chohan biradari, Solangi biradari of Adur Faqir Noohpoto village, Matiari district; and Kolhi biradari and Manghwar biradari of Saleh Dal village, Hyderabad district). There may be differences in applicable appropriate technology, disparities in selecting training participants and in information flow. Therefore, the Project Team will have to take the following points into consideration.
- If applicable appropriate technology is different for landless farmers and land-holding farmers, the Project Team will assess land ownership of villagers and assets before conducting extension activity. This will help the activity to be implemented effectively.
- One of the five paras in Gul Muhammad Gumbeer village, Matiari district consists of landless farmers; this means there could be disparity in inter-para power based on land ownership, which may be hard for outsiders to recognize. In Adur Faqir Noohpoto village, Matiari district, wealthier biradaris never enter poorer biradaris' residential areas (the opposite is also possible). In Haji Hussain Dal village, Tando Muhammad Khan district, members from the biradari with higher status do not eat or drink when visiting a house of members from a lower status biradari. These cases show that land ownership or disparity in wealth may become a barrier to information flow and human movement. The Project Team will have to be aware of the social structure of villages, and ensure livestock technology and necessary information is spread effectively. Also the Project Team will monitor whether both landless farmers and land-holding farmers manage to receive the information they are disseminating. If there is disparity in who the information reaches, the Project Team will examine the cause and deal with it.

5) Activity involving landowners

- There are some cases like Haji Bahadur Daudani village, Tando Allayah district where landowners make tenant farmers live in one para. Because of this, if implementation of a project activity requires permission from landowners, such as for farming of feeding crops, cooperation from a landowner will allow the whole para to gain benefit from the activity. For dissemination of the appropriate technology, gaining landowners' cooperation will allow the activity to achieve the desired outcome more easily.

7.2 Decision-making process at each level/existence of leader

The table below indicates the characteristics of the decision-making process in the nine villages surveyed.

Table 6 Characteristics of Decision-making Processes in Each Village

Village Name	Characteristics of Decision-making Process
Gul Muhammad Gumbeer village,	<ul style="list-style-type: none"> • The village does not have a particular leader, and there is no inter-para network to take decisions.

Matiari district	
Tayab Sand village, Badin district	<ul style="list-style-type: none"> Traditionally, there is a village leader and respective para leaders.
Peerani Wasi village, Tando Muhammad Khan district	<ul style="list-style-type: none"> Although there is a village leader, the leadership is weak.
Maso Bozdar village, Tando Allayah district	<ul style="list-style-type: none"> Although there is a village leader, he is not involved in livestock farming. Two major biradaris have a strong influence in decision-making.
Haji Bahadur Daudani village, Tando Allayah district	<ul style="list-style-type: none"> Leaders from Daudani biradari and Majeedano biradari discuss and take decisions on village-level matters.
Khan Mohammad Shoro village, Hyderabad district	<ul style="list-style-type: none"> Regarding decision-making at village level, the village leader first acts as a facilitator to listen to members' views. After that he will take a decision. Each household from both Shoro biradari and Kolhi biradari send one representative (male) to the meeting.
Adur Faqir Noohpoto village, Matiari district	<ul style="list-style-type: none"> The village leaders listen to views of both disputing parties, and the leaders (one each from Khyber biradari and Noohpoto biradari) take the final decision. If the dispute is complicated, the leaders may call the leaders at para-level.
Saleh Dal village, Hyderabad district	<ul style="list-style-type: none"> The village leader and para leaders discuss village-level decision-making, and call all the villagers if necessary. Each of the nine paras has a leader, apart from one para where Manghwar biradari and Kolhi biradari (both Hindu) have their own leader.
Haji Hussain Dal village, Tando Muhammad Khan district	<ul style="list-style-type: none"> The village has three leaders, and each para has their own para leader. Para leaders attend decision-making meetings at village level.

Based on the decision-making process of the nine surveyed villages and the characteristics of the leaders, the points to consider when conducting extension activity of livestock technology are as follows.

1) Presence of leader

- Although there are some villages without a leader, like Gul Muhammad Gumbeer village, Matiari district, and villages with several leaders, like Maso Bozdar village, Tando Allayah district, most villages have selected one leader.
- As mentioned above, the villagers live in a quarter called a para, and each para has their own leader. Again, when several biradaris inhabit the same para, each biradari elects their own leader.

- Village leaders and para leaders tend to be relatively wealthy - landowners and shop owners.
- 2) The role of leaders
- The role of village and para leaders tends to be coordinators and facilitators in conflict resolution/problem solving, rather than leading the whole village/para to do something.
 - Topics which require decision-making at para-level are mutual help for weddings and illness, conflict resolution, problem solving and elections. Conflict resolution and problem solving are brought to village-level when para-level discussions do not solve them. Village-level discussion also reaches decisions on infrastructure management like water supply, drainage system, schools and roads, and elections, along with conflict resolution and problem solving.
 - The character of the leader determines if s/he can play the role of core farmer and be the driving force for livestock technology dissemination. A realistic starting point would be to request them to cooperate with the Project as facilitators.
 - To avoid creating/widening social divisions through extension activities, their appreciation and cooperation with the Project and extension activities will be key for the Project.
 - There is apparently a custom among the villagers of contributing money to help each other if there is a fire or death of livestock (Khan Mohammad Shoro village, Hyderabad district). The Project Team will examine this custom of mutual aid, which can be utilized for the extension activities.

7.3 Information flow (including factors that may facilitate or hinder information flow)

The table below indicates the characteristics of information flow in the nine surveyed villages.

Table 7 Characteristics of Information Flow in Each Village

Village Name	Characteristics of Information Flow
Gul Muhammad Gumber village, Matiari district	<ul style="list-style-type: none"> • The biradari of the village is the same as the six surrounding villages. • There are six men (one from the other village) who play the role of social worker. Social workers have the role of messenger in a village for various activities - they pass information to other households, and encourage villagers to participate in activities to make them successful.
Tayab Sand village, Badin district	<ul style="list-style-type: none"> • The leader has trust from the other villages, and advice is often sought from them. Some villagers from other villages visit the village to buy milk. • Sand biradari has exchange (social contact) with the surrounding five villages, and some villagers have marital relations with two of the five villages. On the other hand, Kolhi biradari reportedly has no exchange with surrounding villages. • There are five women (two live in other villages) who play the role of

	social worker, although some of them are just messengers.
Peerani Wasi village, Tando Muhammad Khan district	<ul style="list-style-type: none"> • The village has exchange with the neighboring village. They seek advice from the neighboring village when they faced issues that they cannot solve by themselves. Some farmers sell milk to the surrounding villages. • There are three villagers (two from Lakho biradari and one from Manghwar biradari) who play the role of social worker.
Maso Bozdar village, Tando Allayah district	<ul style="list-style-type: none"> • The village has exchange with the surrounding villages. The village functions like a town, and people from the other villages visit there. • There are five villagers who play the role of social worker and messenger.
Haji Bahadur Daudani village, Tando Allayah district	<ul style="list-style-type: none"> • Social interaction with other villages occurs at social events like weddings, funerals and Eid, business, irrigation and issues around theft. The village has daily exchange with villages nearby. • There are eight social workers confirmed.
Khan Mohammad Shoro village, Hyderabad district	<ul style="list-style-type: none"> • The village has Noor Muhammad Solangi village on the south side, and Kamiso Shoro village on the north side. The villagers visit Noor Muhammad Solangi village only for daily shopping due to inter-village trouble. On the other hand, both Shoro biradari and Kolhi biradari have exchange with Kamiso Shoro village. • There are four men (three from Shoro biradari and one from Kolhi biradari) and four women (three from Shoro biradari and one from Kolhi biradari) who play the role of social worker.
Adur Faqir Noohpoto village, Matiari district	<ul style="list-style-type: none"> • There are three men and seven women who play the role of social worker.
Saleh Dal village, Hyderabad district	<ul style="list-style-type: none"> • There are six men and six women who play the role of social worker for disseminating appropriate technologies (the women are more messengers than social workers). One of the six men is a social worker in the neighbouring village who also works in this village. • The female members have little exchange with other biradaris, only to attend weddings and funeral once or twice a year. The male members see few social barriers from different biradaris and religions, and interact with others at weddings, funerals, mutual aid occasions and elections. However, Dal biradari (Muslim) tend not to visit Hindu biradari, maybe due to their pride on their social status (on the other hand, Hindu biradari may visit the house of Muslims).
Haji Hussain Dal village, Tando Muhammad Khan	<ul style="list-style-type: none"> • There are six men who play the role of social worker for disseminating appropriate technologies. • Relationships between the six biradaris are good, although when

district	someone from a biradari with higher social status visits the house of a biradari with lower social status, s/he does not take any food or drink served by the host (this custom is normal in rural areas according to local project staff).
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Based on the information flow in the nine surveyed villages, the characteristics of the information flow, the points to consider when conducting extension activity of livestock technology are as follows.

1) Intra-village information flow

- Villages like Haji Bahadur Daudani village, Tando Allayah district and Haji Hussain Dal village, Tando Muhammad Khan district, where the National Rural Support Programme (NRSP) was involved, tend to have social workers (“samaje karkon” in Sindhi) selected from the villagers. Social workers are volunteers; they coordinate meeting schedules and encourage villagers to participate in activities. Although not every village apparently has their own social workers, this time the Project Team managed to confirm the name of them in all the surveyed villages. There are some limitations, such as some of them are not livestock farmers, but the Project Team should check the availability of social workers in the target extension villages, and decide how to utilize them if available.
- While there are some villages like Haji Bahadur Daudani village, Tando Allayah district which invite villagers from other villages to weddings and funerals regardless of religion, other villages like Gul Muhammad Gumbeer village, Matiari district have little exchange with others when their religion is different. The case of Saleh Dal village, Hyderabad district shows that some villages may have different patterns of exchange for men and women with biradaris that have a different religion. Moreover, even within the same religion, some biradaris have a bigger influence on the village than others. The Project Team will have to ensure that all biradaris receive information.
- The large villages, like Maso Bozdar village, Tando Allayah district, tend to see one biradari spreading into several paras. Information may not reach every para even if they are the same religion, like Saleh Dal village, Hyderabad district. When disseminating information, the Project Team will have to contact para leaders as well as biradari leaders to ensure all para members receive same information.

2) Information flow to outside villages

- Some villages have frequent information exchange with villages nearby: Peerani Wasi village, Tando Muhammad Khan district often seeks advice from villages nearby, and advice from the village leader of Tayab Sand village, Badin district is often sought from surrounding villages; Maso Bozdar village, Tando Allayah district has regular exchange with villagers in surrounding villages with the same biradari. When there is frequent exchange of information with villages nearby, establishing a system to spread information will create an opportunity to disseminate

livestock technologies – an example would be inviting representatives or villagers from surrounding villages to pilot farmers (or core farmers) to introduce appropriate technologies. The Project Team will evaluate the extension method of livestock technologies to assess the impact of extension accurately.

- Some villages attract visitors from surrounding villages through the existence of bazaars and cafés, like Maso Bozdar village, Tando Allayah district and Adur Faqir Noohpoto village, Matiari district. The Project Team will consider disseminating appropriate technologies around these villages to the surrounding villages.

7.4 Religion and Biradari

The table below indicates the patterns of religion and biradaris in the nine surveyed villages.

Table 8 Religions and Biradaris in Each Village

Village Name	Relationship between biradaris
Gul Muhammad Gumber village, Matiari district	<ul style="list-style-type: none"> • One Muslim biradari (Gumber) and one Hindu biradari (Bagri) live in the village. • The Muslims have a good relationship each other, but have no exchange with Hindus. While the preliminary survey found that only the Gumber biradari inhabits the village, the workshop held during this survey targeting women revealed that a Hindu Bagri biradari also lives there. Apparently, there is no exchange between Gumber and Bagri, by either men or women. • There was a suggestion from participants in the female survey that Bagri biradari should come to Gumber biradari area if the Project Team conducts training for both Gumber biradari and Bagri biradari together.
Tayab Sand village, Badin district	<ul style="list-style-type: none"> • One Muslim biradari (Sand) and one Hindu biradari (Kolhi) live in the village. • According to villagers the relationship between villagers is good, with little influence of religious difference. The training can be conducted to the group with mixed biradaris as long as the training venue is Sand biradari area as suggested by the participants for female survey. • The relationship between Sand biradari and Kolhi biradari is good through exchange on weddings, funerals and farming.
Peerani Wasi village, Tando Muhammad Khan district	<ul style="list-style-type: none"> • Three Muslim biradaris (Lakho, Samaja and Lohar) and one Hindu biradari (Manghwar) live in the village • Although relationships within the biggest biradari Lakho is good, there is little exchange between them and the other three biradaris. Members of Lakho biradari and Manghwar biradari never take any food or drink when they visit each other's homes. • Lakho biradari and Samaja biradari may accept mixed-biradari training, while Lohar will not attend even if invited.

<p>Maso Bozdar village, Tando Allayah district</p>	<ul style="list-style-type: none"> • Ten Muslim biradaris (Bozdar, Shah, Samar, Kumber, Laghari, Theba, Lahar, Shivi, Shadi and Mirrani) and two Hindu biradaris (Kolhi and Manghwar) live in the village. • While the relationship between the two major biradaris is good, there is little exchange with the other biradaris. • Mixed-biradari training is possible if it only involves Muslims, while mixed-gender training should be conducted within the same biradari, as suggested.
<p>Haji Bahadur Daudani village, Tando Allayah district</p>	<ul style="list-style-type: none"> • Three Muslim biradaris (Daudani, Majeedano and Chandiya) and one Hindu biradari (Kolhi) live in the village. • The relationship between Muslims and Hindus is good. Frequent inter-biradari social exchanges include weddings and funerals, and economic assistance occurs regardless of whether to Muslim or Hindu. • Movement to other paras is free, even to different biradaris; however, the male members of Kolhi biradari (Hindu) cannot enter Muslim paras (the female members of Kolhi biradari have no problem with it).
<p>Khan Mohammad Shoro village, Hyderabad district</p>	<ul style="list-style-type: none"> • One Muslim biradari (Shoro) and one Hindu biradari (Kolhi) inhabit the village. • The relationship between Muslims and Hindus is good. There are various channels of exchange such as business, health, education, agriculture, weddings and funerals.
<p>Adur Faqir Noohpoto village, Matiari district</p>	<ul style="list-style-type: none"> • Seven Muslim biradaris (Khyber, Chohan, Jat, Noohpoto, Khaskeli, Solangi (or Machi), and Soomro) live in the village. • Despite having only Muslim biradaris, there are clear divisions between the three wealthier biradaris and four poorer biradaris, and the members of wealthier biradaris never enter the poorer biradari areas.
<p>Saleh Dal village, Hyderabad district</p>	<ul style="list-style-type: none"> • Three Muslim biradaris (Dal, Hajam and Wadha) and two Hindu biradaris (Kolhi and Manghwar) live in the village. • While male members have a smooth relationship regardless of religion, female members have little exchange with different biradaris.
<p>Haji Hussain Dal village, Tando Muhammad Khan district</p>	<ul style="list-style-type: none"> • Five Muslim biradaris (Dal, Dars, Kandel, Mangrya, and Gharno) and one Hindu biradari (Manghwar) live in the village. • Apparently, the relationship between Muslims and Hindus is smooth. However, Dal biradari (Muslim) tend not to visit Hindu biradari, maybe due to their pride in their social status (on the other hand, Hindu biradari may visit the house of Muslims).

Based on the current situation of religions and biradaris in the nine surveyed villages, the

characteristics of the religions and biradaris, the points to consider when conducting extension activity of livestock technology are as follows.

1) Muslims and Hindus

- Although Muslims and Hindus often live in the same village, the pattern of Muslim-Hindu relationships and inter-biradari relationships even among Muslim biradaris varies, depending on villages.
- For example, in Gul Muhammad Gumbeer village, Matiari district, some Muslims do not consider the Hindus as being in the same village. On the other hand, members of Lakho biradari and Manghwar biradari of Peerani Wasi village, Tando Muhammad Khan district do not just have no exchange, but also never take any food or drink even if they visit each other's home. In this village, certain biradari (Lohar) will not attend biradari-mixed training, even with fellow Muslim biradaris.
- In villages with smooth relationships between Muslims and Hindus, Hindu men may not be able to enter Muslim paras like Haji Bahadur Daudani village, Tando Allayah district. Another case suggests that certain Muslim biradari (Dal at Haji Hussain Dal village, Tando Muhammad Khan district) tend not to visit Hindu biradari, maybe due to their pride in their social status (on the other hand, Hindu biradari may visit the house of Muslims). The dissemination of appropriate technologies requires careful consideration on social restrictions rooted in religion.
- Extension activities should be conducted based on para or biradari due to inter-religion/inter-para (biradari) social divisions.
- The pilot farmer in Saleh Dal village, Hyderabad district, belongs to Hindu Kolhi biradari, the minority in the village. The pilot farmer may be restricted in disseminating technologies, because villagers with a higher social status may feel reluctant to visit villagers with a lower social status. Also, the largest biradari may not want to see the minority biradari become economically empowered. The Project Team will have to take extra consideration of villages with disparity in social/religious power.

2) Economic disparity

- Within the same Muslim community, there is division due to economic disparity. At Adur Faqir Noohpoto village, Matiari district, members of wealthier biradaris never enter the poorer biradari areas.

7.5 Gender

Women's workshops were conducted during the survey. Detailed information was collected on gender issues. The role of women in livestock activities, limitations of training group arrangements, and limitation of visiting pilot farmers were confirmed. Gender-related characteristics of the target nine villages and points to be considered are summarized in Table 9.

Table 9 Gender-Related Characteristics of Each Village

Name of the village	Women's role and decision-making in livestock activities
Gul Muhammad Gumber village, Matiari district	<ul style="list-style-type: none"> • Women are widely doing livestock activities such as milking, cleaning of sheds, fodder cutting, watering, feeding, selling milk in the village, making by-products, and home remedies for livestock. There are only a few restrictions around gender. For Gumber biradari, there is no problem with conducting the training for mixed paras from Gumber biradari. However, if the Project conducts mixed-biradari training with Gumber biradari and Bagri biradari, the training venue should be premises of Gumber biradari due to their customs. This is may not be possible because some men do not accept Bagri biradari as being part of the same village. For Gumber biradari, there is no problem in conducting mixed-gender training for each para, apart from Muhamad Rahim para. Gumber biradari accept a male trainer for female training whether or not accompanied by a female trainer. They also accept female training being conducted outside of the village. Women are able to visit the pilot farmer's house for field visits.
Tayab Sand village, Badin district	<ul style="list-style-type: none"> • Women are doing milking, feeding, watering, cleaning sheds and making by-products. Hindu women (Kolhi biradari) are also doing fodder cutting and milk selling. • According to participants in the women's workshop, they are not allowed to go out for shopping. They can only go out from the village for medical treatment and marriage ceremonies. Muslim women have restrictions on going out from the village. Women of Sand biradari (Muslim) do not do agriculture work, while women of Kolhi biradai (Hindu) are doing it. • Men make decisions at household level and para level. When the Project introduces appropriate technology to this village, it is better to confirm if the Project needs approval or permission from men to teach the technology to women. • In the same biradari, the Project is able to conduct training for mixed-gender groups. Men will decide whether they accept a male trainer for training women. Everyone can visit a pilot farmer's house to observe appropriate technology. The training for women cannot be conducted outside the village. • Female participants in the workshop took time to understand the questions of the workshop. Only one woman among the participants had received education.
Peerani Wasi village, Tando	<ul style="list-style-type: none"> • Women are doing shed cleaning, fodder cutting, fodder chopping, watering, feeding, making by-products. Only some women are milking.

Muhammad Khan district	<ul style="list-style-type: none"> • According to men in the village, the right to take decisions is equal between men and women at the household level. • In the same biradari, there is no problem in conducting mixed-gender training for appropriate technologies. A male trainer is allowed for training women. Training for women cannot be conducted outside of the village. • There is a savings group called the Committee.
Maso Bozdar village, Tando Allayah district	<ul style="list-style-type: none"> • Women are widely doing livestock activities such as milking, watering, feeding, selling milk through children, shed cleaning, making by-products, fodder cutting and chopping. • If it is only Muslim biradaris, it can be organized as a mixed-biradari group for training. In the case of the same biradari, it can be organized as a mixed-gender group for training. The villagers do not accept a male trainer for training women. Only a few women agreed to have the training outside of the village. There is a savings group called the Committee; however, only men are members.
Haji Bahadur Daudani village, Tando Allayah District	<ul style="list-style-type: none"> • Women have a main role in livestock activities such as fodder cutting, fodder selling, milk selling, purchasing of concentrated feed; they even provide medical treatment for livestock. They also involved in decision making about livestock activities. They especially make decisions on selling milk. • Men are supportive of women attending the BBSYDP³ training on livestock. They have no objection to women's participation in the training of appropriate technology. • According to the survey results on decision-making, it seems that collaborative work between men and women is relatively easier than in other villages. Some participants of the women's workshop attended BBSYDP training before. • At para level, men and women can attend the training as one group. If the Project arranges private transportation from the village, women can attend training that is held outside the village. A male trainer will be allowed if accompanied by a female trainer. • Muslim women organize a saving group called the Committee for reciprocal help. Hindu women of Kolhi group never join this saving group. • There are several sources of income for women such as fodder selling, rope making, selling milk, agricultural labor and making by-products. The main income sources are selling milk and agricultural labor.
Khan Mohammad Shoro village, Hyderabad District	<ul style="list-style-type: none"> • In this village, the role of women in livestock activities depends on which biradari they belong to. Women of Shoro biradari do some activities, however, fodder cutting and milking are men's work. Women of Kolhi biradari are doing

³ Benazir Bhutto Shaheed Youth Development Program (BBSYDP)

	<p>the same work as men.</p> <ul style="list-style-type: none"> • Villagers of Shoro biradari are pious. It seems there are restrictions on women in this village. For example, men and women cannot sit together for meetings and training; a limited number of women can go for shopping; women should form a group when they go for shopping. On the other hand, it seems that there is no limitation for women of Kolhi biradari. • Women of Shoro biradari are not doing work in agricultural fields. They are mainly working indoors when compared with women of Kolhi biradari. Women of Kolhi biradari are more involved in livestock activities than women of Shoro biradari. However, it is not sure whether this is because of religious customs or concern for women. • Women can spend income from subsidies from BISP,⁴ selling handicrafts and by-products. Women keep the money. Men get the money from women when they need it. • Mixed-biradari groups from Shoro biradari and Kolhi biradari for training is allowed; however, men and women should be separated. Mixed-gender groups are not allowed even if they are belong to the same biradari. For Shoro biradari, only a male trainer is allowed for men’s training. Training for women should be conducted by a female trainer. Kolhi biradari accept both a male trainer and female trainer for training women. Shoro biradari does not accept training women outside the village, while Kolhi biradari accepted it. Women are basically not allowed to attend men’s workshops or meetings.
<p>Adur Faqir Noohpoto village, Matiari District</p>	<ul style="list-style-type: none"> • Women are doing milking, cleaning of sheds, watering, feeding and selling milk. They decide the volume of milk for sale by themselves. Their boys aged over nine years old bring milk to sell to the shop. Money collection will be done by men and boys. • Men do not agree to conducting mixed-gender training, while women agreed if the same biradari group. Mixed-biradari group training allowed, unless men and women are separated. According to the men’s opinion, the trainer for women’s training should be female, while women said there was no problem with either a male and female trainer. Training outside the village is allowed if it is for a group of women. Some men do not agree to training outside of the village.
<p>Saleh Dal village, Hyderabad District</p>	<ul style="list-style-type: none"> • Women are doing cleaning of livestock sheds, milking, watering, feeding, making by-products, and rear livestock inside of their property. Women from households which rear livestock in public spaces in the village never do livestock activities.

⁴ Benazir Income Support Programme (BISP)

	<ul style="list-style-type: none"> • Men and women make decisions jointly for livestock purchase and selling. • Women can use income from sewing, handicrafts, BISP and making by-products without permission of their husband. It was implied that women can use 30% of total household income freely. • Most of the household in the village are supported by BISP. Men are not so happy to receive support from BISP because women have power and are difficult to control. • Mixed-biradari groups are acceptable for the villagers unless men and women are separated into different groups. Men of the village recommended conducting the training for a group consisting of two to three female representatives from each para. They also said that only female trainers are acceptable for training women. Mixed-gender groups are not acceptable even if same para. The training venue should be at the school as a neutral place for all women, because women's relationships among different biradari groups are not good. • According to the men, visiting a pilot farmer's farm is not a problem for men, while women are not allowed to visit. At the end of the survey, male participants finally agreed that women could visit the pilot farmer's farm. Forming a female group to visit the pilot farmer's house still needs to be considered.
<p>Haji Hussain Dal village, Tando Muhammad Khan District</p>	<ul style="list-style-type: none"> • Women are mainly doing livestock activities - especially milking, watering and shed cleaning are only done by women. Men help with feeding when women are out from the house for other business. In this village, agriculture is for men, while taking care of livestock is women's work. Some women are cut fodder and sell it at Rs.50/bundle in the village. • Women in this village cannot use any money without permission of their husband. Income from making by-products, sewing and handicrafts will be combined with other income. • Mixed-biradari groups are allowed for the training. Mixed-gender groups are also allowed unless same biradari. A male trainer is allowed if accompanied by a female trainer. On top of that, if the Project provides private transportation, training outside the village, such as in Hyderabad city, is also allowed for a group of two to three female representatives from each para. In this village, villagers can choose their spouse due to their feelings. In the past, a man from Dal biradari (Muslim) and a woman from Manghwar biradari (Hindu) got married.

1) Role of women in Livestock activities

- Cleaning shed, watering, feeding, and making by-products are mainly women's work, except for some households, such as in Saleh Dal village, Hyderabad district, where livestock are reared in public spaces. Women do the milking in most of the surveyed villages. On the other hand, grazing and bathing are men's work. It assumed that those two activities probably need labor or it may be due to religious restrictions.
 - Fodder cutting is different from village to village. Women cut fodder in six out of nine villages, however, women who belongs to Muslim biradari do not cut fodder in two out of six villages. On the other hand, women are not only cutting fodder but also selling it inside the village in Haji Bahadur Daudani village, Tando Allayah District and Haji Hussain Dal village, Tando Muhammad Khan District
 - Women are selling milk to neighbours in Haji Bahadur Daudani village, Tando Allayah District due to high demand. Women are also selling milk at Adur Faqir Noohpoto village, Matiari District, with their boys aged over nine years old taking milk to retailers. Women can sell milk if they do not have direct contact with the middleman, or sell in the town.
 - The role of women in livestock activity is important though involvement in activities varies from village to village. It is a good job opportunity for women who are not doing agricultural work, such as women in Shoro biradari in Khan Mohammad Shoro village, Hyderabad District.
- 2) Limitations in training implementation in terms of biradari and gender

Muslims have a custom of avoiding making contact with women and men from outside. It was confirmed that there are some communication gaps due to differences in religion, biradari, and disparity in wealth. Therefore, limitations in training implementation in terms of biradari and gender such as mixed- biradari groups, mixed-gender groups and the acceptability of a male trainer were confirmed village by village. The answers from each village are summarized in Table 10.

Table 10 Limitations in Training Implementation in Terms of Biradari and Gender

Name of the village	Mixed-biradari training	Mixed-gender training	A male trainer for training women	Training venue outside the village
Gul Muhammad Gumbeer village, Matiari District	Not allowed	Allowed for same para except landless farmers' para	Allowed (even unaccompanied by female trainer)	Allowed
Tayab Sand village, Badin District	Allowed	Not allowed	It depends on men's decision	Not allowed
Peerani Wasi village, Tando Muhammad Khan District	Only Lakho biradari and Sameja biradari	Allowed for same biradari	Allowed	Not allowed
Maso Bozdar village, Tando Allayah District	Among Muslims only	Allowed for same biradari	Not allowed	Allowed (limited participants)

				agreed)
Haji Bahadur Daudani village, Tando Allayah District	Allowed	Not allowed	Not allowed (men's opinion)	Allowed for a group (provision of private transportation necessary)
Khan Mohammad Shoro village, Hyderabad District	Allowed	Not allowed for Shoro biradari Allowed for Kolhi biradari	Not allowed for Shoro biradari Allowed for Kolhi biradari	Not allowed for Shoro biradari Allowed for Kolhi biradari
Adur Faqir Noohpoto village, Matiari District	Allowed for men Not allowed for women	Allowed for same biradari	Allowed	Allowed for a group
Saleh Dal village, Hyderabad District	Allowed for men Not allowed for women	Allowed for same biradari	Not allowed	Not allowed
Haji Hussain Dal village, Tando Muhammad Khan District	Allowed	Allowed for same biradari	Allowed (must be accompanied by female trainer)	Allowed for a group of representatives (provision of private transportation is necessary)

a) Mixed-biradari training

- There are no limitations to forming mixed-biradari groups for training in four out of nine villages.
- Gumbeer biradari (Mulsim) of Gul Muhammad Gumbeer village, Matiari District does not recognize Bagri biradari (Hindu) as being villagers of the same village even though they are living nearby. Neither biradari has any contact with the other.
- Peerani Wasi village, Tando Muhammad Khan District has only 27 households in the whole village. However, Lakho biradari, the biggest in the village with 21 households, has less contact with other biradaris.
- Maso Bozdar village, Tando Allayah District has more than 200 households with 11 biradaris - nine Muslim biradaris and two Hindu biradaris. For mixed-biradari training, the villagers accept mixed-biradari groups only for Muslims
- In the case of Adur Faqir Noohpoto village, Matiari District and Saleh Dal village, Hyderabad District, mixed-biradari training is applicable for men only.
- For Saleh Dal village, Hyderabad District, there is an opinion that the training venue should be the school as a neutral place for women, because the relationship of women between different biradaris is not good.

b) Mixed-gender training

- Six out of nine villages replied that men and women can attend training together in the same biradari or same para. In Khan Mohammad Shoro village, Hyderabad District, mixed-gender training is not acceptable for Shoro biradari (Muslim); however, there is no problem for Kolhi biradari (Hindu). In general, mixed-gender training for Hindus is not a problem for them if it is within the same biradari or same para.
-

c) A male trainer for training women

- Four out of nine villages can accept a male trainer for training women. In one of these villages, Haji Hussain Dal village, Tando Muhammad Khan District, it was a conditional acceptance that the male trainer should be accompanied by a female trainer. In Haji Bahadur Daudani village, Tando Allayah District, women did not recognize a male trainer as a problem, while men expressed their strong objection. In Khan Mohammad Shoro village, Hyderabad District, a male trainer is not acceptable for Shoro biradari (Muslim); however, it is not problem for Kolhi biradari (Hindu).

d) Training venue

- Three out of nine villages did not accept conducting training for women outside the village. The remaining six villages accepted it; however, only one village accepted it without conditions. The other five villages expressed conditions such as provision of private transport, forming a female group, a group of representatives or Hindu biradaris. The training venue for women should be their respective villages except in special cases.

3) Visiting pilot farmers' farm by female villagers

To confirm any limitations on female villagers visiting pilot farmers' farms, interviews were conducted with participants of the survey of women. The summary of results is shown in Table 11.

Table 11 Visiting pilot farmer's farm by female villagers

Name of the village	Result of interview
Gul Muhammad Gumbeer village, Matiari District	Women can visit pilot farmer's farm
Tayab Sand village, Badin District	Women can visit pilot farmer's farm
Peerani Wasi village, Tando Muhammad Khan District	Not applicable (The pilot farmer dropped out from the project activities.)
Maso Bozdar village, Tando Allayah District	Not applicable (The pilot farmer dropped out from the project activities.)
Haji Bahadur Daudani village,	No problem for women because pilot farmer is female. However, special

Tando Allayah District	consideration is needed for visit by men.
Khan Mohammad Shoro village, Hyderabad District	Never asked
Adur Faqir Noohpoto village, Matiari District	Women can visit pilot farmer's farm.
Saleh Dal village, Hyderabad District	Women can visit pilot farmer's farm. (It seems special consideration may be need because decision was changed several times until men finally agreed.)
Haji Hussain Dal village, Tando Muhammad Khan District	Female can visit pilot farmer's farm if they form a female group.

Women can visit the pilot farmer's farm in most of the villages. Some villages set a condition that other men cannot stay at the pilot farmer's farm when a female group is visiting there. The Project should intervene depending on the situation.

4) Others

- Women organize a saving group in some villages such as Peerani Wasi village, Tando Muhammad Khan District and Khan Mohammad Shoro village, Hyderabad District. The committee collects a fixed amount of money from members. Then lots are drawn, and the selected member receives the whole amount. This is a good opportunity for women to get a significant amount of money to buy livestock, such as a calf or a goat, to increase their assets. The Project should consider giving appropriate advice to women to support them.
- The Project needs to consider the religious background of women when recommending appropriate technology to them. In some villages, even Muslim women are doing work in agricultural fields and cutting fodder.

7.6 Assistance from other organizations and current situation of village organization

Previous assistance from other organizations and the current situation of each village are summarized in Table 12.

Table 12 Assistance from the outside and current situation of village organization

Name of the village	Assistance from other organizations and current situation of village organization
Gul Muhammad Gumber village, Matiari District	<ul style="list-style-type: none"> • In the past, NRSP⁵ and HANDS⁶ worked there. Currently, Kushari Bank and Amadu are working there. • Women are pessimistic about receiving credit from a bank or NGO because they have no idea how to use credit properly.

⁵ National Rural Support Programme (NRSP)

⁶ Health and Nutrition Development Society (HANDS)

Tayab Sand village, Badin District	<ul style="list-style-type: none"> Five households are supported by BISP.
Peerani Wasi village, Tando Muhammad Khan District	<ul style="list-style-type: none"> In the past, NRSP was working on a road rehabilitation program. However, Community Organization (CO) was not organized that time.
Maso Bozdar village, Tando Allayah District	<ul style="list-style-type: none"> Twenty women attended BBSYDP training earlier. Two of these twenty women attended the PRA survey. They said they are still using knowledge and skills which they got from the BBSYDP training, such as cleaning of sheds, feeding management, 24 hour watering, salt supply, urea application and vaccination. Several households are supported by BISP, however, the exact number of households under BISP was not identified.
Haji Bahadur Daudani village, Tando Allayah District	<ul style="list-style-type: none"> NRSP worked here four to five years ago. At that time, the village organization was organized. If the village organization is re-organized it might be functional for dissemination of appropriate technologies. Some women attended BBSYDP training, however, they cannot remember the training content because it was lecture-based training. Training should include practical sessions.
Khan Mohammad Shoro village, Hyderabad District	<ul style="list-style-type: none"> Four households of Kolhi biradari and 11 households of Shoro biradari have been recognized as poor households, and have been supported by BISP since 2008. They are given Rs.1,500 per month.
Adur Faqir Noohpoto village, Matiari District	<ul style="list-style-type: none"> In the past, the village worked with some organizations such as 1) Hands, 2) Agha Khan, 3) SAFWCO⁷ and 4) Sindh Graduates Association. However, the CO, Village Organization (VO), Local Support Organization (LSO) were not organized at that time. Ten women attended BBSYDP training three years ago. However, they do not remember the content of the training. No-one continues to practice what they learnt after completion of the training.
Saleh Dal village, Hyderabad District	<ul style="list-style-type: none"> They have no experience of organizing a CO, VO or LSO. Most of the households are supported by BISP. The women of Kamal Dal para are expecting the Project just to give them financial support in the same way as BISP, and are not expecting to do any work in return.
Haji Hussain Dal village, Tando Muhammad Khan District	<ul style="list-style-type: none"> They have worked with several NGOs and banks such as HDF,⁸ NRSP, Olyset-Net, Rahnuma, Microfinance Bank and Khushari Bank. Activities of HANDS were phased out. Apart from the above, some villagers attended BBSYDP training. Some

⁷ Sindh Agricultural & Forestry Workers Coordinating Organization (SAFWCO)

⁸ Human Development Foundation (HDF)

	<p>households are supported by BISP.</p> <ul style="list-style-type: none"> • In 2002 COs were organized in each para, however only the CO in Dal biradari is still functioning. • HDF is conducting regular meetings in this village. The main topics are capacity development, education and health. • The villagers organized a registered NGO for education called Rahnuma. The Village Development Organization (VDO) was organized under this NGO's activities. It is still functioning. There are currently 30 members. • There are three micro-finance groups in the village. One of them is a female group, which has members from different biradaris.
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1) Points to consider

- Some villages were targeted by BBSYDP training. It seems the effectiveness of the training is limited. Some participants clearly remembered the training content; however, most of the participants interviewed in this survey cannot remember the content of training and are not putting it into practice. The reason for this difference should be verified and analyzed, and lessons learnt reflected in extension activities in future.
- Some villages obtain loans from NGOs and a bank. Some villages are supported by BISP, and several women in the village are receiving Rs.1,500 per month as a subsidy for livelihood activities. Some women can use the loan or subsidy money to increase their assets through calf salvation activities or other activities if it is properly coordinated by the Project.
- In some villages, villagers organized the village organization after intervention by NGOs such as NRSP. In Haji Hussain Dal village, Tando Muhammad Khan District, the village development organization and community organization of Dal biradari are still functioning. It is worth the Project trying to co-operate with existing village organizations for dissemination of appropriate technologies.
- Some villagers in Saleh Dal village, Hyderabad District showed strong interest in obtaining inputs from the Project. To avoid excessive expectations from the villagers of the Project, it is necessary to explain to them clearly what the Project can and cannot do through Project activities.

7.7 Period for conducting training

During the survey villagers were interviewed about their preference for the period of training, frequency and time for training. The results are summarized in Table 13.

Table 13 Preference for the period of training, frequency and time for training

Name of the village	Preference for the period of training, frequency and time for training
Gul Muhammad Gumbeer village, Matiari District	<ul style="list-style-type: none"> • The villagers agreed to both a one-day training session per week and continuous training for three to four days. The villagers requested to set the time between 11:00 to 15:00 and to avoid the cotton picking season

	from August to November.
Tayab Sand village, Badin District	• Training time depends on planning by the Project. However, the villagers requested to set the time between 13:00 to 16:00.
Peerani Wasi village, Tando Muhammad Khan District	• Training time depends on planning by the Project. However, the villagers requested to avoid a training session early in the morning.
Maso Bozdar village, Tando Allayah District	• Nothing particular
Haji Bahadur Daudani village, Tando Allayah District	• In case of one week of training, villagers prefer to have the training in May, June or December.
Khan Mohammad Shoro village, Hyderabad District	• Maximum training duration in a day is one to two hours for the villagers.
Adur Faqir Noohpoto village, Matiari District	• In April, May and June, the Project can conduct three to four day continuous full time training.
Saleh Dal village, Hyderabad District	• In case of continuous three to four day training, the villagers requested to conduct it in November after cotton picking. Female villagers agreed to have one-day per week training any season; however, the training time should be between 9:00 to 14:00 or 15:00 to 17:00.
Haji Hussain Dal village, Tando Muhammad Khan District	• The villagers have no problem with one day of training per week at any time during the year. In the case of continuous three to four day training, the villagers prefer to have the training between January to February or August to September. The female villagers requested to set the training time between 10:00 to 12:00.

The busy season for the villagers depends on which crop they are cultivating. In the slack season, the project plans to conduct continuous training during one week or one month. Most of the villagers replied that they can attend the training once a week, for two to three hours per time.

7.8 Others

- The participants of Saleh Dal village, Hyderabad District, showed interest in Project activities because they know about the success story of the pilot farmer in their village. When the Project makes an extension plan, it should consider how to show a visible outcome to villagers through field visits or fostering of core farmers as soon as possible.
- According to participants from Saleh Dal village, Hyderabad District, there are many conflicts among women in the different biradaris of the village. When the Project starts extension activities, it is better to identify the conflicts among the villagers, to avoid these getting worse due to the project intervention.

- In Haji Bahadur Daudani village, Tando Allayah District, the demand for milk is high, so villagers can sell the milk directly to shops and other households, without a middleman. In such villages women are involved in selling milk, and this helps to increase the income of women from rearing milking animals.

8. Suggestions for extension activities

8.1 Direction of extension activities

Extension will be planned and conducted with the following principles, based on the results of the PRA survey.

- 1) Promote market consciousness of the farmers to produce good quality milk and meat.
In some villages the farmers add water to milk before sale since they can get more profit. The project will promote the production and sale of unadulterated milk, expecting project beneficiaries to be recognized as producers of good quality milk. One of the long-term development goals of the Project is to promote market-oriented products that meet consumers' needs, and therefore adulteration will not be accepted by the Project even if it brings short-term benefit to the farmers. Market consciousness of the farmers will be raised through the process of extension activities of the Project.
- 2) Identify leaders who will be supportive of the Project, and actively involve them in extension activities. The Project will need opinion leaders in the villages who can mobilize the villages for effectively disseminating the technologies.
- 3) Provide training to every farmer interested in training, although there should be criteria for selecting participants. The project will provide training for everyone willing to learn appropriate technologies of livestock management. The Project focuses on small-scale farmers as the project target; however, large- and medium-scale farmers will also be accepted as training participants. Nevertheless the number of trainees will have to be limited, therefore criteria for selecting the participants will be drawn up and applied.
- 4) Form training groups and plan training based on biradaris and paras.
Biradaris and paras in each village will be considered when grouping training participants and planning extension activities.
- 5) Involve women in disseminating appropriate technologies, depending on the role of women.
Women are also involved as the target of dissemination of appropriate technologies when they are considered to be playing an important role in livestock activities.
- 6) Conduct assessments of training needs for each training group, and combine the results with experts' views for planning training.
The Project will conduct needs assessment for the training with those interested in the training. These results will be combined with the views of livestock experts, and reflected in the planning for the training.
- 7) Mixed-gender training will be conducted if a village allows it.
If a village allows it, the Project will conduct mixed-gender training because it will provide a good opportunity for both men and women to learn from each other for their income generating activities.
- 8) Training venue to be in each village.
Training will be conducted in the village for both men and women for their convenience. In the

case of specific training for core farmers or other purposes, the training venue will be considered depending on the requirement. The venue needs to be visible and accessible for as many farmers as possible in every case.

- 9) The Project will not form any village organizations, but existing organizations can be utilized for the dissemination of appropriate technologies.

If there is an existing and functioning organization in a village, it will be considered as one of the bases for disseminating appropriate technologies.

8.2 Village selection and expansion of extension activities

Target villages for extension activities will be selected by shortest distance from the pilot villages, considering the ability of extension workers and the area in their charge. The number of villages allocated per extension worker in each year are given below. These numbers include both newly selected villages and villages for follow-up.

- 1) First, the extension activities will be conducted in all the pilot villages. The second year is the On the Job Training (OJT) period for master trainers and extension workers. They will join OJT for extension work in the pilot village of each district. Then the extension worker in charge will be assigned for each pilot village.
- 2) In the third year, extension activities will be expanded to the four villages neighboring the pilot village. Each extension worker shall be in charge of five villages.
- 3) In the fourth year, extension activities will be expanded to four villages neighboring the third year villages. Each extension worker shall be in charge of nine villages.
- 4) In the fifth year, extension activities will be expanded to four villages neighboring the fourth year villages. Each extension worker shall be in charge of 13 villages.

8.3 Flow of extension activities

The flow of extension activities in the village is proposed as shown in Figure 1.

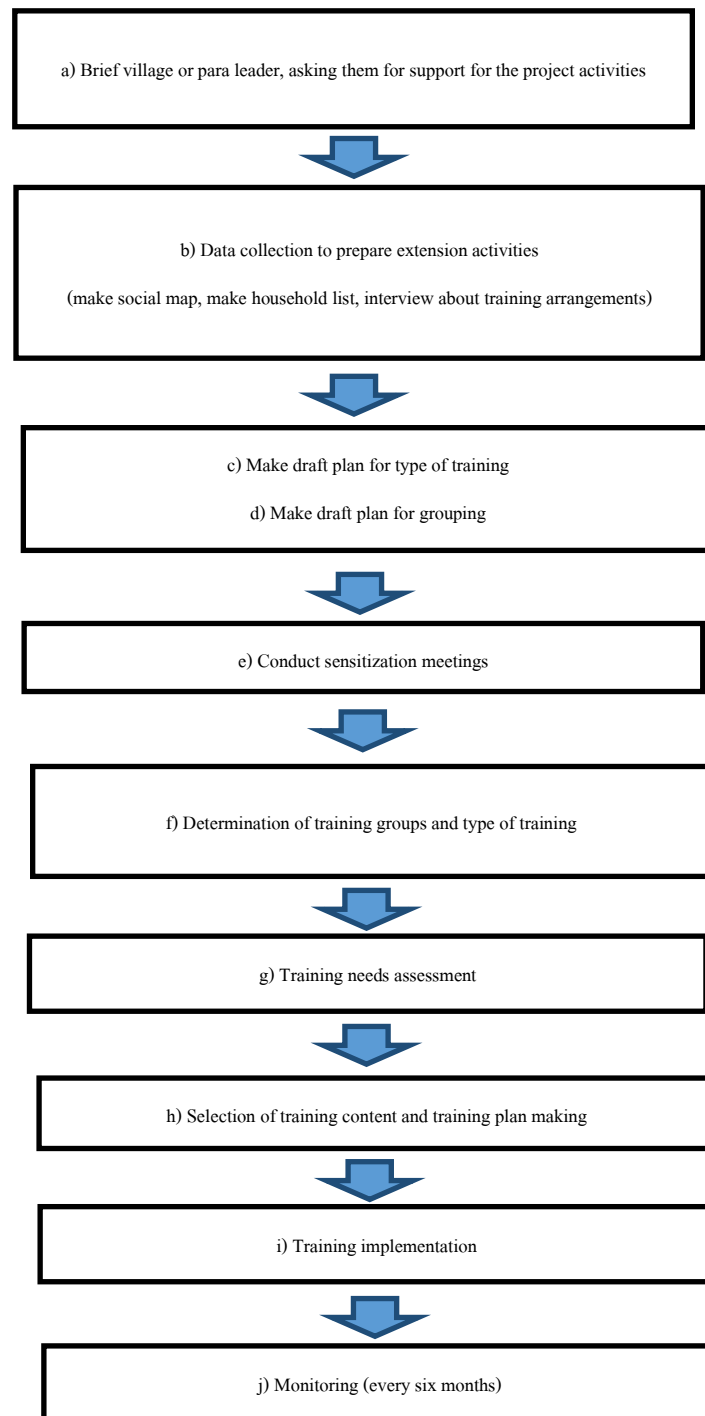


Figure 1 Flow of Extension Activities

a) Brief village or para leader, asking them for cooperation with project activities

Most villages have their own village leaders. For smooth implementation of extension activities, the cooperation of the village leader/para leaders is necessary. Therefore, the Project will explain about project activities to the village leaders and confirm the outline of the village situation.

Then, the Project will ask them to cooperate with project activities.

b) Data collection to prepare extension activities

The Project will conduct a workshop in each village to make a social map, collect the name of household heads, and interview about training preparation before starting extension activities. The social map is to identify the number of biradaris and paras, including their location in the village. The household list is to identify target households for the training by livestock and landholding status. This information is useful for proper grouping for training. Items for data collection by social map making are proposed in Table 14. This data can be collected in half a day, even if the target village is very large.

Table 14 Data collection by social map making

Drawing Item on the Social Map	Interview Items
1. Border of the village including roads and canals	1. Name of village leader
2. Name of surrounding villages and location	2. Name of biradari (or para) leader
3. Facilities in the village	3. Name of social workers with livestock holding status and main role for activities
4. Number of biradaris and location of paras	4. Relationship among biradaris
5. Name of the household heads of each biradari or each para	5. Relationship among surrounding villages

(Note) It is difficult to find out the name of female social workers from a survey of the whole village because attendance is normally only male. It is necessary to briefly interview women in a separate session.

On the social map-making day, only the name of household heads should be collected. After that, detailed data, such as population of each household, number of livestock and area of owned land, should be collected on another day. Items of data collection for making the household list are proposed in Table 15.

Table 15 Data collection for making household list

Details of data to be collected for making household lists
1. Population of household (household means they have a separate kitchen from other households and a different income source)
2. Number of livestock (only large milk animals such as buffaloes and cows; number of animals owned individually and shared should be separated).
3. Area of owned land
4. Occupation (main income source)

(Note) The name of household head and name of biradaris or paras will be identified during making of the social map.

The following items in Table 16 should be collected through interviews during making the social map.

Table 16 Interview about training arrangements

Interview items
1. Role and responsibility for livestock activities (Prepare activities list before the interview. Both men and women should be asked.)
2. Possibility of conducting mixed-biradari training
3. Possibility of conducting mixed-gender training

c) Make a draft plan for type of training

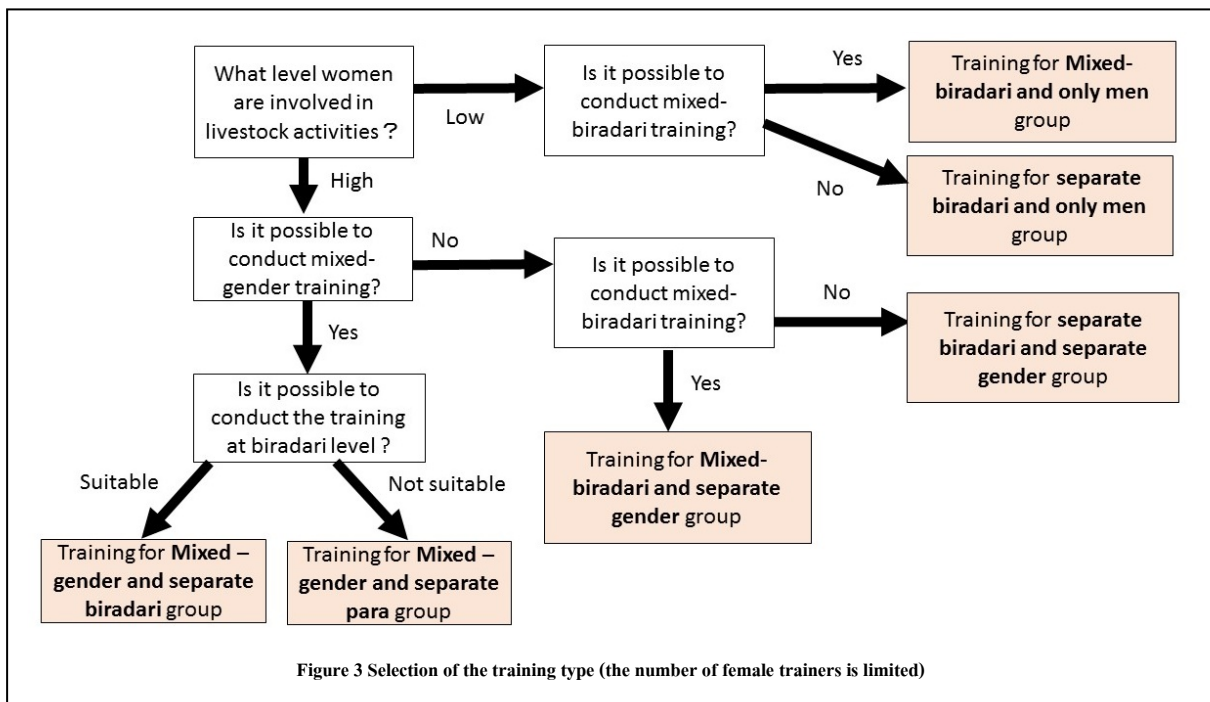
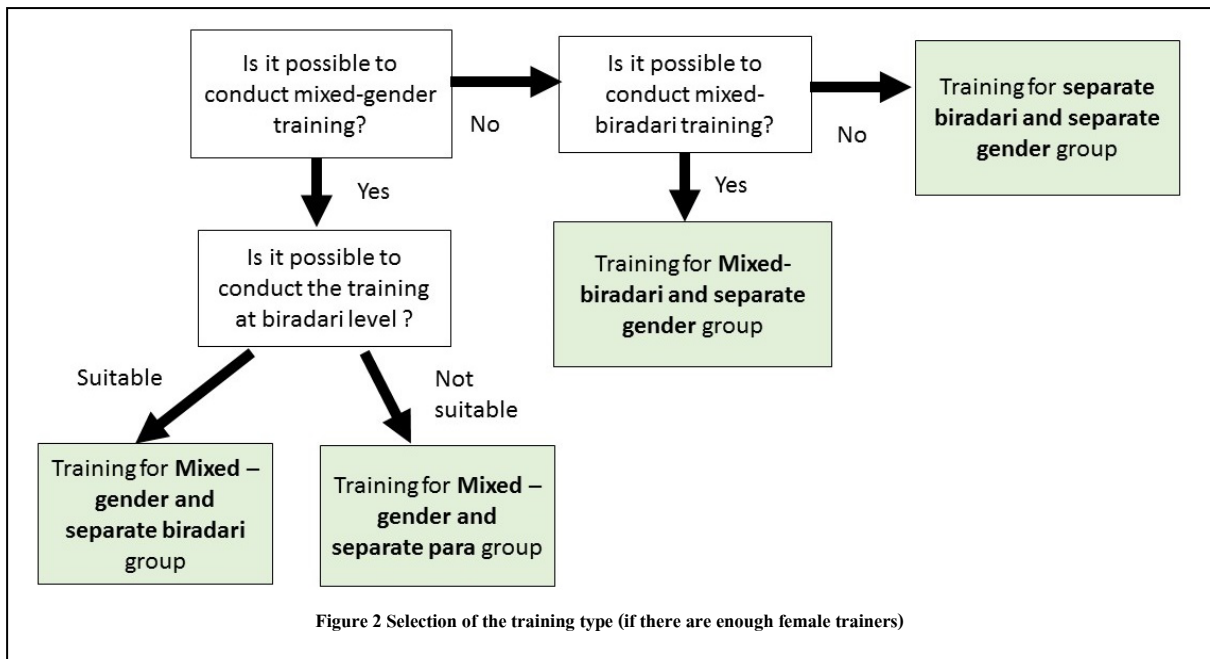
Considering the limitations on grouping for the training, there should be three proposed training types: 1) mixed-gender training, 2) mixed-biradari and separate gender training, and 3) separate biradari and separate gender training. The type of training for each village can be decided using Figure 2. The points to consider are as follows:

It is impossible to conduct mixed-gender training at village level for all the surveyed villages. This grouping can be applied at biradari level or para level. The village size and relationship between biradaris will be considered when deciding whether training should be conducted at biradari level or para level.

Mixed-biradari and separate gender training can be applied in villages where the relationship among different biradaris is good.

Separate biradari and separate gender training is needed to avoid participants being limited to specific biradaris or paras, because this may cause conflict or jealousy among the villagers. Clear objective criteria are needed for selection of targeted biradaris, such as the number of households and number rearing livestock.

When the Project conducts training for women under categories 2) and 3), the number of female trainers may restrict the amount of training of women that can be conducted. In general, the villagers do not accept a male trainer for training of women, or accept a male trainer with the condition that they are accompanied by a female trainer. In this case, involvement of women in livestock activities should be considered as shown in Figure 3, to select villages where the Project should provide training for women.



d) Making a draft plan for grouping

The Project will make a draft plan for grouping for training based on the results of the social map and household lists. According to the results of the PRA survey, it is difficult to conduct mixed-biradari training and mixed-gender training in all the villages. The village size varies from small with 20 to 30 households, to large with more than 200 households. Because of the variation in village size, the master plan report proposed that training groups consist of 20 farmers (as first beneficiaries) per group in each village. However, the Project will form training groups based on the result of b) Data collection to prepare extension activities (above), and the number of training groups

will be decided according to village size.

In addition, the Project is expecting dissemination of appropriate technologies from first beneficiaries to second beneficiaries after the Project provides technical guidance through extension workers to the first beneficiaries. The Project assumes that dissemination of appropriate technologies from first beneficiaries to second beneficiaries will happen spontaneously when the first beneficiaries realize that cooperation with the second beneficiaries brings them more benefit. This aspect will be considered for grouping for the training.

e) Conducting sensitization meetings

The Project will conduct a sensitization meeting in each village to explain the project activities and appropriate technologies. The program will consist of an introduction to the Project, contents of the project activities, and confirmation of those interested in participating in the training. During the sensitization meeting, the Project will clearly explain to the villagers what the Project can do and cannot do, to avoid the villagers having excessive expectations of the Project. The Project will provide only technical support and advice for livestock activities through training and monitoring.

f) Determination of the training groups and type of training

The Project will decide training groups and type of training based on the results of the sensitization meeting. The range of monitoring will be also decided.

g) Training needs assessment

Training needs assessment will be conducted for each training group. Then, the appropriate technologies to learn through the training will be prioritized. This work will be done by the extension workers in future.

h) Selection of training content and making training plan

A training plan will be made for each training group based on the result of the training needs assessment and identified content for the training. Technical experts and counterparts will be involved in the confirmation of training content. This work will be done by the master trainers in future.

i) Implementation of training

Training will be conducted by the master trainers and extension workers. Training for women will be conducted by female CPs at first. As for the frequency of training - once a week, and two to three hours per time, is suitable for busy farmers.

h) Monitoring each six months

The situation with dissemination of appropriate technologies will be confirmed by monitoring target

farmers using the checklist of appropriate technologies and household lists. The first beneficiaries will be asked whether they teach appropriate technologies to other farmers (the second beneficiaries). Any obstruction to the information flow caused by landholding status and disparity in wealth will be identified. When a village is showing good practice in terms of dissemination of appropriate technologies, the factor of promotion will be identified through monitoring.

8.4 Points that need to be discussed in the Project team

a) Content of the training

Training materials will be developed for each subject: 1) farm management, 2) marketing, 3) feeding management, 4) fodder, 5) reproduction, 6) animal health, and 7) genetic improvement. The Project should consult the technical experts about training content, and whether it should cover all topics for every farmer or select some specific topics according to the situation of the farmers.

It is possible that the required appropriate technologies depend on the village situation and environment. For example, in Adur Faqir Noohpoto village, Matiari District, the villagers do not have enough grazing land due to the physical structure of the village. If this is compared with the other villages, the land available for them to use is very limited because most of the land is residential. They are forced to rear livestock on their premises. Due to this, the role of men and women in livestock activities are clearly divided by gender. Feeding and watering are the work of women, while cutting fodder is work for men. In general selling milk is work for men; however, women and children are able to sell milk to the shop because the market is inside the village. In addition, the relationship among biradaris is affected by disparity in wealth.

The participants' interest in the training may be increased if they are shown tangible benefits they may receive. For example, if milk production increases in the summer season, the villagers can obtain more money from selling milk because the price of milk in summer is higher.

b) Training period

At the moment, the Project is planning that extension workers will visit a village once a week. The duration of training is planned to be two to three hours per training session; however, a final decision will be made after discussion with technical experts about training content.

c) Field training

Some former participants of BBSYDP training joined in the PRA survey. Some of them said that they could not remember the content of the BBSYDP training because it was lecture-based training and difficult for them to understand. They never practiced what they learned. The Project should consider the kind of technical training that can be provided that would be most effective for the participants.

d) Training materials

The Project will develop training materials for farmers that cover the necessary information, are visually attractive, and will be enjoyable to learn from. In the villages, there is a big gap in the education level. Only a few women can read. The level of understanding is different between educated villagers and non-educated villagers.

According to the results of the interview survey to extension organizations conducted in December 2014 by the Project, some training materials were collected. However, most of the materials consist of text. This can be a problem for a farmer who cannot read. The Project will develop training materials as shown in Table 17.

Table 17 Type of proposed training materials and outline of design

Type of training material	Outline of design
Textbook for farmers	All training themes are covered with brief explanation including illustrations and pictures to make it easy for the farmers to understand, even if they are illiterate.
Series of posters for extension workers	A combination of illustrations and key messages.
Game	1. Board game by which one can learn the relationship between cause and effect: for example, between application of appropriate technologies and milk production 2. Card game by which one can learn important points of appropriate technologies.
Calendar	To show seasonal or periodic livestock activities, such as the timing of vaccination and fodder management, with illustrations.

e) Use of pilot farmers and core farmers

In the village where the pilot farmer had achieved a certain level of results, the villagers were interested in appropriate technologies and they willingly attended the survey workshop. Therefore, when the Project conducts extension activities in a village, the Project should provide opportunities for villagers to realize the outcome for pilot farmers through a field visit or study tour, even from the surrounding villages. At the same time, giving frequent technical guidance to core farmers should be planned, because core farmers can be resource people for disseminating appropriate technologies to other farmers.

f) Selection and training of core farmers

The biradari that farmers belong to and disparity in wealth should be considered when the Project selects the pilot farmers or core farmers, because it might cause a hindrance for extension activities. Some villages have some conditions which derive from the difference between biradaris and economic status; people who belong to a biradari of high social standing never visit the residence of a biradari of lower social standing; and men from Hindu biradaris cannot enter Muslims' paras.

With selection of core farmers, it is better to select a farmer who has a good relationship with the pilot farmer, and who are willingly to learn appropriate technologies. In a village that does not have a pilot farmer, a core farmer will be selected from the training group members. In this case, the core farmers should be selected from training members with a good relationship with the pilot farmer, who are willing to learn appropriate technologies.

g) Use of social workers

In this survey, social workers and messengers have been identified in each village. If the Project can cooperate with these, they can be key people in dissemination of appropriate technologies. However, not all social workers rear livestock. Therefore, cooperation with social workers will be considered case by case.

9.5 Consideration for extension activities

a) Cross-check of information/data

Data from the survey and monitoring should be cross-checked to collect precise data. For example, the male villagers of Gul Muhammad Gumbeer village, Matiari District, who attended the workshop for the whole village said that there are only Muslims with one para in the village. However, when the Project conducted the workshop for women it was revealed that there is not only a Muslim biradari but also one Hindu biradari in the village. For Tayab Sand village, Badin District, three paras for one Muslim biradari and one para for a Hindu biradari were identified during the social mapping for the whole village. However, when the Project conducted the workshop for women, it was found that one of the Muslim paras is a different biradari to the neighboring villages. The actual number of paras in this village is two paras for one Muslim biradari, and two paras for one Hindu biradari. In Saleh Dal village, Hyderabad District, some of the female participants tried to report a lower price for by-products than the actual price to the Project, expecting to obtain inputs.

b) Contact between the Project and the village

If the Project cannot directly access the village head due to the existence of a messenger or mediator between the Project and village head, it is better to find several communication channels to ensure messages are conveyed to the village head properly.

Appendix Z3-3 Report on the Past Extension-Related Experience

Report on the Past Extension-Related Experience

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1. Objective of the Survey

In order to develop a sustainable extension system, extension activities implemented by other institutes in the past were surveyed. The main three objectives of the Survey is following.

- i) To collect extension materials developed by the existing extension-related institutes, and utilize those materials for the Project if possible
- ii) To clarify whereabouts of extension workers trained by the extension-related institutes, and try to collaborate with those trained extension workers as precious human resources for the Project
- iii) To grasp lessons obtained through the extension activities done by the extension-related institutes, and utilize those lessons for the extension activities of the Project

2. Survey schedule and names of interviewees

In December, 2014, nine extension-related institutes were interviewed. The survey schedule and names of interviewees are summarized in Table 1.

Table 1 The survey schedule and names of interviewees

	Date	Name of institutes (name of section) and names of interviewees
1	Dec. 1	Livestock and Dairy Development Board (LDDDB), (Milk Section) • Dr. Ghulam Hussain Dawach, Former Deputy Project Coordinator
	Dec. 3	Livestock and Dairy Development Board (LDDDB), (Meat Section) • Dr. Mushtaq Jokhio, Former Feedlot Fattening Specialist, LDDDB Meat section
2	Dec. 2	BBSYDP, Benazir Bhutto Shaeed Youth Development Program • Dr. Majeed Hakeem Dhamrah, Deputy Project Director (Livestock) • Dr. Liaqat Ali Abro, Assistant Director (Livestock)
3	Dec. 4	PDDC, Pakistan Dairy Development Company • Dr. Rasool Bux Soomro, Former Regional Office head of Sindh • Dr. Naheed Baloch, Former Regional Extension Officer
4	Dec. 5	SPO, Strengthening Participatory Organization • Dr. Ghulam Mustafa Baloch • Mr. Abdul Wahid Sangrasi, Programme Specialist
5	Dec. 8	TRDP, Thardeep Rural Development Programme • Mr. Nazir, Chief Executive officer • Mr. Vashoo Mal Parmar, Natural Resource Management • Mr. Narumal, General Manager (Finance and Administrations) • Mr. Zaheer Udin Babar Junejo, Senior Manager (Human Resource)
6	Dec. 9	SAFWCO, Sindh Agricultural and Forestry Workers Coordinating Organization • Mr. Suleman G. Abro, Chief Executive Officer • Mr. Qulban Shar, Executive Officer • Mr. Syed Sajjad Ali, Managing Director • Mr. Altaf Hussain Nizamani, General Manager, Program Development • Mr. Rafiq Ahmad, General manager • Ms. Ambar, Manager Education

	Date	Name of institutes (name of section) and names of interviewees
7	Dec. 10	NRSP, National Rural Support Programme · Mr. Ghulam Mustafa Haider, Regional General Manager
8	Dec. 10	RDF, Rural Development Foundation · Mr. Masood Ahmed Mahesar, Executive Director · Mr. Ashfaq Soomro, Head of Programme Unit
9	Dec. 11	ASLP II, Agriculture Sector Linkage Program Phase II · Dr. Sobia Majeed, Area Advisor

3. Outline of activities done by each extension-related institutes

3.1. LDDB, Livestock and Dairy Development Board

3.1.1 Outline of the organization

LDDB was established in 2005 to promote the livestock sector in Pakistan under an initiative of Ministry of Food, Agriculture and Livestock. Their activities were divided into two sectors, dairy and meat sectors. The dairy sector conducted Milk Collecting Processing and Dairy Production and Development Programme while the meat sector conducted Meat Development Programme. Both programmes were started from July 2007 as five-years programmes, however, they were suspended in March 2010 due to reorganization of the Ministry.

3.1.2. Livestock related project

a) Milk Collecting Processing and Dairy Production and Development Programme

This programme aimed to increase milk production by 10 to 15% and meet demand. The total budget of 1,500 million rupees was allocated by the Government of Pakistan. In Sindh Province, seven districts, namely Tando Muhammad Khan, Tando Allahyar, Badin, Thatta, Matiari, Shaheed Benazirabad (Nawabshah) and Hyderabad District were selected as target area. This programme comprised mainly two components as written in the below box.

<ul style="list-style-type: none"> i) Milk collection, processing and marketing ii) Progeny test
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i) Milk collection, processing and marketing

As targeting small scale farmers and landless farmers, this component aimed to improve their livelihood, to increase value adding of milk, and to empower women by organizing Milk Producers Group (MPG), and by introducing and managing a milk cooling tank. Outline of the component is summarized in Table 2.

Table 2 Outline of milk collection, processing and marketing component

Objective	· To generate income of small scale and land less farmers through the improvement of
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	<p>milk collection and marketing by farmers' organizations in collaboration with milk processors</p> <ul style="list-style-type: none"> • To improve food security and value addition by linking with urban market and milk processors • To empower women through value adding and capacity building
Outline of activity	<ul style="list-style-type: none"> • Milk Producer Groups (MPG) were organized by small scale livestock farmers who has 4 to 5 milking animals. One MPG comprised about 100 households covering 2 to 3 villages. Each group selected one Milk Cooling Operator (MCO) and one Village Livestock Worker (VLW) from their group. It was designed that LDDDB paid salary to MCO and VLW during first 2 years, then MPG would pay salary to them afterward. • MPG collected 50 paisa per 1 liter of milk from members as management cost, and paid necessary expenses such as operational cost of a milk cooling tank and wages of MCO and VLM. • LDDDB entered into an agreement that those companies collected milk from each MPG with 3 milk processors, namely Engro, Pakola, and Milac,. The price was determined by fat contents in milk. If fat content percent was 5 to 6%, the price was Rs. 20 to 25 per liter in 2007. • LDDDB provided a subsidy of Rs.200,000 for installing a milk cooling tank to each MPG. However, only 21 MPG out of 75 MPG could install a milk cooling tank due to discontinuation of the programme. The number of MPG which installed a milk cooling tank in each district were 5 in Tando Muhammad Khan, 6 in Tando Allahyar, 8 in Badin and 2 in Thatta.
Outcome	<ul style="list-style-type: none"> • 75 MPG was established. • 21 milk cooling tanks were installed. • 21 MCO were trained. • 22 VLW were trained. • 485 farmers were trained in feeding management, nutrition management and disease control.
Training	<ul style="list-style-type: none"> • MCO were trained by the milk cooling tank supplier, Uni-tech. • VLW were trained by Sindh Agriculture University, Tando Jam.

ii) Progeny Test

Although registration of farmers who reared indigenous breeds in Sindh province, such as Kundi Buffalo and Red Sindhi Cattle, was started to identify its elite mother buffalo/cow, this activity was discontinued after five to six months from the launching.

b) Meat Development Programme

This programme, as targeting maximization of meat production as an overall goal, aimed to establish efficient fattening farm, add value on meat products, link with stakeholders, and strengthen meat production and processing. Activities budget was 1,500 million rupees for the whole nation of Pakistan. In Sindh Province, following two main components were conducted.

- i) Feedlot fattening program
- ii) Organizing farmers association based on market

i) Feedlot fattening program

To select target farmers, at first, requirement of candidate farmers was advertised in a newspaper. Then, target farmers were selected among applicants who filled the selection criteria. Details of selection criteria were as follows:

- Farmers show willingness to construct livestock shed by own resources and it is feasible.
- Farmers have at least 1 to two acres of land for fodder production
- Farmers own 10 to 200 heads of large animals and/or 20 to 250 heads of small animals

The farmers who fulfilled the selection criteria were registered and were instructed to record animal health and feed management of their livestock. Rs.1,400 per head for large animals and Rs.400 per head for small animals were subsidized for vaccination.

ii) Organizing farmers association based on market

The number of fattening farmers is less than one of dairy farmers. In this component, LDDDB tried to organize scattered fattening farmers into a group by holding a meeting with fattening farmers and stakeholders of slaughter house and meat dealers, in order to establish a good business flow from farmers to retailers. However, activities were discontinued before the programme achieved any outcome.

3.1.3 References for the Project

a) Extension materials

Extension materials developed by LDDDB are shown in Table 3.

Table 3 Extension materials developed by LDDDB

Materials	Contents	Target	Availability / spec
Milk Collecting Processing and Dairy Production and Development Programme			
Textbook for MCO	How to operate chiller tank	MCO	Not-obtained / n.a. (The training was implemented by a manufacturer of the chiller tank)
Textbook for VLW	How to collect	VLW	Not-obtained/ n.a.

Materials	Contents	Target	Availability / spec
	milk		(The training was implemented by Sindh Agriculture University)
Meat Development Programme			
Textbook for participants of the training	How to fatten animals	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures

b) Human resource

Human resources trained by LDDDB are show in Table 4.

Table 4 Human resources trained by LDDDB

Title	Roles	Number of trained persons/ location
Milk Collecting Processing and Dairy Production and Development Programme		
MCO	To operate milk chiller at village level	21 persons in total/ 5 persons at TMK, 6 persons at TA, 8 persons at Badin, 2 persons at Thatta
VLW	To collect milk at village	22 persons in total/ 5 persons at TMK, 6 persons at TA, 8 persons at Badin, 2 persons at Thatta, and 1 person unknown
Livestock farmer	To be trained on feeding management ,nutrition management, and animal health management	485 persons in TMK, TA, Badin, Thatta, Matiari, Nawabshah, and Hyderabad District
Meat Development Programme		
Feedlot Fattening Officer	To monitor farmers' fattening activities under supervision of Feedlot Fattening Specialist To provide trainings to livestock farmers	6 persons in Sindh Province (Sindh Province was divided into 6 areas, 1 person at each area)
Stock assistant	Stock assistant	25 persons

c) Lessons and other useful information

Suggestions from LDDDB to the Project are following. Opinions and views from the Project are mentioned in brackets.

- Although there was an agreement with private milk processing companies, many farmers did not sell their milk to their chiller tank of MPG but sold directly their milk to nearby market. It is because the price at MPG was lower than the market price which was Rs. 30 to Rs. 35 per litter. (It is crucial to understand the market economy for marketing activities. This is a precious lesson which indicates that we should not ignore it.)
- Roles of middlemen could be improved through this programme. Middlemen were used to get double profits from farmers by two ways, by selling concentrate feed to farmers at high price and by buying milk at low price. However after this programme started, the issue was

eased.

- Although the programme tried to educate farmers thorough the trainings, the farmers were interested in only what kinds of incentives they could get. (It is important that the Project should try not to be expected by farmers too much, should not provide everything for free, and should urge farmers to put their self-help efforts as much as possible.)
- The most difficult issue at the beginning of the programme was to acquire farmers' trust. The farmers had bad impression on government officers saying "things done by you, government officers, were nontransparent, and you are lazy and not trustful". It was difficult to eradicate such impression of the past. (It is needed for the Project to keep transparency and sincere attitude to farmers as much as possible in order to acquire farmers' trust.)
- A key of successful animal breeding project is to provide a subsidy for risks of animal deaths. Since the farmers need supports for animal breeding, the Project should provide necessary protection to farmers especially at the early stage. If the Project can provide livestock insurance, the farmers will have more interests. (Financial source for such subsidy is an issue. The livestock insurance is another issue which should be tackled with.)

3.2 BBSYDP, Benazir Bhutto Shaheed Youth Development Program

3.2.1 Outline of the organization

Benazir Bhutto Shaheed Youth Development Program (BBSYDP) is a program implemented by an initiative of the Government of Sindh. It aims to tackle youth problems and improve social and economic status of youth by providing technical training to unemployed youth. The program targets persons of 18 to 35 years old. They can attend technical trainings only once in their life. Phase I was started in 2008. As of December 2014, Phase IV is under implementation.

Project Coordination Unit (PCU) is located in Karachi. Project Management Unit (PMU) under PCU is located in Hyderabad. There are BBSYDP's district offices in each district. The Government of Sindh provides a fund for the program. PMU needs to submit a proposal to the Government of Sindh through PCU. After the proposal is approved by the Government, the budget will be allocated. It is said that a part of the budget is provided by the World Bank. A proposal of Phase IV, which is on-going, was submitted to the Government of Sindh in 2012. Livestock trainings, including poultry, targeting 3,890 persons with budget of Rs.134 million as well as fisheries trainings targeting 1,380 persons with budget of Rs.89 million were approved in June 2014. As of December 2014, 65% of trainings were accomplished.

3.2.2 Livestock related project

BBSYDP training for youth covers various fields. Livestock related trainings are i) livestock management training by Lady Livestock Worker (LLW) ii) Artificial Insemination (AI) training, iii) animal health, iv) feeding management of goat, v) fisheries, and vi) poultry. The number of participants who attended livestock related trainings of BBSYDP are shown in Table 5. Details of i) livestock management training by LLW and ii) AI training are summarized as below.

Table 5 Participants number of Livestock Related Training by BBSYDP (Target /Achievement)

Phase	Component	Target	Achievement
Phase I (2008-2009)	Livestock and Fisheries	3,200	2,694
Phase II (2010-2011)	Livestock and Fisheries	2,037	2,023
Phase III	Livestock and Fisheries	0	0
Phase IV (on-going)	Livestock	3,890	2,625
	Fisheries	1,380	977
Total		10,507	8,319

(Source) Introduction presentation of BBSYDP

a) Livestock management training by Lady Livestock Worker (LLW)

Twenty five LLW are currently employed by BBSYDP to provide livestock training to women in villages. The monthly salary of LLW is Rs.25,000. Transportation cost to go to villages is not included in the salary. Livestock management training by LLW is conducted in villages. Necessary materials for the training such as a lap top PC, UPS, a generator, a projector, multi media for training contents, posters, presentation files, text books and a digital camera are carried from the BBSYDP Hyderabad office to the training venue. Outline of livestock management training by LLW is shown in Table 6.

Table 6 Outline of livestock management training by LLW

Target	<ul style="list-style-type: none"> • 18 to 35 years old women at 130 villages in Tando Muhammad Khan, Tando Allahyar, Matiari and Hyderabad District
Training duration and venue	<ul style="list-style-type: none"> • A training is held every day from 9:00 to 14:00 for 3 weeks to 1 month in a village. A training targets one village.
Outline of activity	<ul style="list-style-type: none"> • In general, BBSYDP Training is conducted step by step; i) lecture, ii) demonstration, iii) small group discussion, vi) case study, and v) role play. Training by LLW is composed of lecture and field practice. • Lecture is given as a form of presentation used by multimedia. After lecture, field practice is taken place. • Contents of practice are simple techniques which villagers can easily apply such as straw treatment by urea, deworming, mastitis test, vaccination, urea molasses to

	<p>animals as feed, and use of weed (busa). At the end of the training, LLW conducts a whole day gender workshop.</p> <ul style="list-style-type: none"> Participants of the training are given Rs.2,500 after the completion of training. If participants live more than 70km far from the training venue, 3 times of meals and accommodation are provided. During the training period, every participant is provided lunch and one time of tea as well as stationeries such as pencils, notebook and markers.
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b) AI training

AI training was conducted at Research and Training Institute (RTI) for persons who have Doctor of Veterinary Medicine (DVM). The cumulative number of participants is 134 as of December 2014. The participants were given a certificate and AI kits including a nitrogen container after the completion of the training.

3.2.3 References for the Project

a) Extension materials

Extension materials developed by BBSYDP are shown in Table 7.

Table7 Extension materials developed by BBSYDP

Materials	Contents	Target	Availability / spec
Training in livestock by LLW			
Textbook for farmers	Basic feeding management	Livestock farmers (female)	Obtained / Sindhi, black and white, text with some pictures
Multimedia teaching materials	Materials for trainer	Livestock farmers (female)	Not-obtained / n.a.
Presentation			
Poster			

BBSYDP requested the Project Team to share training materials once the Project Team develops them. On the other hand, teaching materials developed BBSYDP for LLW seem to include basic livestock techniques which fit to rural famers. The Project will refer their materials obtained during this meeting and positively utilize their good aspects. In addition, the Project will refer a series of their training methods such as lecture, demonstration, group discussion, case study, and role play.

b) Human resource

Human resources trained by BBSYDP are shown in Table 8. As of December, 2014, Haji Hussain Dal village in Tando Muhammad Khan District as well as Mazo Bozdar village and Haji Bahadur Daudi village in Tando Allayar District are target areas overlapped by both

BBSYDP and the Project. It is expected that farmers who attended BBSYDP training provide by LLW acquired a certain level of livestock technologies. It may be possible that the Project will provide advanced livestock technologies to those farmers or bring those farmers up as core farmers.

Table 8 Human resources trained by BBSYDP

Title	Roles	Number of trained persons/ location
Training on livestock by LLW		
Lady Livestock Worker	To Train rural female in livestock technologies	25 persons working in TMK, TA, Matiari, and Hyderabad District
Livestock farmers (female)	To be trained by LLW in livestock technologies	Many females from 18 to 35 years old at 130 villages in TMK, TA, Matiari, Hyderabad District
AI training		
Villagers	To be trained in AI technique at RTI	134 persons in total from phase I to IV in Sindh

c) Lessons and other useful information

- According to BBSYDP, activities for follow-up and monitoring after their training are not included into their plan and budget. A way how farmers cope with their problems relies on personal relationship between farmers and LLW. Based on this situation, in order to enhance training's effect, the Project will monitor and follow up regularly after the training, and will try to develop a mechanism in which farmers widely know necessary contact address whom farmers can ask to solve their problems.

3.3 PDDC, Pakistan Dairy Development Company

3.3.1 Outline of the organization

PDDC was a non-profit company which was established under the initiative of Ministry of Industry. It had been operated from May 2006 to August 2012. The board of directors had rights to decide all management issues of the organization. It comprised various members from different sectors such as processing companies, such as Nesle and Engro, Department of Finance, universities and progressive farmers. The head office was located in Lahore. Through regional offices located in each province, activities were extended to whole Pakistan.

3.3.2 Livestock related project

At first phase called as Horizon I, two programs were mainly conducted, i.e. model farm program, and cooling tank program. At second phase called as Horizon II, in total nine programs were proposed such as i) community farm, ii) milk pocket development, iii) extension, iv) breeding management and training, v) upgrading of milk farm (in Punjab), vi) bulk vending,

vii) rural service provider, viii) link to finance, ix) biogas. However only four programs, i) community farm, iii) extension, iv) breeding management and training, and ix) biogas, were actually implemented. Details of activities of Horizon I and Horizon II are explained as below.

a) Model farm program

Model farm program aimed to increase milk production by 25 to 30% by extending livestock technologies through establishing model farms at various parts in the country. Model farms were classified by the number of livestock as shown in Table 9. The half of construction cost for model farm was provided by the government as form of materials. The rest of half was paid by farmers themselves. At the model farms, free access to water and temperature mitigation for livestock were practiced based on technical advices from the staff. PDDC had targeted to establish 1,000 model farms per year. However, only 250 farms were actually established in whole Pakistan.

Table 9 Classification of PDDC’s Model farms

Size of Model farm	Number of livestock (including large and small)	Target setting
Small	1 to20 heads	60% of total farms
Medium	20 to 50 heads	20% of total farms
Large	More than 50 heads	20% of total farms

In this program, 12 technical staffs, called as Farm Production Advisor (FPA) , were employed by PDDC. They gave technical advices to the farmers about animal health, record keeping, and fodder. One FPA were in charge of 15 to 20 model farms covering two to three districts. All FPA were men. Eight FPA were veterinarians and other four FPA were agronomists. FPA visited the model farms once a month, then they reported the result of monitoring to the Area Manager.

b) Cooling tank program

Cooling tank program aimed to keep milk quality, to link with a market, and to improve milk selling price. The cost of the cooling tank was Rs. 400,000 per tank. It was provided with five years loan to individual farmers. PDDC employed two Milk Cooling Operators (MCO), and MCO played a role to connect milk producers and milk processors.

In total 360 tanks were installed in whole Pakistan. Fifty tanks out of 360 tanks were installed in Badin, Thatta and Shaheed Benazirabad (Nawabshah) District in Sindh Province. It was planned to install tank at Kairpur, Sukkur, Umerkot and Dadu District. However it was not implemented due to discontinuation of the program.

c) Community farm

PDDC formed a community which comprised 20 households who reared one to five livestock and lived in a same village. This program was conducted in four districts, i.e. Shaheed Benazirabad (Nawabshah), Kairpur, Dadu and Badin District. Communities were formed in five to six villages in each district, and in total 50 communities were formed in Sindh Province.

For this program, ten Community Farm Advisors (CFA) were employed. Main activities of CFA were to visit the communities twice per month; to grasp the problems which they have, and to give necessary advice to them. Technical advices were mainly done for joint procurement of seed, implementation of training, linking with milk processors, and construction of bamboo made livestock sheds. CFA are comprised of four women and six men. Nine of CFA were veterinarians and one CFA was an agronomist. PDDC provided cars to CFA for transportation to visit community.

d) Extension-Farmer Discussion Group (FDG)

Regional Extension Officers (REO) were assigned to north, central and south Sindh. All REO were veterinarians, three women and one man. Extension activities were conducted in the same area with model farm program. REO took charge of seven to eight districts. They visited target villages one to two times per month, and formed Farmer Discussion Group (FDG). In the end, 12 to 15 FDG were formed.

The extension method was to pose simple questions to FDG and give advices to their questions. REO repeated the same questions one year later, and checked progress of farmers' activities. Sometimes field trainings were took place to reply farmers questions on simple issues such as mastitis test. However PDDC did not plan trainings before conducting this extension program. In addition, REO conducted a field day to show demonstration plot and ask farmers to tell their success story to other farmers. According to REO, FDG was very effective extension method because farmers could learn each other.

FDG was comprised of 15 to 20 farmers. Men and women were divided into separate groups and biradari was not considered for group formation. REO in charge of south Sindh took care four FDG. Two FDG in Hyderabad were comprise of only women while one FDG in Badin and on FDG in Karachi were comprised of only men. As the result of regular discussion by FDG, activities such as fence construction, watering to animals, mastitis, and fodder utilization and quality of milk (do not mixing with impurities) were improved. These activities were done mainly through group discussions, and any special extension materials were not developed.

e) Biogas

The same staff with cooling tank program took charge of Biogas program. Biogas plants were installed to Tando Allahyar, Matiari, Umerkot, Sukkur and Shaheed Benazirabad (Nawabshah) District, total number of installation in the five districts was around 100. Average number of installation per district was two to three plants. Twenty five to 30 plants were installed in Umerkot District because of high demand.

3.3.3 References for the Project

a) Extension materials

PDDC didn't develop any extension materials.

b) Human resource

Human resources trained by PDDC are shown in Table 10.

Table 10 Human resources trained by PDDC

Title	Roles	Number of trained persons/ location
Model farm		
Farm Production Advisor	To provide technical advices to farmers on animal health, record keeping, and fodder	12 person (male)(8 veterinary doctors and 4 agriculture management specialists) in Sindh province (one person in charge of 2 to 3 districts)
Chiller tank programme		
Milk Cooling Operator	To promote installment of chiller tanks and connect between milk processing companies and farmers	2 persons in Badin, Nawabshar, and Thatta District
Community Farm		
Community Farm Advisor	To visit communities and provide advices on group purchasing of seed, implementation of trainings, and installment of shed	10 persons (4 female and 6 male/ 9 veterinary doctor and 1 agriculture specialist) in Nawabshar, Dadu, Badin, and Khairpur District
Extension – Organizing Farmer Discussion Group		
Regional Extension Officer	To organize Farmer Discussion Group	4 persons (3 females veterinary doctors and 1 male veterinary doctors) in 3 areas (northern, central, and south area) of Sindh Province

c) Lessons and other useful information

- The former PDDC officer said “Farmer Discussion Group is a very effective extension method because we could understand degree of farmers’ understanding and could deal with more than one person”. He also shared “farmers in Badin have to sell their milk at low price because they live far from market. Their animals suffer from mastitis. And farmers

mix water into milk”.

3.4 SPO, Strengthening Participatory Organization

3.4.1 Outline of the Organization

SPO is a non-profit organization established in 1994 after deriving from the development project by the Government of Pakistan and the Government of Canada. The headquarters is located at Islamabad and extends their activities to whole Pakistan. It aims to protect human rights especially for women, girls, youth, children and social minority group through enhancement of community organization. Main programs are i) democratic governance program, ii) social justice program, iii) organization development and enhancement for SPO itself. Outlines of main programs are shown in Table 11.

Table 11 Outline for main programs of SPO

	Name of program	Outline
i)	Democratic governance program	This program aimed to democratic governance, human right security, and conflict management through Community Based Organization (CBO). To enhance CBO's ability, development planning management training was conducted with 18 month field work and follow-up after 3 month from the field work. This training aimed that CBO could become to identify their problems and make own development plan for conflict resolution by themselves. 300 of CBO were trained as of today. Though SPO did not have directly livestock related project, they provided livestock related training if CBO picked up livestock activities as problems which should be solved.
ii)	Social justice program	1) Establish of monitoring committee for education and health facilities: the monitoring committee will monitor installation status and condition of facilities especially considering women. For example, they check whether lady's toilet is properly installed in the school and it is good condition to use. Rs.80,000 per facility are provided for the activities. 2) Women empowerment This activity establishes literacy groups to help livelihood each other among the group members and provides some funds. In Sindh Province, the activities are conducted in the villages in 9 districts including Matiari, Tando Muhammad Khan and Hyderabad. 20 villages are included in one district. The literacy group is comprises of 15 rural women and Local Resource Person (LRP) teaches them how to write and read together with simple calculation. Teaching is a continuous course of 6 month. There are

	Name of program	Outline
		10 LRP in Matiari, Tando Muhammad Khan and Hyderabad respectively. LRP is employed by SPO at Rs. 3,000 per month. 3) Advocacy campaign Advocacy campaign is conducted by using civil society network, political group and media to solve the problems of human rights and Government. Main advocacy campaigns are for marriage customary practice, punishment, caste, and drinking water. 27 of comprehensive campaigns were conducted in three years. These activities are supported by High Commission of England, the Government of Australia, the International Organizations for Migration (IOM), FAO, and United Nations according to the subject.
iii)	Capacity building of SPO	As one of the training institute, SPO is doing capacity building to enhance their function as the training institute. Especially they are conducting the training on facilitation and social mobilization. SPO has three their own trainers in this field.

3.4.2 Livestock related project

Livestock related programs are not main part of SPO's activities. However, Livestock Department Sindh requested them to organize Training of Trainers (TOT) to enhance not only livestock technical skills but also non-technical aspect such as facilitation skill and social mobilization. In 2007, 30 of veterinary officers were trained. Outline of TOT is shown in Table 12.

Table 12 Outline of TOT for officers of Livestock Department by SPO

Target of TOT	Officers of Livestock Department (Veterinary officer) , 30 person
Duration	15 days (Training implementation 10days, preparation and follow up 5 days)
Theme	Training in facilitation skill and social mobilization training Based on the above training, training on making trainer's and trainee's manual, and implementation of livestock management training at village level
Schedule	1) Needs assessment of a community, 2) development of training tools and materials (3 days) 3) field training (2 days) 4) verification of field training by role-play, and development of manuals for trainers and trainees 5) evaluation of the training
Budget	Rs. 1 million from the Livestock Department, Sindh
Output	Trainer's and trainee's manuals developed by the training participants
Note	Three C/P of the JICA project on sustainable livestock development for rural Sindh attended this TOT.

	Because of good reputation on the training, SPO provided this TOT to other organizations such as Engro and UNDP
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3.4.3 References for the Project

a) Extension materials

Extension materials developed by SPO are shown in Table 13. Those materials could not be obtained at the meeting. However since the counterparts of the Project attended the training, the Project will try to obtain the materials and confirm the detail of the materials

Table 13 Extension materials developed by SPO

Materials	Contents	Target	Availability / spec
TOT for veterinary officers at Livestock Department			
Manual for trainer	Manuals for trainers on basic feeding management	Trainers who provide trainings to livestock farmers)	Not-obtained / n.a.
Manual for trainee	Manuals for trainees (farmers) on basic feeding management	Livestock farmers	Not-obtained / n.a.

b) Human resource

Human resources trained by SPO are shown in Table 14.

Table 14 Human resources trained by SPO

Title	Roles	Number of trained persons/ location
TOT for veterinary officers at Livestock Department		
Trainers of livestock training	To provide training on facilitation, social mobilization, and way to develop manual for livestock training	30 veterinary officer at Livestock Department
Social Justice Programme		
Local Resource Person	To teach rural females on basic reading/writing and calculation (SPO selects LRP from villagers and hires them with Rs.3,000 per month)	30 females in Matiari, TMK, and Hyderabad District (10 females in each district)

c) Lessons and other useful information

Based on the discussion with SPO, the Project team has views as following.

- The methodology in which participants develop, examine and revise training materials by themselves during the training as verifying training materials through role-playing activities can be applied to the Project.

- Dissemination of information and implementation of group activities might be smoothly done in the areas where CBO is organized.

3.5 TRDP, Thardeep Rural Development Programme

3.5.1 Outline of the organization

TRDP is a non-profit organization. It was established in 1998. The head office is located at Mithi in Tharparkar District. They target Tharparkar, Umerkot, Dadu, and Jamshoro District. They aim to empower rural communities in order to enable rural people to develop their community by themselves and secure their rights.

Characteristics of TRDP's activities are to build up organizations at different level starting with Community Organization (CO), Village Organization (VO), and finally Local Support Organization (LSO). Based on these organizations, they conduct various activities. This method is applied by NRSP which is introduced afterward.

TRDP has nine sections as follows: i) Social Mobilization and Capacity Building, ii) Microfinance & Enterprise Development, iii) Natural Resource Management, iv) Health, Education & Sanitation, v) Community Physical Infrastructure, vi) Emergency Response & Rehabilitation, vii) Gender main stream, viii) Child protection, and ix) Coal & Tourism.

Livestock related activities are implemented under the Natural Resource Management section. The board of directors is comprised of 50 members. TRDP has 334 regular staffs, and 30% of them are women. According to TRDP, TRDP is the second largest training provider to farmers in Pakistan. TRDP has a training station and drip irrigation demonstration plot at Mithi.

3.5.2 Livestock related project

a) Prime Minister's Special Initiative for Livestock Project (PMSIL)

PMSIL was conducted for 5 years from 2007 to 2012 with the budget of the Government of Pakistan. Under this project, following five activities were conducted; i) training for veterinarians, ii) training for Community Livestock Extension Workers (CLEW), iii) establishment of veterinary clinics, iv) microfinance for livestock, and v) livestock management training for farmers. The details of each project are summarized in Table 15.

Table 15 Outline of PMSIL

Activity	Outline
i) Training for veterinarian	• 44 veterinarians were trained in feeding management of goat and sheep.
ii) Training for Community Livestock Extension	• Target area was 4 districts, i.e. Umerkot, Tharparkar, Jamshoro, and Dadu District • The training was comprised of 3 phases, 8 days for orientation, 15days for

Activity	Outline
Workers (CLEW)	<p>lectures and practices, and 31 days for field works. The lectures and practices were conducted in RTI. Totally 454 CLEW were trained.</p> <ul style="list-style-type: none"> • CLEW worked in their village after the training. CLEW were not hired by TRDP, but CLEW generated income by providing vaccination service to farmers. Under one veterinarian, 22 CLEW were assigned.
iii) Establishment of veterinary clinic	<ul style="list-style-type: none"> • During the project period, there were 44 veterinary clinics in the target districts. The clinics were located close to the market, and were fully equipped with necessary medicines such as vaccines and medicines for deworming. They were functioning as a community shop with enough stock. • 30 clinics in Tharparkar District are still operated by TRDP's own budget after the project was completed.
iv) Microfinance for livestock	<ul style="list-style-type: none"> • 30% of microfinance is related to livestock activities, and its main purpose is goat rearing. Minimum amount of loan is from Rs 10,000 to Rs. 15,000 while maximum amount of loan is Rs. 70,000. Women are main target of microfinance. Interest rate is 18% per year. The payment period depends on types of business. There are lump sum payment, weekly payment, and monthly payment. 99% of loans were successfully paid back. In case of poorest poor, interest can be exempted. In addition, in case of a scheme that the Government provides the fund for, they don't charge interest. • When livestock which a farmer bought by microfinance loan dies, all member who belong to the same group with the farmer have to compensate the loss. For example, there are 5 members in a group and livestock of one of them dies, other four members have to pay the loss. This joint responsibility is clearly mentioned in the contract paper.
v) Livestock management training for farmers	<ul style="list-style-type: none"> • If a group of member decided to buy a livestock by loan, TRDP provided livestock management training to the group. In total 21,000 women attended the training. Most of master trainers of livestock management are women.

b) Microfinance

TRDP has provided about Rs. 6,727 billion of loan to 109,949 persons. TRDP is currently working in 7 districts, namely, Umerkot, Tharparkar, Jamshoro, Dadu, Mirpurkhas, Badin, and Sanghar District. TRDP has branch offices at rural area and officers in charge of microfinance visit villages.

c) Milk collection, selling and calf rearing project at Umerkot district

This is a project for three years from 2012 to 2015. In present, 50 members are collecting milk and selling it at nearby market. Five villages are under implementation as a pilot project. TRDP does not provide any technical trainings and by-product making for this project.

3.5.3 References for the Project

a) Extension materials

Extension materials developed by TRDP are shown in Table 16.

Table 16 Extension materials developed by TRDP

Materials	Contents	Target	Availability / spec
Feeding management training for farmers			
Textbook for trainees	Plants and fodder in Tharparkar	Livestock farmers	Obtained / Sindhi
Textbook for trainees	Poultry	Livestock farmers	Obtained / Sindhi
Multimedia materials	n.a.	Livestock farmers	Not obtained / n.a.

b) Human resource

Human resources trained by TRDP are shown in Tale 17.

Table 17 Human resources trained by TRDP

Title	Roles	Number of trained persons/ location
Organizing CO, VO, and LSO		
Social Mobilizer	To organize CO, VO, LSO at village level and at UC level	Number is unknown /Tharparkar, Umar Kot, Dadu, and Jamshoro District ※ They are employees of TRDP.
Training for veterinary doctors		
Veterinary doctors	To be trained in management of sheep and goats	44 persons in Umar Kot, Tharparkar, Jamshoro, and Dadu District
CLEW		
CLEW	To provide livestock related services at village	454 persons in Umar Kot, Tharparkar, Jamshoro, and Dadu District
Training on management of animals for farmers		
Master trainers	To train farmers in management of animals	Number is unknown (mainly females) in Umar Kot, Tharparkar, Jamshoro, and Dadu District
Livestock farmers	To be trained in management of animals	21,000 person in total in Umar Kot, Tharparkar, Jamshoro, and Dadu District

c) Lessons and other useful information

Based on the discussion with TRDP, the Project team has views as following.

- The way of TRDP to start activities at rural communities is distinctive; TRDP firstly

investigates community's needs and organizes Community Organization. Then if there are needs, TRDP provides trainings in livestock to villagers. It is essential for the Project to extensively grasp farmers' needs at first and to clarify meanings and importance of Project's supports. PRA Survey will be useful for the purpose.

- CLEWs can provide services to nearby farmers without transportation means because CLEWs live in the village. Some CLEWs keep providing services after the completion of the project. This is one way by which livestock technologies can keep being utilized by providing villagers their income source.
- Although the target areas of TRDP and the Project don't overlap much, TRDP provides microfinance in Badin District, one of target districts of the Project. There is possibility to collaborate with TRDP if TRDP can provide financial services to farmers who need a loan to buy animals for calf rearing or recycling dry buffaloes. In addition, their way of risk diversification seems interesting; when an animal owed by a borrower dies, the loss would be compensated by all members of a group.

3.6 SAFWCO, Sindh Agricultural and Forestry Workers Coordinating Organization

3.6.1 Outline of the organization

SAFWCO is a non-profit organization which established in 1986. They started their first activity in Sanghar District. In present, the head office is located in Hyderabad, and they are mainly working at villages in Sindh Province. SAWFCO covers following fields; i) social mobilization, ii) credit and enterprise development, iii) community physical infrastructure, iv) education, v) health, vi) human resource and institutional development, and vii) environment and climate risk management.

3.6.2 Livestock related program

Since 1994, 20 livestock related programs have been conducted in Sanghar, Badin, Thatta, Jamshoro and Matiari District. Especially, 15 programs out of 20 were conducted in Sanghar District. Foreign NGOs are main donors for SAWFCO's projects while the Government of Sindh also provides funds for some projects. Five veterinarians are working as SAFWCO's staffs. And they are collaborating with government activities, facilities, and staff in livestock sector. For example, when the veterinarians of SAFWCO visit a village, they give vaccination to livestock in the village as collaborating with a government's dispensary. The achievement of a series of livestock related programs are summarized in the below box.

- Established goat bank
- Provided two goats to 500 women for improving their livelihood
- Established five UC based milk collection centers
- Formed Livestock Enterprise Groups by women
- Improved skills of 4,000 women on product diversification, value addition and marketing
- Improved skills of 5,000 women on livestock fattening and management
- Trained 100 livestock extension workers
- Vaccinated 1.5 million livestock heads pre, during, and post disaster
- Improved 100 men's and women's skills on modern livestock farming
- Provided fodder for 50,000 livestock heads on monthly basis

Among the livestock related projects, microfinance and training for Community Extension Workers (CEW) are their main components. The details of the activities are as follows:

a) Microfinance

Microfinance for women is provided in Sanghar, Shaheed Benazirabad (Nawabshah), Matiari District, and Hyderabad. Purposes of loan vary including goat and buffalo rearing and selling. Amount of loan per time is from Rs. 50,000 to 500,000. In case of the poorest poor, necessary money can be given as a grant instead of a loan. In total 250,000 household borrowed money for livestock related activities. Mortality rate of livestock is 10%.

b) Community Extension Workers (CEW)

SAFWCO trained Community Extension Workers (CEW) in technical subjects such as water management, irrigation, and fodder management as well as non- technical training such as PRA, social mobilization, group organization, and entrepreneurship through 15 days training. 80% of CEW are women. However, men are superior to women on their mobility. SAFWCO does not employ CEW as their staff. CEW are generating income by vaccinating livestock in their village. Education level of CEW is mostly secondary level.

3.6.3 References for the Project

a) Extension materials

Extension materials developed by SAFWCO are shown in Table 18.

Table 18 Extension materials developed by SAFWCO

Materials	Contents	Target	Availability / spec
A series of livestock-related projects			
Textbook for trainees	Livestock (goat)	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures

Materials	Contents	Target	Availability / spec
Textbook for trainees	Livestock and poultry	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Textbook for trainees	Livestock and vaccination for prevention	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Leaflet	Advocacy of food safety project	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures

b) Human resource

Human resources trained by SAFWCO are shown I Table 19.

Table 19 Human resources trained by SAFWCO

Title	Roles	Number of trained persons/ location
A series of livestock-related projects		
Veterinary doctor	(Staff of SAFWCO)	5 persons
Training for Community Extension Worker		
Community Extension Worker	To be trained in various theme such as water management/ irrigation, livestock feeding management, and social mobilization To Provide vaccination services at village level	100 persons (80% are female) in Sanghar, Badin, Thatta, Jamshoro, and Matiari District

c) Lessons and other useful information

Suggestions from SAFWCO to the Project are following.

- Shifting from small scale livestock activities to business is very important but difficult. Shifting to business doesn't mean commercialization in large scale. For example, some people rear one or two goats not for income source but for showing his status. The situation has not been improved much although various trainings have been conducted at villages.
- At first it is essential to have counseling with farmers. Then it is important to collaborate with existing government facilities and trainings.
- What the Project should put in order are i) what kinds of resources such as facilities and trainings exist and what the Project can strengthen, ii) how marketing issues such as outlets, transportation and chiller tanks can be solved.
- Regarding the first issue, the government has veterinary hospitals and Research and Training Institute, RTI, for capacity development in Tando Muhammad Khan District. But it is hard to say that those facilities meet people's needs. These facilities should be prioritized by the government to be improved. In addition, an action plan should be in line with a policy.

- Regarding the second issue, it is very important for small scale farmers who rear two to four buffalos how those farmers sell their milk as minimizing a commission of middlemen and maximizing farmers' profit.
- It is important to think how to integrate 3 factors, i) livestock technologies, ii) finance at rural, and iii) utilization of existing facilities, to solve issues.

Besides the above, the Project Team has views as following.

- SAFWCO said that their goat bank is successful as applying revolving. It can be referred to the Project, especially when the Project develops a mechanism to save calves.
- SAFWCO provides microfinance in Matiari and Hyderabad District, target districts of the Project. There is possibility to collaborate with SAFWCO if SAFWCO can provide financial services to farmers who need a loan to buy animals for calf rearing or recycling dry buffaloes.

3.7 NRSP, National Rural Support Programme

3.7.1 Outline of the organization

NRSP is a non-profit organization established in 1991. NRSP is the largest organization among many of Rural Support Programmes in Pakistan in terms of target area, number of staff, and contents of activities¹. NRSP is organizing Community Organization (CO), Village Organization (VO), and Local Support Organization (LSO) at village level, Deh level and Union Council level respectively. Based on these organizations, NRSP implements various activities. In Sindh Province, 17,086 CO were established and 278,459 persons became members of CO.

Table 20 The number of CO organized by NRSP and number of CO members in Sindh Province

District	Number of CO				Number of member		
	Men	Women	Mix	Total	Men	Women	Total
Badin	2,686	2,399	566	5,651	56,416	46,497	102,913
Hyderabad	370	200	153	723	6,878	5,081	11,959
TMK	403	490	172	1,065	6,494	11,052	17,546
Mirpurkhas	1,862	1,884	397	4,143	32,920	36,585	69,505
Matiari	1,590	915	267	2,772	23,057	8,961	32,018
TA	355	63	41	459	4,513	1,100	5,613
Shaheed Benazirabad	25	36	67	128	589	703	1,292
Thatta	1,016	799	330	2,145	18,767	18,846	37,613

¹ 19th Annual Progress Report 2012-2013 – Enabling the Poor to Improve their Livelihoods, NRSP

合計	8,307	6,786	1,993	17,086	149,634	128,825	278,459
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(Source) 19th Annual Progress Report 2012-2013 – Enabling the Poor to Improve their Livelihoods, NRSP

NRSP starts working at village level to organize CO, and after that, they work at Deh level and UC level to organize VO and LSO. Therefore an existence of LSO indicates that villages under the UC are well-organized at certain level. Therefore villages in UC where NRSP organized LSO can be assumed that the villages are well organized. In our target districts there are 3 UC, namely Reeru Rashari UC in Badin District, Tando Saindad UC in Tando Muhammad Khan District, and Haji Dahadal Daudani UC in Tando Allayah District, where LSO are active. One of our pilot villages, Tayab Sand village in Badin District, is overlapped with NRSP rehabilitation program. NRSP is working in Sindh based in Hyderabad. NRSP allocates 100 social mobilizers, and half of them are female.

3.7.2 Livestock related project

a) NRSP Livestock Program/Community Livestock Extension Worker (CLEW)

It was conducted in selected 16 districts in the whole Pakistan from July 2011 to June 2014. In order to provide veterinary services such as vaccination and deworming, NRSP improved operational ability of veterinary clinics, and trained Community Livestock Extension Worker (CLEW). CLEW generate their income by providing veterinary services, and NRSP does not employ CLEW as their staff. Education levels of male CLEW are mostly secondary level while ones of female CLEW are mostly primary level. In south Pakistan, about 500 CLEW were trained, and 50 CLEW out of 500 were women. In addition to the above activities, this program provided livestock management training to 1,000 rural women.

b) Microfinance

NRSP provides two microfinance programs, i) Microfinance and Enterprise Development Programme mainly for rural area and ii) Urban Poverty Alleviation Programme for urban area, for income generation in various fields. Total amount of disbursement is about Rs. 71,900 million. NRSP mainly provides loan in three fields, i) small business, ii) agriculture and iii) livestock, and livestock is assumed as one of their main fields.

NRSP allocates Micro Investment Facilitators, and they support villagers to prepare a repayment plan and solve problems at household level. NRSP assesses and decides provision of loan and CO guarantees the payment. Amounts of loan for a household are mainly from Rs.15,000 to 25,000. Upper limit is Rs.70,000. In case of livestock related loans, it is mainly used for purchasing small animals such as calf, goat and sheep. 99% of borrowers are landless farmers or non- farmers. Crop and livestock insurances have been introduced as a trial basis.

3.7.3 References for the Project

a) Extension materials

Extension materials developed by NRSP are shown in Table 21.

Table 21 Extension materials developed by NRSP

Materials	Contents	Target	Availability / spec
NRSP Livestock Program / Community Livestock Extension Worker (CLEW)			
Textbook for CLEW training	Basic livestock	CLEW	Not-obtained / n.a. ※the training materials were provided by RTI

b) Human resource

Human resources trained by NRSP are shown in Table 22.

Table 22 Human resources trained by NRSP

Title	Roles	Number of trained persons/ location
Organizing CO, VO, LSO		
Community Resource Person	To support social mobilizer of NRSP at village (selected from villagers)	Number is unknown /Badin, Hyderabad, TMK, Mirpurkhas, Matiari, TA, Nawabshar, and Thatta District
Social Mobilizer	(Social Mobilizer employed by NRSP)	100 persons in Badin, Hyderabad, TMK, Mipurkhas, Matiari, TA, Nawabshar, and Thatta District
NRSP Livestock Program / Community Livestock Extension Worker (CLEW)		
CLEW	To provide services of animal health	500 persons (including 50 females) in southern part of Pakistan
Livestock farmers (female)	To be trained through 7-days livestock management training	1,000 females in southern part of Pakistan

c) Lessons and other useful information

Suggestions from NRSP to the Project are following.

- It is very important that the Project should precisely grasp community's needs, and select communities which show their willingness to work with the Project.
- In order to foster organizing CO, VO, and LSO, there are three important factors, i) potential of the organization, ii) member's willingness to change, and iii) existence of a good leader. A leader must be honest, have loyalty to his community, and have a certain educational background. A leader doesn't need to be a village chief, and in many cases a leader is not a village chief.
- It is easy to disseminate information and work as a group in villages where CO is functional because those villages are well-organized. Therefore if the Project plans to implement any group activities, it is better to start activities in villages where CO is

functional.

- Farmers, especially in the area where villagers received emergency aid before, tend to receive goods and services for free. Social mobilization is effective when the Project lead farmers from grant aid to self-help effort. Therefore social mobilization should be included into training. For your reference, NRSP does not provide incentive to farmers when NRSP implement trainings to farmers.

Besides the above, the Project Team has views as following.

- It is expected that villages in UC where LSO is organized are well-organized. Since there are some UC where LSO is functional in pilot districts of the Project, the Project will examine whether or not an extension model which utilize LSO, VO, and CO is feasible.
- The Project will examine whether or not the Project can utilize CLEW trained by NRSP for extension activities.
- The Project will ask NRSP whether or not NRSP can provide financial services to farmers who need a loan to buy animals for calf rearing or recycling dry buffaloes. It is written on their annual report that NRSP introduced livestock insurance as pilot. The Project will confirm the effectiveness of their livestock insurance.

3.8 Rural Development Foundation

3.8.1 Outline of the Organization

Rural Development Foundation, RDF, is a non-profit organization established in 1978. The Head office is located in Islamabad and they have a consultative status of the United Nations Economic and Social Council². RDF has five sections, i.e. i) Food Security and Livelihood, ii) Reproductive Health, iii) Quality Education and Learning, vi) Emergency Response, and v) Climate Change and Disaster Risk Reduction (Climate Change & DRR). Livestock related projects are implemented under the Climate Change & DRR section. There are seven on-going projects in total and a part of the projects is implemented in collaboration with TRDP.

3.8.2 Livestock related project

a) Climate change project in Tharparkar

Among their on-going projects, the climate change project in Tharparkar focuses on livestock related activities. Ten Community Livestock Extension Workers (CLEW) were trained in RTI. The training included communication and social mobilization in addition to livestock technical topics. Three veterinarians, 2 men and 1 woman, trained at Sindh Agriculture University Tandojam, are working in Tharparkar. In this project, Farmers Field School (FFS)

² <http://www.rdf.org.pk/>

method was applied to teach livestock management to farmers.

Main themes of FFS are livestock sheds, nutrition management, vaccination, and fodder management. Only one day was taken for each theme, however, it has been continuously held for 3 to 4 months. As for training materials, simple posters were prepared. Vaccination chart is kept at the office of Community Organization, and three to four copies are distributed per village.

b) CLEW: Community Livestock Extension Workers

Apart from the on-going project in Tharparkar, RDF trained CLEW in Dadu, Jamshoro and Tando Allahyar District a few years ago. RDF conducted training for CLEW, however, they did not employ CLEW as their staff. CLEW earn income by providing veterinary services to farmers in their village. Two types of extension materials packages, namely Capacity Building Package and Community Extension Package, were provided to CLEW. Both of them, flip-chart like materials, are made from hard board papers with pictures and key messages. Capacity Building Package explains social mobilization, gender issue (working responsibility of men and women), human rights, and general issues of livelihood. Community Extension Package explains the techniques of livestock management. Volume of each package is as same as one sketch book. This is very convenient to bring to villages. Duration of training for CLEW was about one month, and the first aid kits were provided to each CLEW at the end of the training. Average income of CLEW generated by vaccination services is about Rs. 3,000 to 4,000. CLEW live in their own villages, and provide veterinary serves to villagers in and surrounding their village.

c) Vaccination in Tando Allahyar

Vaccination in Tando Allahyar is only one activities which RDF collaborate with the Government. MOU was concluded between the Director General of Livestock Department and RDF. RDF is conducting various campaigns such as orientation of vaccinations in communities for 7times. This activity is two years project and it will be completed in June 2015.

d) Others

Mott grass which is high salinity tolerant species is experimentally planned in Dadu District. This grass can be used for multipurpose including being used as fodder. As another activity, livestock is provided to poorest poor women, and technical advices such as how to select good livestock and how to link with a market are also provided.

3.8.3 References for the Project

a) Extension materials

The training materials developed by RDF for farmers basically comprise pictures and short messages. RDF does not use multimedia materials such as video etc. The contents is basic knowledge on livestock management, lists of “should not do”/”should do”, and calendar for fodder and feeding management. The training materials for farmers are summarized into 2 packages, Capacity Building Package and Community Extension Package. The 2 packages seem worth to refer. Extension materials developed by RDF are shown in Table 23.

Table 23 Extension materials developed by RDF

Materials	Contents	Target	Availability / spec
CLEW			
Capacity Building Package	Social mobilization, gender, human rights etc	Training for livestock farmers	Not-obtained / sketchbook-like materials with pictures and key messages in Sindh
Community Extension Package	Basic livestock management	Training for livestock farmers	Not-obtained / sketchbook-like materials with pictures and key messages in Sindh

b) Human resource

Human resources trained by RDF are shown in Table 24.

Table 24 Human resources trained by RDF

Title	Roles	Number of trained persons/ location
Climate change related project in Tharparkar District		
Veterinary doctor	(Employees of RDF)	3 person (2 males and 1 female) in Tharparkar District
CLEW		
CLEW	To be trained for a month To provide veterinary services	10 person in Tharparkar District (RDF trained CLEW in Dadu, Jamshoro, and TA in the past)

c) Lessons and other useful information

Suggestions from RDF to the Project are following.

- Firstly it is important for the Project to work directly in communities. It depends on capacity of the community whether or not the community can keep on working by themselves. Therefore the Project should carefully select technologies by focusing on what kinds of technologies villagers can apply and keep using after the completion of the Project. Especially feeding management is a very important area.
- It is very important to minimize villagers’ expectation. In many cases, various NGO provide various incentives to villagers. This is also an issue for RDF, but the Project should urge villagers to put self-help efforts. RDF applied self-help approach in a project which

RDF implemented in Sanghar where people suffered from flood in 2011. In the project, RDF encouraged villagers to save Rs.20 per week. And once the savings reach at certain amount, villagers lend some amount to member, and the member started a small retail shop.

- The existing vaccine services done by the government are very good services, and the Project should collaborate with the services.

As additional information from RDF, RDF does not implement training targeting only female but both males and females separately on the same contents. If the Project implement training at village level, it is necessary to consider gender issues by providing training to male and females separately

3.9 ASLP II, Agriculture Sector Linkage Programme (Phase II)

3.9.1 Outline of the programme

ASLP II is a collaboration project between Charles Sturt University (CSU) in Australia and University of Veterinary and Animal Sciences (UVAS) in Lahore which supported by Australian Agency for International Development, AusAID. The project aims to improve milk production by small scale dairy farmers through improvement of extension services. ASLP is a five years project; Phase I was implemented from 2007 to 2009 and Phase II is implemented from 2010 to 2015. Outline of the program is shown in Table 25.

Table 25 Outline of ASLP II

Objective	<ul style="list-style-type: none"> • To determine the most effective extension approach in different areas of Pakistan • To develop and demonstrate strategies for optimizing feed resources for small holder dairy farmers • To identify and promote profitable new strategies for calf rearing • To identify and promote profitable strategies for milk production by improving milk marketing options for a quality product • Build the capacity of key personnel driving the production and marketing of milk from the farm to the consumer
Target	<ul style="list-style-type: none"> • Small scale livestock farmers
Target area	<ul style="list-style-type: none"> • In total seven districts; Punjab Province five districts ; Sindh Province, Thatta and Badin District • Target villages of Sindh Province are six villages in Thatta District and ten villages in Badin District
Structure	<ul style="list-style-type: none"> • Top of the structure is the Project Leader, followed by Project Manager. There are three pairs of Area Advisors under the Project Manager, and a pairs is composed of a man and a woman. Two pairs of advisors are working in Punjab Province and

	one pair in Sindh Province.
Extension method	<ul style="list-style-type: none"> • At first, a focal person is selected among the villagers. Then, a pair of advisors visits the villages once in a month to conduct a village meeting. Area Advisors of Sindh Province are in charge of 16 villages. That means that they have 16 times of the meeting in a month. If the farmers request them to conduct another meeting, extra meeting will be held. Duration of the meeting is three hours per time. Veterinarians, three persons for Thatta District and five persons for Badin District, also attend the village meeting. They are provided Rs.5,000 per month by ASLP II as allowance. Veterinarians are visiting the village twice a month. • When ASLP II conducts training, the pair of Area Advisors work as trainers. Therefore, there is no need to train master trainers. No incentive is provided to the farmers for attendance of the meeting. The activities will be suspended during Ramadan.
Extension Materials	<ul style="list-style-type: none"> • There are many extension modules and leaflet.
Outcome of Extension	<ul style="list-style-type: none"> • Livestock farmers' awareness is improving through regular meetings.

3.9.2 References for the Project

a) Extension materials

Extension materials developed by ASLP are shown in Table 26.

Table 26 Extension materials developed by ASLP

Materials	Contents	Target	Availability / spec
ASLP			
Extension module	Booklet on each subject of livestock management	Livestock farmers	Obtained / Sindhi, colored text with some pictures
Leaflet	Leaflet on each subject of livestock management	Livestock farmers	Obtained / Sindhi, colored text with some pictures
Success story	Success stories of ASLP registered farmers	Livestock farmers and others	Obtained/ English, colored booklet

* Livestock management includes 8 subjects, i) calf rearing, ii) dairy products, iii) hygiene, iv) health, v) livestock, vi) milk marketing and value addition, vii) nutrition, and viii) combination

b) Human resource

Human resources trained by ASLP are shown in Table 27.

Table27 Human resources trained by ASLP

Title	Roles	Number of trained persons/ location
ASLP		
Area Advisor	To visit and organize a meeting once per month, and provide training (employees of ASLP)	2 person (1 male veterinary doctor and 1 female veterinary doctor) in Sindh

c) Lessons and other useful information

Based on the discussion with ASLP, the Project team has views as following.

- This is an example of extension activities implemented by regular visit and advice without any incentives to farmers
- Calf rearing is also included as one of the subjects and the Project can exchange information with ASLP on this regards

4. Summary of reference for the Project

4.1 Extension materials

As BBSYDP developed extension materials (including multimedia material) for LLW and RDF developed two packages of extension materials (Capacity Building Package and Community Extension Package), various extension materials such as multimedia materials, flip-chart-like materials, posters, and pamphlet have been developed. Based on the extension materials obtained during this Survey, the Project will utilize good aspects of these materials. Extension materials developed by extension-related institutes are summarized in Table 28

Table 28 Extension materials developed by various livestock project

Materials	Name of project	Contents	Target	Availability / spec
Materials to train CLEW				
Textbook for CLEW training	NRSP, NRSP Livestock Program / Community Livestock Extension Worker (CLEW)	Basic livestock	CLEW	Not-obtained / n.a. ※ Training materials were provided by RTI
Materials for trainers				
Manual for trainer	SPO, TOT for veterinary officers at Livestock Department	Manual for trainer	Trainers who provide trainings to livestock farmers	Not-obtained / n.a.
Multimedia materials	TRDP, Feeding management training for farmers	n.a.	Livestock farmers	Not obtained / n.a.
Capacity Building Package	RDF, CLEW	Social mobilization, gender, human rights etc	Training for livestock farmers	Not-obtained / sketchbook-like materials with pictures and key messages in Sindh
Community Extension Package	RDF, CLEW	Basic livestock management	Training for livestock farmers	Not-obtained / sketchbook-like materials with pictures and key messages in Sindh
Success story	ASLP	Success stories of ASLP registered farmers	Livestock farmers and others	Obtained/ English, colored booklet
Materials for Operator				
Textbook for MCO	LDDDB, Milk Collecting Processing and Dairy	How to operate chiller tank	Milk Cooling Operator	Not-obtained / n.a. (The training was implemented by a

Materials	Name of project	Contents	Target	Availability / spec
	Production and Development Programme			manufacturer of the chiller tank)
Textbook for VLW	Lddb, Milk Collecting Processing and Dairy Production and Development Programme	How to collect milk	Village Livestock Worker	Not-obtained/ n.a. (The training was implemented by Sindh Agriculture University)
For farmers				
Textbook for participants of the training	Lddb, Meat Development Programme	Livestock fattening	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Textbook for farmers	BBSYDP, Training in livestock by LLW	Basic feeding management	Livestock farmers (female)	Obtained / Sindhi, black and white, text with some pictures
Multimedia teaching materials Presentation Poster	BBSYDP, Training in livestock by LLW	Materials for trainer	Livestock farmers (female)	Not-obtained / n.a.
Manual for trainee	SPO, TOT for veterinary officers at Livestock Department	Manuals for trainees (farmers) on basic feeding management	Livestock farmers	Not-obtained / n.a.
Textbook for trainees	TRDP, Feeding management training for farmers	Plants and fodder in Tharparkar	Livestock farmers	Obtained / Sindhi
Textbook for trainees	TRDP, Feeding management training for farmers	Poultry	Livestock farmers	Obtained / Sindhi
Textbook for trainees	SAFWCO, A series of livestock-related projects	Livestock (goat)	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Textbook for trainees	SAFWCO, A series of livestock-related projects	Livestock and poultry	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Textbook for trainees	SAFWCO, A series of livestock-related projects	Livestock and vaccination for prevention	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures

Materials	Name of project	Contents	Target	Availability / spec
Leaflet	SAFWCO, A series of livestock-related projects	Advocacy of food safety project	Livestock farmers	Obtained / Sindhi, black and white, text with some pictures
Extension module	ASLP	Booklet on each subject of livestock management	Livestock farmers	Obtained / Sindhi, colored text with some pictures
Leaflet	ASLP	Leaflet on each subject of livestock management	Livestock farmers	Obtained / Sindhi, colored text with some pictures

4.2 Human Resource

TRDP, NRSP and RDF have trained hundreds of villagers called as “CLEW” who provide livestock services at village level. Since CLEW live at villages, they can provide livestock services to nearby farmers without transportation means. In order to provide sustainable livestock services, the Project will figure out whether the Project can work with CLEW for project's extension activities.

In addition, it is expected that farmers who attended training, e.g. provide by LLW, acquired a certain level of livestock technologies. It may be possible that the Project will provide advanced livestock technologies to those farmers or bring those farmers up as core farmers.

Human resources trained by extension-related institutes are shown in Table 29.

Table 29 Human resources trained by extension-related institutes

Title	Project	Role	Number of trained persons/ location	Possibility to collaborate
Officer				
Feedlot Fattening Officer	LDDDB, Meat Development Programme	To monitor farmers' fattening activities under supervision of Feedlot Fattening Specialist To provide trainings to livestock farmers	6 persons in Sindh Province (Sindh Province was divided into 6 areas, 1 person at each area)	
Farm Production Advisor	PDDC, Model farm	To provide technical advices to farmers on animal health, record keeping, and fodder	12 person (male)(8 veterinary doctors and 4 agriculture management specialists) in Sindh province (one person in charge of 2 to 3 districts)	
Milk Cooling Operator	PDDC, Chiller tank programme	To promote installment of chiller tanks and connect between milk processing companies and farmers	2 persons in Badin, Nawabshar, and Thatta District	
Community Farm Advisor	PDDC, Community farm	To visit communities and provide advices on group purchasing of seed, implementation of trainings, and installment of shed	10 persons (4 female and 6 male/ 9 veterinary doctor and 1 agriculture specialist) in Nawabshar, Dadu, Badin, and Khairpur District	

Title	Project	Role	Number of trained persons/ location	Possibility to collaborate
Regional Extension Officer	PDDC, Extension – Organizing Farmer Discussion Group	To organize Farmer Discussion Group	4 persons (3 females veterinary doctors and 1 male veterinary doctors) in 3 areas (northern, central, and south area) of Sindh Province	
Area Advisor	ASLP	To visit and organize a meeting once per month, and provide training (employees of ASLP)	2 person (1 male veterinary doctor and 1 female veterinary doctor) in Sindh	
Trainer				
Lady Livestock Worker	BBSYDP, Training on livestock by LLW	To Train rural female in livestock technologies	25 persons working in TMK, TA, Matiari, and Hyderabad District	The Project can exchange information and may provide training
Master trainers	TRDP, Training on management of animals for farmers	To train farmers in management of animals	Number is unknown (mainly females) in Umar Kot, Tharparkar, Jamshoro, and Dadu District	The Project can exchange information and may provide training
Trainers of livestock training	SPO, TOT for veterinary officers at Livestock Department	To provide training on facilitation, social mobilization, and way to develop manual for livestock training	30 veterinary officer at Livestock Department	Since CP also attended the training, the Project ask CP to share what they learn.
Social Mobilizer				
Social Mobilizer	TRDP, Organizing CO, VO, and LSO	To organize CO, VO, LSO at village level and at UC level	Number is unknown /Tharparkar, Umar Kot, Dadu, and Jamshoro District ※ They are employees of TRDP.	(They are employed by TRDP)

Title	Project	Role	Number of trained persons/ location	Possibility to collaborate
Social Mobilizer	NRSP, Organizing CO, VO, LSO	(Social Mobilizer employed by NRSP)	100 persons in Badin, Hyderabad, TMK, Mipurkhas, Matiari, TA, Nawabshar, and Thatta District	(They are employed by NRSP)
Technician				
Villagers	BBSYDP, AI training	To be trained in AI technique at RTI	134 persons in total from phase I to IV in Sindh	
Veterinarian				
Veterinary doctors	TRDP, Training for veterinary doctors	To be trained in management of sheep and goats	44 persons in Umar Kot, Tharparkar, Jamshoro, and Dadu District	
Veterinary doctors	SAFWCO, A series of livestock-related projects	(Staff of SAFWCO)	5 persons	
Veterinary doctors	RDF, Climate change related project in Tharparkar District	(Employees of RDF)	3 person (2 males and 1 female) in Tharparkar District	
Stock assistant				
Stock assistant	LDDDB, Meat Development Programme	Stock assistant	25 persons	
CLEW / CEW				
CLEW	TRDP, CLEW	To provide livestock related services at village	454 persons in Umar Kot, Tharparkar, Jamshoro, and Dadu District	Since their target areas are not overlapped, collaboration may be difficult.
CLEW	NRSP, NRSP Livestock Program /Community Livestock Extension Worker (CLEW)	To provide services of animal health	500 persons (including 50 females) in southern part of Pakistan	The Project may be able to collaborate and need to obtain their contact information.
CLEW	RDF, CLEW	To be trained for a month	10 person in Tharparkar	In the past, some CLEW

Title	Project	Role	Number of trained persons/ location	Possibility to collaborate
Community Extension Worker	SAFWCO, Training for Community Extension Worker	To be trained in various theme such as water management/ irrigation, livestock feeding management, and social mobilization To Provide vaccination services at village level	District (RDF trained CLEW in Dadu, Jamshoro, and TA in the past) 100 persons (80% are female) in Sanghar, Badin, Thatta, Jamshoro, and Matiari District	were trained by RDF in our target district. The Project need to obtain their contact information. The Project may be able to collaborate and need to obtain their contact information.
Worker at village				
Milk Cooling Operator	LDDB, Milk Collecting Processing and Dairy Production and Development Programme	To operate milk chiller at village level	21 persons in total/ 5 persons at TMK, 6 persons at TA, 8 persons at Badin, 2 persons at Thatta	
Village Livestock Worker	LDDB, Milk Collecting Processing and Dairy Production and Development Programme	To collect milk at village	22 persons in total/ 5 persons at TMK, 6 persons at TA, 8 persons at Badin, 2 persons at Thatta, and 1 person unknown	
Trained farmers				
畜産農家	LDDB, Milk Collecting Processing and Dairy Production and Development Programme	To be trained on feeding management, nutrition management, and animal health management	485 persons in TMK, TA, Badin, Thatta, Matiari, Nawab Shah, and Hyderabad District	It may be possible to provide advanced livestock technologies or to bring those farmers up as core farmers
Livestock farmers (female)	BBSYDP, Training on livestock by LLW	To be trained by LLW in livestock technologies	Many females from 18 to 35 years old at 130 villages in	-do-

Title	Project	Role	Number of trained persons/ location	Possibility to collaborate
Livestock farmer (female)	NRSP, NRSP Livestock Program /Community Livestock Extension Worker (CLEW)	To be trained through 7-days livestock management training	TMK, TA, Matiari, Hyderabad District	
Livestock farmer	TRDP, Training on management of animals for farmers	To be trained in management of animals	1,000 females in southern part of Pakistan	-do-
Resource person at village				
Local Resource Person	SPO, Social Justice Programme	To teach rural females on basic reading/writing and calculation (SPO selects LRP from villagers and hires them with Rs.3,000 per month)	21,000 person in total in Umar Kot, Tharparkar, Jamshoro, and Dadu District	Since their target areas are not overlapped, collaboration may be difficult.
Community Resource Person	NRSP, Organizing CO, VO, LSO	To support social mobilizer of NRSP at village (selected from villagers)	30 females in Matiari, TMK, and Hyderabad District (10 females in each district)	Contact information of 30LRP is obtained. The Project may be able to collaborate with them by providing livestock technologies
			Number is unknown /Badin, Hyderabad, TMK, Mirpurkhas, Matiari, TA, Nawabshar, and Thatta District	The Project may be able to collaborate and need to obtain their contact information.

4.3 Lessons and other useful information

Lessons and other useful information during this Survey are summarized as follow.

(1) Extension activities

a) Basic behavior

- The importance of counseling to farmers (by SAFWCO) and grasping community's need (by NRSP) are pointed out by some institute.
- Farmers may have bad impression on government officers. Therefore the Project needs to keep transparency and sincere attitude to farmers as much as possible in order to acquire farmers' trust (by LDDDB).
- Farmers, especially in the area where villagers received emergency aid before, tend to receive goods and services for free. It is very important to minimize villagers' expectation and to urge villagers to put self-help efforts. When the Project provides trainings to farmers, the Project should provide no incentive or minimized incentive to farmers. (by LDDDB, NRSP, and RDF)

b) Importance of social mobilization

- In order to urge from grant to self-help efforts, social mobilization is effective. Therefore the Project should include a content of social mobilization in trainings. (by NRSP)
- Shifting from small scale livestock activities to business is very important but difficult (by SAFWCO). Social mobilization seems effective for making farmers sift from Self-sufficient livestock activities to business.

c) Methods of extension

- Various methods are applied. During the TOT for veterinary officers at Livestock Department done by SPO, participants develop, examine and revise training materials by themselves during the training as verifying training materials through role-playing activities. This methodology seems effective to continuously revise training materials.
- Trainings done by BBSYDP include various methods such as lecture, demonstration, group discussion, case study, and role play. The Project should learn from them.
- RDF applied FFS methods to disseminate livestock technologies. The Project will consider to implement FFS with P/F
- According to PDDC, Focus Discussion Group was effective as extension activities. The Project will figure out the effectiveness of it.

4) Collaboration with existing organization (LSO, VO, CO)

- TRDP and NRSP firstly figure out community's needs and organize Community

Organization before they provide trainings to famers. If there are needs of training in livestock, they provide livestock training to farmers.

- Although target areas of TRDP are not overlapped with the Project, NRSP have organized more than 10,000 Community Organizations, CO, in our target districts. They start working at village level to organize CO, and after that they work at Deh level and at UC level to organize Village Organization, VO, and Local Support Organization, LSO, at each level. Therefore villages in UC where NRSP organized LSO can be assumed that the villages are well organized. In our target districts there are 3 UC, namely Reeru Rashari UC in Badin District, Tando Saindad UC in Tando Muhammad Khan District, and Haji Dahadal Daudani UC in Tando Allayah District, where LSO are active.
- Since villages where CO is functional can be recognized as well-organized village, those villages are expected that the Project can easily disseminate information and villagers can easily work as a group. Therefore if the Project plans a group activity, it is better to start the group activity at villages where CO is functiona..

(2) Others

a) Microfinance / livestock insurance

- TRDP, SAFWCO, and NRSP provide microfinance to small livestock farmers. In this regards, there is possibility to collaborate with TRDP, SAFWCO, and NRSP if they can provide financial services to farmers who need a loan to buy animals for calf rearing or recycling dry buffaloes.
- SAFWCO pointed out that it is important to think how to integrate 3 factors, i) livestock technologies, ii) finance at rural, and iii) utilization of existing facilities, to solve issues. The Project will try to confirm whether there is financial source at rural. Then if there is, the Project will consider how the Project can combine such financial source at village level with the rest of the 3 factors.
- It is written on NRSP's annual report that NRSP introduced livestock insurance as pilot. LDDDB pointed out an importance of livestock insurance. Once it is assured that livestock insurance is effective, the Project will consider a possibility of collaboration with NRSP.

**Report on
the First Extension Team Training**

October, 2015

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

Due to delay of recruitment of new extension staff by the Government of Sindh, Focal Persons (FPs) and Stock Assistants (SAs)(hereafter the extension team) were assigned as alternative extension staff by the Director of Livestock Department Sindh. The first extension team training was conducted for following objectives;

- 1) To understand Project activities and extension plan
- 2) Team building for working as the extension team
- 3) To learn Social mobilization and other knowledge which required for activities in the villages

1-2 Duration of the training

Between 12th October 2015 to 28th October 2015 in total 11days

1-3 Number of Participants

Each male Focal person (FP) and male Stock assistant (SA) from the Project District; Badin, Hyderabad, Matiari, Tando Allahyah, Tando Muhammad Khan in total 10 participants.¹

1-4 Training schedule and outline of training program

Training schedule and outline of training program is shown in Table1. Detail programs are attached as Attachment 1 to Attachment3.

Table 1 Training schedule and outline of training program

Date	Main theme	Sub theme	Lecturer
12 Oct. (Mon)	Project orientation	(1) Outline of the Project activity (2) Plan of Extension (3) Role of extension worker	Project C/P
13 Oct. (Tue)		(1) Feeding management (2) Fodder (3) Calf salvation	
14 Oct. (Wed)		(1) Livestock farm management (2) Livestock Marketing	
15 Oct. (Thu)		(1) Animal health (2) Animal reproduction	
16 Oct. (Fri)		(1) Livestock asset (2) Animal breeding	
19 Oct. (Mon)	Team building	(1) Communication skill for team building (2) Organizational behavior (3) Office/Work ethics	Dispatched lecturers from the Institute of Rural Management (IRM)
20 Oct. (Tue)		(1) Gender (2) Leadership skill (2) Time management	
21 Oct. (Wed)		(1) Team building and group dynamics (2) Conflict resolution	
26 Oct. (Mon)	Social	(1) Basic of social mobilization (2) Key elements of social mobilization	Mr. Gopal Das

¹ One female veterinarian and one female SA were also assigned to the Project as a member of Extension Team, however, they refused to join Project activities due to personal issues.

Date	Main theme	Sub theme	Lecturer
	mobilization	(3) Dialogue and program introduction methodology in the field (4) Motivation skill (5) Concept of participatory approach and level of participation	
27 Oct. (Tue)		(1) Formation of community organization (2) Leadership in the community (3) Gender: role of men and women in livestock activity (4) Communication skill	
28 Oct. (Wed)		(1) Outline of PRA tools (2) PRA tools for extension activity and role of extension worker for data collection	

2. Contents of the training

2-1 Project orientation (the first week)

1) Outline of the Project

The Project manager explained outline of the Project such as objectives of the Project, Project goals. Then, the Farm Management C/P explained progress of the Project activities about Output 1 and Output 2. At the end of session, the Farm Management C/P showed one picture which three stakeholders were shown C/P, a Pilot farmer, and a Japanese Expert with joining their shoulders and smiling. The Farm Management C/P asked to the trainees about impression about that picture. He explained to the trainee that this picture implied what kind of relationship between farmers and the Project should be.

2) Plan of extension activity

The Extension/Gender expert explained about the extension plan of the Project, extension structure, principles of extension activities, flow of extension, how to decide training group, and outline of extension materials. She also explained that the Project extension activities and existing veterinary services were different. FP- Hyderabad asked that difference between the second beneficiary and the core farmer. The Extension/Gender expert explained that the core farmer would be chosen from the first beneficiaries and the farmer who taught by the core farmer would be called the second beneficiaries. FP-Tando Allahyah asked that how disseminate appropriate technology without organizing the farmers. The Extension/Gender expert replied that the Project would provide technical training to everyone who was willingly to learn appropriate technology. That is way organizing farmer was not necessary. However, if there is existing organization, collaboration work with the Project would be considered.

3) Role of extension worker

The Training C/P explained that role, behavior, qualification, and necessary skill for extension workers. Expected challenges for extension activities were brainstormed. Trainees pointed out the expected challenges as follows; high expectation of farmers to the Project, how long the farmers interest to the Project would be continue, and how disseminate appropriate technology to female. In general, when other

donors conduct training to the farmers, they will provide not only lunch and dairy allowance but also some inputs such as small animal and equipment. In this lecture, it was emphasized that this Project would provide only technical training of appropriate technology and technical guidance only.

4) Feeding management

The Feeding Management C/P explained setting of the iron pipe race/wooden retainer to measure body weight of buffaloes. Setting of milking shed was also explained.

5) Fodder

The Fodder C/P explained that proper feeding management for increase milk production. It was explained that kinds of feed, example of good feeding and bad feeding, proper harvesting timing of fodder, and storage technique of fodder.

6) Calf salvation

The Feeding Management C/P explained objective of calf salvation, procedure of collecting calf from cattle colony, and calf hatch. After the lecture, extension team visited the calf rearing center. The Feeding Management C/P explained sucking period of calf and group feeding at the calf rearing center.

7) Livestock farm management

The Livestock Farm Management C/P explained definition of livestock farm management and current situation of Pilot farmers. Importance of record of farm management such as income and expenditure were also explained. After the lecture, trainees visited the Pilot Farmer in Tando Allahyar District and observe situation of livestock management. Current situation of farm management record at the Pilot farmer was explained.

8) Livestock marketing

The Livestock marketing C/P explained definition of livestock marketing, elements of marketing, current situation and problems of milk and meat products market, and situation of marketing of pilot farmers.

After the lecture, training participants visited the Watayo faqeer milk producers' group in Tando Allahyah district. The milk chiller which introduced by the Livestock & Dairy Development Board (LDDDB) in 2006 is still functioning. Although group activities were ended following to the end of the LDDDB's project, representative of the group, Mr. Mohmood Bozder, has continued to collect milk from surrounding farmers. Capacity of milk chiller is 5,000 liters, however, volume of collecting milk is 360 liters per day. Adulterated milk is not accepted. Mr. Bozdar had an annual contract with a milk shop in Tando Jam and sold milk to them, however, their unpaid amount of milk reached to Rs.150,000. Milk selling price was Rs. 50 to 60 per liter.

9) Animal health

The Animal Health C/P explained that animal health did not mean that cure animals when they were sick. It was very important that take care animals properly every day. Common disease of livestock such as parasitic disease and Mastitis, and its prevention measure were explained.

10) Animal reproduction

The Animal Reproduction C/P explained that it was important to improve conception rate of buffaloes to increase milk yield. Then, financial loss due to low reproduction, current situation about reproduction of Pilot farms, and rectal palpation were explained. After the lecture, trainees visited the Pilot Farmer in Hyderabad District. Hormone treatment at the Pilot farm explained.

11) Livestock asset

The Livestock asset C/P explained definition of livestock asset, experience of calf distribution and situation of current livestock sharing system in the villages.

12) Animal breeding

The Animal Breeding C/P explained objective of breeding and system of breeding etc. Problems about breeding were shared; breeding bull is not pure Kundhi buffalo; it is difficult to have own breeding bull in the village; and it is difficult for farmers to find out ability of breeding bull. After the lecture, the participants visited the breeders farm. Current situation of breeding was explained.

13) Other

At the beginning of every training, review of previous day was conducted. Every trainee expressed their opinion through group presentation and discussion. The Project requested to every lecturer to give question to trainee and make them speak out as much as possible.

2-2 Team building (the second week)

Training of the second week was conducted by the subcontractor, the Institute of Rural Management (IRM). Dispatched lecturers gave the lecture to trainees.

(1) Communication skill for team building



A scene of tower building(Group1)



A scene of tower building(Group2)



Comparison of towers
(Left: Group2, Right: Group1)



The follower walked narrow path made by papers and avoid obstacles using only voice instruction of the leader.



At the beginning of this lecture, trainees were unresponsive as if team building was beyond their understanding. However, trainees' attitude had been changed during an exercise for competition to build paper towers by divided two groups. Then, another exercise was conducted. There are a leader and a follower and follower put a bandage over his eyes. The follower walked narrow path way made by papers and avoid obstacles using only voice instruction of the leader. All of trainees were enjoyed and felt difficulty to follow only voice instruction. After this exercise, discussion of trainees had a lively exchange of opinions.

(2) Organizational behavior

Trainees were divide into two groups. The trainees discussed common problem and its countermeasure in the Department of Livestock. Each group picked up one theme from the results of discussion and played a short play.

The short play of group A was miscommunication about training implementation between the district office and men/women extension workers. Message from this short play is that contact to the farmers should consider their convenience.

The short play of group B was emergency activities to save livestock during flood. It was based on a real story. SAs complained to the District Officer how we could perform duty without incentive, vaccine, and transportation. However, the District Officer never listen what SAs were saying because the District Officer did not trust SAs. It was really realistic performance even though they are from different districts and never worked together before.

	
<p style="text-align: center;">Group A</p> <p>The 1st and 2nd from the left were the role of male extension workers, the 3rd and 4th from the left were the role of female extension worker. The rightmost is the role of district officer.</p>	<p style="text-align: center;">Group B</p> <p>The 1st and 2nd from the left were the role of stock assistants. 3rd from the left was the role of veterinarian who mediate both side. The rightmost was the role of district officer.</p>

(3) Office/work ethics

The lecturer wrote items of Office/work ethics on cards and gave it to each trainee to hold it.

Then, each trainee read out the contents of card one by one. Listed up items were 1) equality, 2) appreciation, 3) enabling (tension-free) environment, 4) conflict resolution, 5) effective planning, 6) gender sensitivity, 7) trust building, and 8) leadership.

(4) Gender

The lecturer explained difference between sex and gender. Social role of man and women was learned through exercise. The lecturer was female and all trainees were male. Strong argument was happened between the lecturer and some trainees. Trainees were not convinced of explanation by the lecturer. Therefore, the Training C/P tried to made additional explanations to trainees.




(5) Leadership skill

The trainees learn what leader should be through 14 of key messages with video clips such as; leaders should be good observers; leaders imagine possibility; and leaders do not give excuse and limitation. The lecture was easy to understand for trainees and the lecturer was good to draw attention of the trainees. After the lecture, the trainees offered handshake to the lecturer one after the other.

(6) Time management

It was happened that the lecturer of time management was late for 30 minutes. The lecturer could speak Sindhi, however, she failed to give simple explanation for SAs because she was not familiar with Sindhi lecture. It was found that her lecture was normally given by English. The Training C/P requested her to try to make simple explanation or give some examples, however, it was failed.

As a part of time management exercise, the trainees divided into three groups and competition of making a ship by folding paper was done. Group 1 could not make any ship and got panic. They lost listen to others. After the exercise, group1 members concluded that leadership of group1 was weak that was why they failed to make a ship.

		
<p style="text-align: center;">Group1</p> <p>They failed to make a ship and started argument at last.</p>	<p style="text-align: center;">Group 2</p> <p>They caught up with group 3 at last.</p>	<p style="text-align: center;">Group 3</p> <p>They decided their role sharing at the beginning and made ships constantly.</p>

As a reply to conclusion of Group1, the Extension/Gender expert showed a ship which she made by herself through observation of others and made comment that what was lacking for Group1 was not leadership but attitude to observe others carefully. She also mentioned that it was very important to ask advice to the Project or colleagues when they faced the problem which difficult to solve by themselves because it could be expected several challenges for extension activities in the field. She said to trainee that did not panic even though such difficult time, took deep breath and observed situation carefully.

(7) Team building and group dynamics

It was learned that there were four stages for team building; 1) forming, 2) storming, 3) norming, and 4) performing. Trainees were divided into two groups. They draw the map of building of the Livestock Department with cooperation of each member. Then, they did exercise which found hidden markers and cards in the building within time limit. This exercise implied that each member had own skill and answer could be found from the place beyond their imagination.

(8) Conflict resolution

Trainees watched example of conflict through video clip and learned about type of conflict and its resolution.

2-3 Social mobilization (the third week)

Before the lecture of Social mobilization, the Extension/Gender expert made a presentation about explanation plan again. The contents of presentation were focused only three topics;1) extension system of the Project, 2) flow of extension activities, 3) number of targeted beneficiaries. It was emphasized that the Project will provide technical training to the farmers as a means of dissemination of appropriate technology and that training will be given by SAs to farmers. It was also explained that number of target beneficiaries was 7,500 farmers at the end of the Project, however, this extension team would focus 25 pilot farmers as the beginning of extension activities. In the first week of the training, some of FPs showed their concern that it was difficult to achieve the goal because number of beneficiary was too high as compared with current extension structure. They finally understood that what they should focus.

Following lectures were given by Mr. Gopal, an external local expert.

(1) Basic of social mobilization

At the beginning, the lecturer explained definition of mobilization and social mobilization. Mobilization is the process which brought some kind of changes. Social Mobilization is that organize them selves and take collective action to obtain necessary resources for belonged community such as human resource, natural resource and financial resource; or to resolve common problems for community by self-help or support by other organization. It was explained that community development was tool for social mobilization.

(3) Key elements of social mobilization

Five steps of social mobilization were explained; 1) information sharing, 2) improvement of awareness, 3) improvement of motivation, 4) community mobilization, and 5) awareness shearing as the whole. The lecturer said it was very important that people who belong to same community thought together, decided together and solved the problem together based on common awareness by social mobilization. Relationship between social mobilization and community development; and requirement of smooth community development were explained.

(3) Dialogue and program introduction methodology in the field

The lecturer explained how to speak to the farmers. An advice was given to trainee that when extension team went to the village, the extension team should not speak about a program or project in detail at the first contact. It was better to speak in detail after the second visit.

(4) Motivation skill

The lecturer explained six C of motivation; 1) choice, 2) collaboration, 3) constructing meaning, 4) consequences, 5) control, and 6) challenges. It was also explained how to keep high motivation.

(5) Concept of participatory approach and level of participation

The lecturer explained participatory approach, type of participation such as passive participation, interactive participation etc.

(6) Formation of community organization

The lecture of village organization took three hours although it was planned as one hour. It was enough only outline of Community Organization (CO), Village Organization (VO) and Local Support Organization (LSO), however, too detailed information was given to the trainees.

(7) Leadership in the community

The lecturer drew a picture of man and explained qualification of leaders such as always smiling. Then, the trainees continued to list up the qualification of village leaders. After that exercise, difference between the leader and manager was explained. It was also explained that it was very important to find real leader in the village. In many cases, person who did not have qualification was selected as the village head or other important position due to political reasons. Even though the real leader found, it is not necessary to open the real leader to the villagers to avoid unnecessary tension arose among the villagers.

(8) Gender: role of men and women in livestock activity

The trainees learned general topic of gender by the training of IRM in the second week. Therefore, this lecture focused on role of men and women in livestock activities. The trainees divided into

2 groups and listed up work of livestock activities. Then, ratio of workload sharing between men and women was discussed. For example, milking was 40% for men's and 60% for women's work. Useful information was obtained for extension activities in future.

(9) Communication skill

Illustrated household account book instead of text was used as material to learn importance of non-verbal communication.

(10) Outline of PRA tools

PRA tools such as social map, flow chart, seasonal calendar, and pie diagram were explained.

(11) PRA tools for extension activity and role of extension worker for data collection

Among PRA tools, Social Map will be used in future extension activities. Therefore, the Extension/Gender expert explained lesson learnt and considering points from the twice of PRA survey in the past by showing pictures. Household lists and results of data compilation were also shown to the trainees.

2-4 Opinions from trainees

- Some FPs said that they could understand the whole picture of the Project and it was good because they knew about their district only until attended this training. Several trainees said that it was good to visit other district because they could compare with their district.
- Both FPs and SAs said that they could obtain new knowledge about technical aspects.
- Training period was too short if compared with training contents.
- FP-TMK and FP-TA said that they were so happy to attend this kind of training because it was first time for them although they were working for the Department around 20 years.

3. Observation about trainees

The behavior of trainee was observed though the training period especially for following three points; 1) level of understanding to training contents, 2) leadership, and 3) cooperativeness. Results of observation are as below;

- All of trainees listened lecture carefully and did exercise seriously.
- FPs actively participated to the training. Each FP had different leadership style. Sometimes they led the group, another time they acted as supporter for smooth progress of exercise.
- SAs had difficulty to understand English and graphs. If compared with FPs, their level of understanding of technical contents is low. However, they are tried to understand during the training. In particular, they showed their strong interest to feeding management and fodder management, and

asked several questions.

- Some of SA had working experience around 20 years, however, that experience was limited for vaccination and deworming.
- At the beginning of the training, some SAs never spoke out. As the training progress, the unity of the extension team was recognized through group work, discussion, and presentation. A friendly atmosphere was created among the extension team. It can be said that team building was succeeded.

4. Challenges revealed by the training implementation

4-1 About female extension staff

One female veterinarian and one female SA were also assigned as an alternative extension team, however, they refused to join the training against the order of the Secretary of Livestock Department. Due to this incident, it is difficult to secure female extension staff and no other female staff is available in the Livestock Department. Activity for women in the village should be postponed.

4-2 About SA

SAs had difficulty to understand English and graphs and level of understanding of technical issue is relatively lower than FPs. Current extension plan is based on the precondition that SAs could conduct training alone in the village, however, it is very difficult for present situation. Training in Sindhi for SAs is necessary. If SAs have own buffalo, the Project facilitates them to practice appropriate technology at home.

According to C/P, veterinarian will treat disease of buffaloes and SAs do only vaccination in general. Therefore, it is not common that the farmers ask technical advice to SAs. SAs also never expected that farmers ask something to them. It is required to enable SAs to have great trust from the farmers.

Attachment 1 Program of project Orientation



THE PROJECT ON SUSTAINABLE LIVESTOCK DEVELOPMENT for RURAL SINDH HYDERABAD (JICA Technical Cooperation)



5 Days Technical Training Schedule for New Staff

Dated: Oct 12-16, 2015

Day 1: 12 October 2015

Time	Contents	Methodology	Facilitator
09:00 am	Registration of Participant		Dr. Rukhsana
09:05 am	Recitation from Holy Quran		
09:15 am	Introduction of Participant		Dr. Rukhsana
09:30 am	Welcome Address by the host		Dr. G. Sarwar Shaikh
9:40 am	Introduction about Livestock Department	Presentation	Dr. Jamil Shaikh
10:00 am	Fears ,Hopes and code of conduct	Round Ribbon	Dr. Rukhsana
10:30 am	Tea Break		
10:45 am	Project Orientation	Presentation	Dr. G. Sarwar Shaikh
11:15 am	Progress of development of appropriate Technology	Presentation	Dr. G. M. Jiskani
12:00 pm	Question /Answer Session	Verbal Communication	Dr. G. M. Jiskani
01:15 pm	Lunch& Pray Break		
02:15 pm	Extension Plan of the Project		Ms. Kawamoto
03:00 pm	Extension & Extension Worker	Presentation / Group work	Dr. Rukhsana
03:45 pm	Tea Break		
04:00 pm	Group Formation (Role Play)		Dr. Rukhsana
05:00 pm	Close		

Day 2: 13 October 2015

Time	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		
09:05 am	Review of the Last day		Dr. Rukhsana
09:30 am	Feeding Management	Lecture/Group Discussion	Dr. Fazlani
10:30 am	Tea Break		
10:45am	Fodder Management	Lecture/Group work	Dr. Arif
11:45 am	Calf Salvation	Presentation	Dr. Fazlani
12:45 pm	Fodder Production & Development	Presentation	Dr. Arif
01:30 pm	Lunch & Pray Break		
02:30 pm	Visit of Calf Salvation Experimental Center Hyderabad	Field Visit	Dr. Fazlani/ Dr. Arif
03:30 pm	Visit of Milk Inspection Laboratory Office PSLD	Field Visit	Dr. Arif/Dr. Fazlani
04:30 pm	Quiz time		Dr. Rukhsana
05:00 pm	Close		

Day 3: 14 October 2015

Time	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		
09:05 am	Review of Last day		Dr. Rukhsana
09:30 am	Livestock Farm Management	Lecture	Dr. Jiskani
10:30 am	Tea Break		
10:45 am	Livestock Marketing	Lecture	Dr. Iqtidar Memon
11:45 am	Progress & Future Plan of Farm Management	Presentation	Dr. Jiskani
12:45 pm	Current Situation & progress of L/s Marketing	Presentation	Dr. Iqtidar
01:30 pm	Lunch & Pray Break		
2:00 pm	Field Visit		
03:30 pm	Visit of Chiller/Milk shop (TA)	Field Visit	Dr. Iqtidar/Dr. Jiskani
04:30 pm	Visit of P/f (Mr. Mushtaque TA)	Field Visit	Dr. Iqtidar/Dr. Jiskani

Day 4: 15 October 2015

Time	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		
09:05 am	Review of Last day(Quiz time)		Dr. Rukhsana
09:30 am	Animal Health	Lecture/Group work	Dr. Zulfiqar
10:30 am	Tea Break		
10:45 am	Existing Situation & Progress of Animal Health	Lecture	Dr. Zulfiqar
11:45 am	Animal Reproduction	Presentation	Dr. Shahani
12:45 am	Reproduction Disorders	Lecture/Group discussion	Dr. Shahani
1:30 pm	Lunch & Pray Break		
02:00 pm	Field Visit	Field Visit	Dr. Shahani/ Dr. Zulfiqar
03:00 pm	Visit of P/F Pehlaj Hyd	Field Visit	Dr. Shahani/ Dr. Zulfiqar

Day 5: 16 October 2015

Time	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		
09:05 am	Review of Last day (Quiz time)		Dr. Rukhsana
09:30 am	Livestock Genetic Improvement	Presentation	Dr. Jatoi
10:30 am	Tea Break		
10:45 am	Livestock Assets	Presentation/Group work	Dr. Naeem
11:30 am	Quiz time		
12:00 am	Views of Participant		
12:30 pm	Closing Remarks		Dr. Jamil
12:45 pm	Lunch & Pray Break		
02:30 pm	Field visit Departure		
03:30 pm	Visit of Breeder/PF (TMK)	Field Visit	Dr. Jatoi/Dr. Naeem

Attachment 1-2

Attachment 2 Program of team building



Training on Team Building

Date: October 19 – 21, 2015

SCHEDULE

DAY ONE: Monday – October 19, 2015		
Time	Session	Responsibility
0900	Registration of participants	Training coordinator
0910	Recitation of Holy Quran verses, Welcome to Participants by Representative of JICA/IRM & Introduction of IRM	Training coordinator
1015	Introduction of participants, Expectations, Fears and setting the norms	Training coordinator
1016	Pretest	Training coordinator
1045	Tea Break and Group Photo	
1100	Effective Communication Skills for Team Building	Mr. Israr Hussain
1300	Lunch and Prayer break	
1400	Organizational Behavior	Mr. Noor Bajer
1530	Tea break	
1545	Office/Work Ethics	Mr. Noor Bajer
1645	Evaluation of the day	
1700	Group work, assignment and evaluation of the day	Training coordinator

DAY TWO: Tuesday – October 20, 2015		
Time	Session	Responsibility
0830	Review of the previous day and group presentations	Training coordinator
0900	Gender Awareness	Miss. Sarwat Sultana
1100	Tea break	
1115	Leadership Skills	Mr. Atiq Raja
1330	Lunch and Prayer break	
1430	Time management	Dr. Sindhu Almas
0330	Tea break	
0345	Cont. Time management	Dr. Sindhu Almas
1645	Group work and assignment	Training coordinator
1700	Evaluation of the Day	Training coordinator

DAY Three: Wednesday – October 21, 2015		
Time	Session	Responsibility
0830	Review of previous day and group presentations	Training coordinator
0900	Team Building and Group Dynamics	Mr. Israr Hussain
1100	Tea break	
1115	Conflict Resolution through Team Building	Mr. Israr Hussain
1330	Lunch and prayer break	
1430	Training evaluation & clearing MIST Closing ceremony & Vote of Thanks	Mr. Israr Hussain
1530	Good By	

Attachement3 Program of social mobilization

3Days Training Schedule on Social Mobilization For Extension Staff October 26-28, 2015

Day-1 (26th October 2015)

Time	Topics/Activities	Description of the activity	Mode of Activity	Facilitator
09.00-09.30	Recitation			Participant
	Introduction of the Participants Expectation/ Fears and ground roles	Introductory Session	Participatory	Participants
09.30-10.30	Extension plan of the Project		Presentation/Briefing	Ms. Kawamoto
10.30-11.30	Concept of Social Mobilization and Some Basic question for Social Development (Reason and Solution)	Social Mobilization Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
11.30-11.45 Tea Break				
11.45-1.30	(1) Key Elements of Social Mobilization (2) Phases of social mobilization	Social Mobilization phases	Presentation/Discussion and Lecture	Gopal Das
1.30-2.30 Lunch				
2.30- 3.30	Dialogue and programme introduction methodology for field	Programme Introduction	Discussion , Lecture and Role Play	Gopal Das /participants
3.30- 4.25	Motivation skills	Steps and important of Motivation in extension work	Presentation/Discussion/ Group work /Lecture	Gopal Das
4.25-4.30 Tea Break				
4.30-5.00	Concept of participatory approach with level of participation	Conceptual understanding of Organization	Presentation/Discussion/ Group work /Lecture	Gopal Das

Day-2 (27th October 2015)

Time	Topics/Activities	Description of the activity	Mode of Activity	Facilitator
09.00-09.20	Review of the previous Day	Learning of the previous Day	Participatory	Gopal Das /participants
9.20-11.15	(1) What is Organization and its important (2) Process of Organization formation (3) Type of Organizations (4) Organizational Structure (5) Role & Responsibilities in Organization Office Bearers	Understanding about Organization & Organizational Structure	Presentation/Discussion/Group work /Lecture and	Gopal Das
11.15-11.30 Tea Break				

Time	Topics/Activities	Description of the activity	Mode of Activity	Facilitator
11.30-12.30	(6) How to conduct Organization meeting (7) How to write Organization Proceeding	Understanding of Organization meeting proceeding through practical exercise	Role Play/Discussion	Gopal Das
12.30-1.30	Community Attitude & Behaviors	Checklist of Attitude & Behaviours	Presentation/Discussion /Group work /Lecture	Gopal Das
1.30-2.30 Lunch Break				
2.30-3.30	Leadership and its major responsibilities Leaders characteristics Conflict management	Leadership & conflict management strategy	Presentation/Discussion/ Group work /Lecture	Gopal Das
3.30-4.00	Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
4.00-4.15 Tea break				
4.15-5.00	Communication & Facilitation skills	Communication & Facilitation skills	Participatory discussion Lecture	Gopal Das

Day -3 (28th October 2015)

Time	Topics/Activities	Description of the activity	Mode of Activity	Facilitator
09.00-09.30	Review of the previous Day	Learning of the previous Day	Participatory	Gopal Das /participants
09.30-11.00	Introduction of PRA Tools and their important in data collection	PRA - Concept	Presentation/Discussion/Group work /Lecture	Gopal Das
11.00-11.15 Tea Break				
11.15-1.30	PRA- Tools practices (1) Social map (2) Network diagram (3) Marketing(4) Role of Extension worker in data collection	PRA- Tools & Techniques	Presentation/Discussion/Group work /Lecture	Gopal Das
1.30-2.30 Lunch				
2.30-3.30	Closing	Feedback Comments Certificate Distribution	Comments	Participants Facilitator Livestock Department and JICA team

**Report on
the Second Extension Team Training**

December, 2015

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

For Focal Persons (FP) and Stock Assistants (SA)(hereafter the Extension Team) who assigned as alternative members by the Director of livestock Department Sindh, the Project conducted the first extension team training in total 15 days in October 2015. According to the results of first training, it was revealed that SAs understood English a little and had difficulty reading graphs. Then, level of understanding about livestock technology was lower than F/Ps. Therefore, the second extension team training was conducted to improve Extension Workers' level of understanding in 3 days from 30th November 2015. As part of preparation of the training, basic and high priority subjects were selected from the previous training contents. Then, all of training materials were prepared in Sindhi. Lectures and practices were also done in Sindhi. Four subjects from appropriate technology were selected; 1) feeding management, 2) calf rearing and diarrhea, 3) animal health (mastitis), and 4) animal reproduction. Then, social map making, and extension plan and role of extension workers were also reviewed.

1-2 Duration of the training

From 30th November 2015 to 2nd December 2015 in total 3days

1-3 Number of participants

Each male Focal person (FP) and male Stock assistant (SA) from the Project District; Badin, Hyderabad, Matiari, Tando Allahyah, Tando Muhammad Khan in total 10 participants.

1-4 Training schedule and outline of training program

Training schedule and outline of training program is shown in Table 1. Detail programs is attached as Attachment1.

Table 1 Training schedule and outline of training program

Date	Theme	Lecturers
30 th Nov (Mon)	(1) Review of visiting Pilot farmers (2) Review of the extension plan and role of extension workers (3) Animal health (Mastitis) (4) Feeding management (5) Review of social map making	Dr. Rukhsana Vighio Ms. Mika Kawamoto
1 st Dec (Tue)	(1) Practice of social map making and transect walk at Adam Panhwar village, Tando Muhammad Khan district (2) Review of social map making (3) Plan of extension activities after the training	
2 nd Dec (Wed)	(1) Review of past 2days (2) Calf rearing (3) Calf diarrhea (4) Animal reproduction (5) Review of communication skill and how to take record	

2. Contents of the training

2-1 The first day

(1) Warm-up

As warm-up before the lecture, Hyakumasu Keisan ¹(multiplication) was conducted. The 100 blanks where a line and a row crossing should be filled in a result of one-digit multiplication. It is required to line up the number from 0 to 9 arbitrary order in the first left line and the first top row without duplication. Elementary school pupils in Japan will do this exercise in two minutes, however, time limit was set as five minutes for this warm-up. The actual problem is shown in Table 2.

Table 2 Hyakumasu Keisan (multiplication)

×	4	6	8	5	2	1	0	7	9	3
3										
2										
5										
1										
8										
9										
0										
6										
4										
7										

Figure 1 and Figure 2 show result of Hyakumasu Kesan (multiplication) of FPs and SAs respectively. Three FPs managed to finish all of calculation within time limit of five minutes. Only one FP out of three got perfect score. Many mistakes found for multiplication of zero. That answer will always be zero, however, many participants made mistake about it. It was revealed that there is difference between FPs and SAs about calculating ability. It might be required regular practice of four fundamental rules of calculation for SAs.

¹ Hyakumasu Keisan is a part of exercise of Kageyama method which conceived by Mr. Hideo Kageyama for repeated practice of calculation.

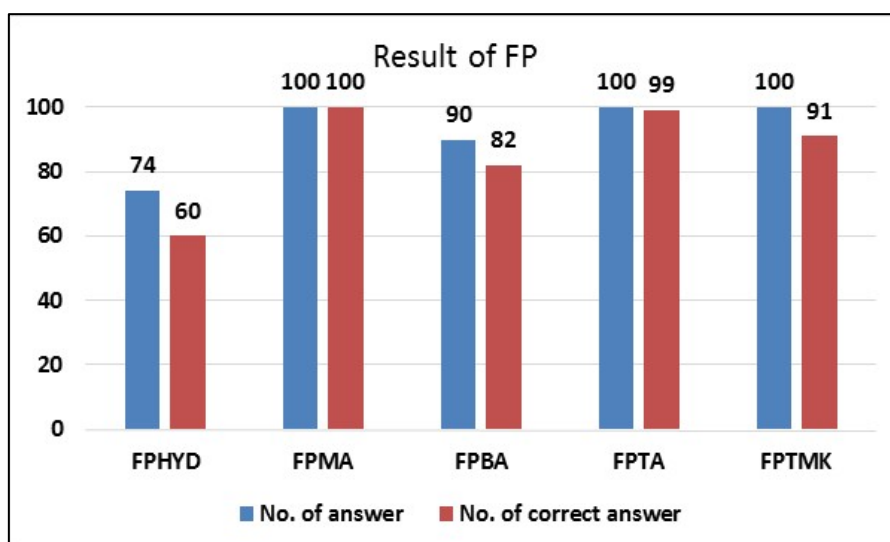


Figure 1 Results of FP for Hyakumasu Keisan (multiplication) ²

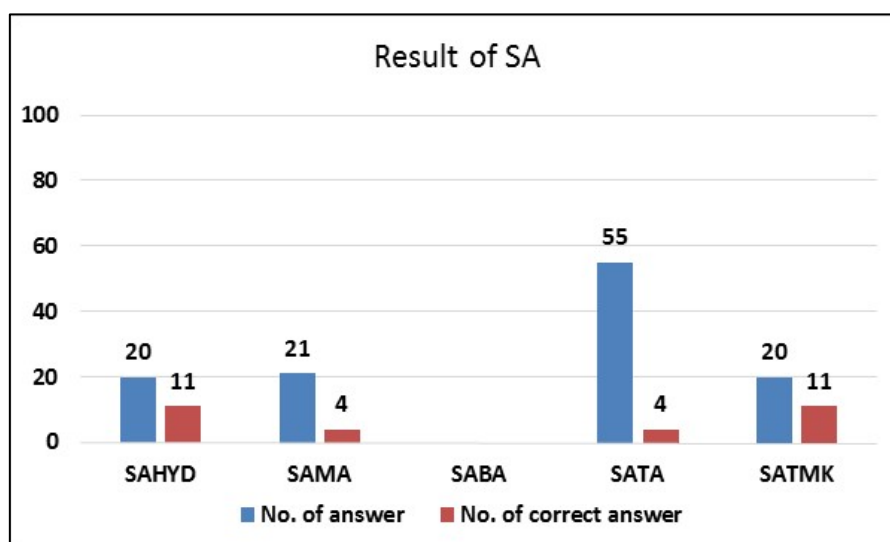


Figure 2 Results of FPs for Hyakumasu Keisan (multiplication)³

(2) Review of visiting Pilot farmers

In the first half of November 2015, the pilot farmers in each district were visited by the pair of FP and SA in charge. In that time, FP explained to SA about appropriate technology development activities and weekly data collection at the Pilot farms. In this session, the participants expressed their opinions about findings from pilot farm visiting. Concerns about future extension activities were also expressed. In particular, individual opinion was listened from SAs apart from the whole discussion. There were six points of discussion as the whole. Individual opinion of SAs are shown in Table 3.

² Abbreviation in the graph are combination of the position (FP or SA) and name of district. Hyderabad is HYD. Matiari is MA. Badin is BA. Tando Allahyar is TA. Tando Muhammad Khan is TMK.

³ SA-Badin could not attend warm up session because he was late.

- 1) Secure water for livestock
 - The Project recommend 24 hours watering for livestock with fresh water as a part of appropriate technology, however, it might be difficult for the village where could secure salt water only. (FP-TA).
 - Desalinization apparatus could be procured around Rs. 25,000. Is there any plan to buy such kind of apparatus by the Project? (FP-Hyderabad)

- 2) Problems of land tenure and fodder supply
 - Land owners could cultivate fodder by themselves, however, it is difficult for landless farmers to secure fodder for livestock through the year. In particular, securing fodder is big problem in rural area. Appropriate technology for land owners and landless farmers could be different contents. The Project is targeting landless farmers such as small scale farmers and tenant farmers (more than one SA).

- 3) Activity expansion to new villages
 - I have no idea to expand extension activities to new villages where I do not have any social contact (more than one SA)

- 4) Provision of daily allowance and transportation allowance from the Department of Livestock
 - It is concerned whether transportation means and daily allowance/transportation allowance for extension activities will be provided as promised by the Department of Livestock (more than one SA).

- 5) Training for extension team
 - Additional extension staff training is required to learn more about technology (SA-Badin).

- 6) Mastitis
 - When I visited the Pilot farmer, buffalo which had Mastitis was not treated. It was very concerned (SA-Hyderabad).

Table 3 Opinion about visiting the pilot farmers and concern about future extension activities by SAs

SA	Opinion
SA-TA	There is nothing to fear except provision of transportation for extension activities. I'm ready to be a trainer in the village. I realized difference between the appropriate technology such as 24 hours watering, formula feed etc., and traditional rearing method which I practiced before.
SA- TMK	I have no idea to expand extension activities to new villages where I do not have any social contact.
SA-Badin	It is concerned whether transportation means and daily allowance/

	transportation allowance for extension activities will be provided as promised by the Department of Livestock. I'm concerned to expand activities to new villages. Training for capacity building is required.
SA-Hyderabad	When I visited the Pilot farmer, buffalo which had Mastitis was not treated. It was very concerned. Some of buffaloes repeated subcritical mastitis.
SA-Matiari	I'm ready to be a trainer. I could deepen my understanding about mastitis and calf rearing by the Pilot farm visit

(3) Review of the extension plan and role of extension workers

The Extension/Gender expert gave the lecture about extension plan and role of extension workers in English. The Training CP interpreted consecutively in Sindhi. Contents were number of target for extension activities, training implementation structure, principles of extension activities, role of extension supervisors, role of FPs, role of SAs, and behavior of extension team in the village. It was also explained that the project aimed to conduct Mixed-gender training if the village allowed, however, it would be considered due to lack of female trainers. FP-Badin shared his experience from other project that he had conducted training in the village both men's group and women's group in different time of same day with same contents. At that time, he was accepted by the women's group as the trainer.

(4) Animal health (Mastitis)

The comic for mastitis learning was previously developed in Spanish by the Livestock Technology Development expert. It was translated in Sindhi by the Training C/P. During the training, each page of comics was shown on the screen and read it one by one. After the reading, the trainees learned correct milking order, mastitis test and treatment of mastitis through the discussion.

(5) Feeding management

At the beginning of session, each trainee prepared a Feeding calendar (what kind of feed are given to buffaloes in each month of the year) based on their experience and shared it to others. FP-Hyderabad said that concentrate was cheap in summer season and expensive in winter season. He also said that fodder production depended on following points; 1) quality of seed, 2) watering at least twice per month, 3) fertilizer (urea) at least one bag per month. He said if farmer had a land, fodder production could be a business. During this practice, it was found that SA-Hyderabad did not have experience about rearing a buffalo by himself.

Then, the Training CP gave the lecture about kinds of fodder (roughage, concentrate), formula feed which developed by the Project, feeding management of buffaloes for before/after parturition and dry period of buffaloes. Comfortable environment for buffaloes and bathing were also explained.

Trainees also practiced how to use the formula feed table according to buffaloes' body, milk volume, and quality of feed. Only SA-Hyderabad had difficulty to read the table. Individual instruction was needed for him. Finally, he understood how to read tables.

The Extension/Gender expert asked the trainees whether formula feed would be given to buffaloes before parturition in the village. The answer from the trainees that it was not common for general farmers, however, some of innovative commercial farmers were doing.

(6) Review of social map making

As review of previous training, the Extension/Gender expert explained important matters about Social map making based on real case studies. Household list making was also explained again.

2-2 The second day

(1) Practice of social map making

Social Map making was conducted at Adam Panhwar village, Tando Muhammad Khan district. The venue was the elementary school of the village. There were suitable conditions for Social Map making such as just the right size venue for practice, a floor covered with concrete, no wind (small papers never be blown off). At the beginning of session, the venue divided into two space as a side of participants from the village and a side of participants from the Project. Therefore, space for map drawing was set up again as all of participants surround it. In the session, there were three facilitators; Training CP, FP-Matiari, and FP-Badin. Participants from the villages was 31 men including young men and boys. At first, the representative of villager for map drawing struggled to draw a village border. Facilitators did smooth facilitation throughout the session. Collected data by Social Map are shown in Table 4.

Table 4 Collected data by Social Map

Drawing Item on the Social Map	
1. Border of the village including roads and canals	5. Name of the household heads
2. Name of surrounding villages and location	6. Name of village leader
3. Facilities in the village	7. Name of biradari (or para) leader
4. Number of biradaris and location of paras	

There were seven paras in the village and those paras were formed by one biradari⁴ (Panhwar). According to the results of previous interview survey which conducted during the pilot farmer selection, number of household in the village was reported as 280. However, actual number of household in the village was revealed as 84 by Social Map making. It was good example to explain to the trainees about importance of cross check of information.

⁴ A biradari is a socially-bonded group based on consanguinity.



(2) Interviews to farmers about training preparation

To prepare the training, necessary information about training were interviewed. Results of interviews are as follows;

- This village does not accept Mixed-gender training. Training group should be separated men and women.
- Trainers should also be separated men and women
- Suitable season for the training implementation is January and February.
- Other month is also acceptable if training is conducted once a week.
- Anyone (even women in the village) can visits the Pilot farmer’s house to observe appropriate technology.

(3) Household list making

At least one participants from each para⁵ remained the venue. FPs and SAs collected necessary information from the participants of each para. Collected information are shown in Table 5.

Table 5 Collected data by household list making

Collected data
1. Name of household head
2. Name of belonged para
3. Population of household (person who lives in the village only)
4. Number of livestock (only large milk animals such as buffaloes and cows; number of animals owned individually and shared should be separated.)
5. Area of owned land
6. Occupation (main income source)

⁵ A para is an area where several households live together.

(4) Transect walk

To confirm validity of Social Map, transect walk was conducted. The sketch of Social Map is shown in Figure 3. The light blue line in Figure 3 shows actual route of transect walk.

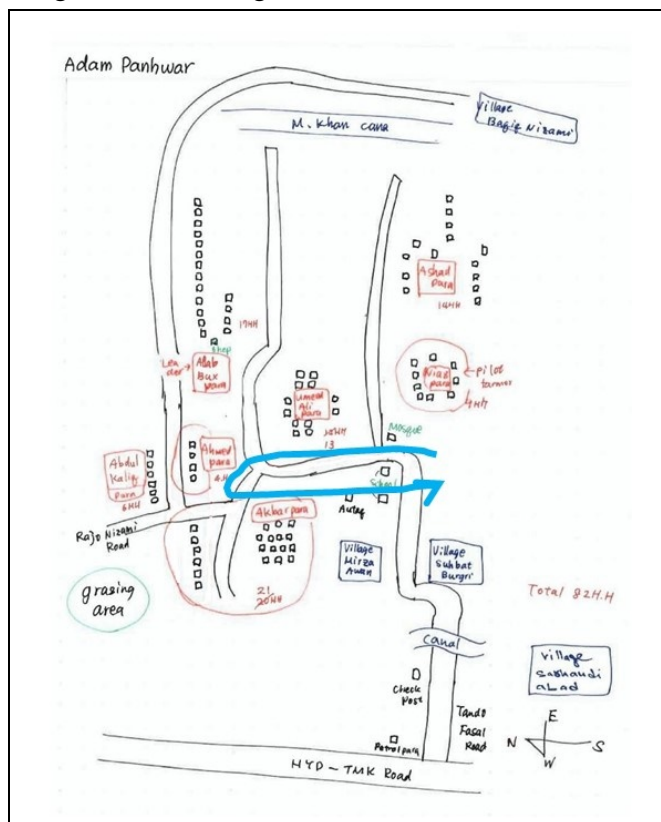


Figure 3 Sketch of Social Map, Adam Panhwar village, Tando Allayahyar district

Observed items by transect walk are as follows;

- Paras are surrounded by agriculture fields and fodder (alfalfa and berseem) fields.
- Border of each para is the road. Each para is not separated by walls. It is easy to observe neighbors' activity. This is an advantage for extension activities.
- Livestock are reared inside of each para. There are no community livestock shed.
- This village use buffalo dung as fertilizer for agriculture purpose while most of other villages use it as fuel for cooking. Cotton stalk are used for fuel of cooking in this village.



Elementary school



Niaz para



Allah Bux para



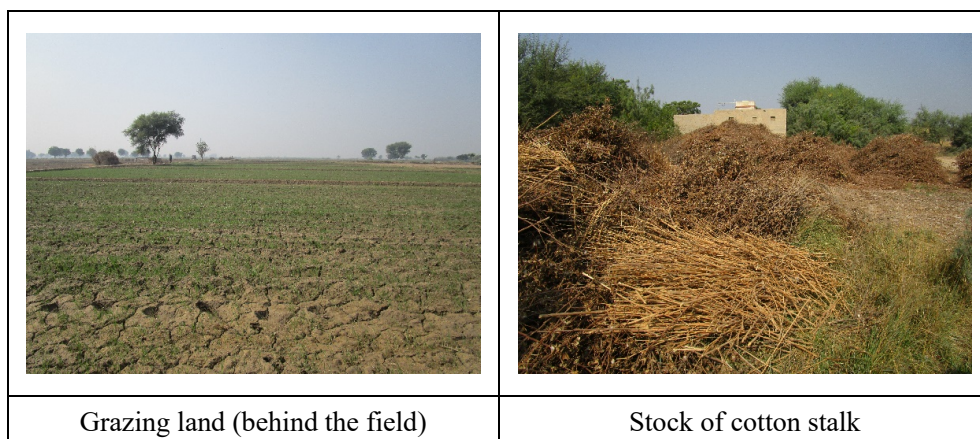
Livestock shed



Watering by woman



Stock of wheat straw



(5) Review of Social Map making

After the transect walk, everyone went back to the office and reviewed Social Map making. FPs and SAs gave findings from the field and the Extension/Gender expert wrote each comment onto a large size of sticky note in English. Not only FPs but also SAs expressed their findings well. Then, those findings were classified into four categories; 1) physical structure of the village, 2) social structure of the village, 3) information for training implementation, and 4) problems of the village. After that, SA-TMK translated and wrote in Sindhi and SA- Hyderabad read out to confirm the contents with all of participants. Results of Social Map making is shown in Table 6.

Table 6 Review of Social Map making

(1) Physical structure of the village	(2) Social structure of the village
<ul style="list-style-type: none"> ● There is no drainage system. ● There is one shop. ● Number of household is 84. ● There is one mosque. ● There is one autaq⁶. ● There are seven paras. ● Houses are made by concrete, though maintenance condition are not good. ● The villagers draw underground water by the hand pump to use daily life water. 	<ul style="list-style-type: none"> ● Three villagers are employed by the government. ● Many children are given education. ● Relationship among all of para is good. ● This village has good relationship among the surrounding villages. ● There is a leader at the village and each para. ● Most of the villagers engage in agricultural labor. ● The villagers rely on the income from livestock activity. ● Most of the villagers are landless farmers. ● Milk selling price through the middle man is Rs. 60/kg.

⁶ Autaq is kind of meeting place.

(3) Information for training implementation	(4) Problems of the village
<ul style="list-style-type: none"> ● Wednesday is good day for once a week training. ● Some of villagers attended the livestock related training by BBSYDP⁷. ● Training group should be organized men and women separately. 	<ul style="list-style-type: none"> ● Water shortage ● Only salt water is available in the village. ● Maintenance condition of main road to the village is bad. ● There is no health care facility in the village.



A scene of discussion





Result of review

After the review, the Extension/Gender expert explained important matters about facilitation of Social Map making. Contents are as follows;

- Space for map drawing should be set as all of participants could see.
- Cards should be prepared for different size, shape, and colors according to each item such as household, school, shop etc. It is easy to recognize contents of drawing.
- At the beginning of drawing, village borders and para borders should be decided first by road, canal, river etc. After range of map drawing confirmed by the borders, details should be drawn on the map.
- Facilitator should be careful his/her standing position. If he/she stand in front of participants, participants in the back could not see a map.
- When facilitator place the card on the map, it is better to ask help to participant so that participants would be involved in Social Map making and it would be more enjoyable.
- After completion of Social Map making, transect walk should be done to verify contents of map whether it is reflected village situation well.

⁷ BBSYDP : Benazir Bhutto Shaheed Youth Development Program

	
Participants view was blocked by facilitators	It was easy to recognize contents of map by different size, shape, colors.

(6) Survey plan for remaining pilot villages

As for four pilot villages in three districts out of 12 pilot villages in five districts which selected in the first year of the Project, Social Map making was planned. The plan of Social Map making is shown in Table 7.

Table 7 Plan of Social Map making

Date	Name of the village	Member
8 th Dec (Tue)	Haji Suleman Rafu village, Matiari district	FP-Matiari FP-Hyderabad
9 th Dec (Wed)	Jamal Khan Bozdar village, Tando Allahyar district	FP-Matiari FP-Hyderabad
14 th Dec (Mon)	Moosa Junejo village, Badin district	FP-Matiari FP-TMK
15 th Dec (Tue)	Ghulam Hussain Jamali village, Badin district	FP-TMK

Note: The Extension/Gender expert and Training C/P will attend all sessions.

2-3 The third day

(1) Review of past two days

Trainees expressed their opinions what they learnt in past two days. Although, SA-Hyderabad understood training contents a little during the previous training, he succeeded to explain the procedure of mastitis test in front of other participants in this training. SA-Badin said that it was problem to leave buffalo at dirty place after the milking. Each SA could answer the question about the correct order of milking for healthy buffalo and buffalo which affected by mastitis.

After the review of training contents, there was a discussion about provision of refreshments during the training in the village. In general, other donors or government programs would provide daily allowance, refreshment, and lunch to the training participants. The Training CP explained that the Project never provide daily allowance even refreshment to the training participants in the village. The Project

Manager explained that there was no project budget for refreshment and lunch for the training participants. FPs and SAs showed their strong concern that it was against custom. The Training CP made further explanation based on her experience from PRA survey which conducted in May and June 2015. During that survey, the survey team never provide refreshment to the participants even though it was hottest season in Pakistan. When the Extension/Gender expert informed her no provision of refreshment to the participants, she felt it was hard to believe because it was against our custom. However, the survey team could complete survey without any conflicts. That was why she changed her mind.

(2) Calf rearing

The Training CP gave the lecture about calf management right after its birth, importance of colostrum, sucking, feeding for sucking calves, and feeding for weaned calves. After that, it was practiced how to read formula of calf starter, feed table for suckling calves and feed difference of age of the month calves. SAs asked many questions actively about calf starter and how to feed calves.

(3) Calf diarrhea

The Training CP gave the lecture about diagnosis of calf diarrhea, dehydration condition of calf, body temperature measurement, and treatment of dehydration and fever. Type of diarrhea and its medicine and treatment were also explained. SAs asked several questions about necessary amount of oral rehydration salts (ORS) etc.

The Extension/Gender expert asked the trainees whether they could measure body temperature of calf without a thermometer. They replied that they could measure body temperature of calf based on their experience. The Extension/Gender expert also asked the trainees what kind of home remedy would be given to calves at the village. They replied that yogurt, sugar water, banana, leaf of Jaman (Laulak prum) would be given to calves when they were sick.

At the end of session, cost for treatment was calculated. Each cost was follows; ORS Rs.10/pack, antidiarrheal Rs.37/pack, antibiotic Rs.30 /time, anticoccidium Rs.80/pack. It is required continuous three days for treatment. If farmers called a veterinarian, additional cost would be needed from Rs. 1,500 to 2,000 per animal head. After the lecture, SAs continued discussion about type of diarrhea and its treatment.

(4) Reproduction

The Training CP explained about conception of heifers, conception of mother buffalo, delivery interval of a cow, and delivery interval of a buffalo. In Pakistan, interval of delivery is one time per two years. Sometimes it took longer period than this. The targeted delivery period of the Project was explained as once a year. In case of buffalo, it is difficult to achieve this target if compared with cow. Buffalo's pregnancy period is longer than cow about 25days.

After the lecture, the Extension/Gender expert informed that subject of reproduction would not be a training subject for the farmers because it was too technical for the farmers. However, awareness rising activities about reproduction would be took place to promote keeping reproduction record, and to call a

veterinarian for treatment.

(5) Review of communication skill and recording method

The Extension/Gender expert gave the lecture about how to ask questions to farmers and how to take field record. About how to ask questions to farmers, it was explained for following points 1) try to ask facts such as what, when, where, how much, how many, 2) be careful about chronological order of what they said. About how to take field record, it was explained that date and time should be recorded on the notebook and findings and own opinions should be separately recorded. After this lecture, role of extension workers and behavior which dealt in the first day was reviewed.

2-4 Opinions from trainees

As the last session of the training, trainees expressed their opinion about the training freely. Opinion from trainees are as shown in Table 8.

Table 8 Opinion from trainees

Trainee	Opinion
FP-Hyderabad	It was good training because it was full of information and easy to understand. Two training facilitators were also good. It was good opportunity of review. For Social map making, villagers were so collaborative. I could learn how to make social map. I'm satisfied for this training.
FP-Matiari	Training contents was easy to understand. It was good to have discussion several times in the training. I have confident to be a facilitator for next social map making. I think Social map is useful for not only this project but also other duties.
FP-Badin	This training was good for review and refresh my knowledge. Practice of Social map making would be useful when I do facilitation next time. I could learn many things about technical aspects from this training.
FP-TA	I'm very interested in formula feed which the Project developed. I'm ready for social map making next time through the practice.
FP-TMK	It was very good opportunity to learn. (He mentioned about summary of all training contents in his speech.)
SA-Hyderabad	I could deepen my understanding about mastitis including its treatment and calf diarrhea I also learned about concept of social map and implementation.
SA-Matiari	I understand about mastitis test and how to make Social map well.
SA-Badin	Social map practice was good. It is good to have the Formula feed table. I could deepen my understanding about Mastitis treatment and animal reproduction.
SA-TA	I learned feeding management and calf rearing, and calf diarrhea. I'm satisfied with the training.
SA-TMK	I understand Mastitis treatment. I could lean correct order of milking and procedure. I also understand reproduction and importance of colostrum.

3. Observation about trainees

3-1 Observation about trainees as a whole

During this training, special attention was paid for SAs whether they understand training contents well. SAs' reactions were also carefully observed. Training contents focused some subjects and training materials were prepared in Sindhi. The lectures were also given in Sindhi. Not only lectures but also other activities such as quiz, practice and discussion were done. Degree of understanding of SAs were measured by some questions after each lecture. Every SA could answer the question correctly. It was confirmed that understanding of SAs were improved if it is compared with the previous training.

During the lecture and tea break time, FPs and SAs had several discussions together about current situation of the village based on what they have learnt from the lecture. This could not happen if SAs did not understand the contents of the training. Trainees asked questions and had discussions during the lectures while they burst into laughter when they had a chat during tea break. There was good contrast between time for intense concentration and time for relaxation. It was very good atmosphere through the training. It seemed that every trainee was satisfied with the training according to their comments and expression.

3-2 Observation about FP

Training contents of this training were simplified version of training contents in previous training. Therefore, it was review for FPs who are veterinarian. However, all of FPs actively attended this training. They were so cooperative to help SAs to understand the contents.

3-3 Observation about SA

If compared with the previous training, each SAs actively express their opinion than before. Particular comments for three SAs are as below.

- SA-Matiari said in front of other participants that I was ready to give the training to the farmers in the village. In the previous training, he tried to understand the lectures and actively participated, however, he understood the contents of training a little. At present, his degree of understanding had been improved so much. It seemed that he could gain self-confidence. FP-Matiari helped him through guidance and explanation about appropriate technology development.
- SA-Hyderabad could not follow the training content in the previous training, although he attended the whole program. In this training, it was recognized that his degree of understanding has been improved. Although he was required to individual guidance to read the formula feeding table, he could answer the question about Mastitis test and other topics.
- SA-TMK refused to participate in the Project activities after the previous training, however, he was persuaded to join the Project activities and participated in all of program for this training at last. During the previous training, it was observed as problematic behavior that he did not listen to others before he spoke. However, such kind of attitude was not found.

4. Challenges revealed by the training implementation and its countermeasures

4-1 Next training

Level of understanding of SAs are improved because of Sindhi lectures with Sindhi materials. However, it will be required another training to enable them to teach the farmers using by real materials for the training. That training materials, Materials for Teaching the Farmers, should be prepared immediately. It would be preferable to conduct an extension team training again in January 2016.

4-2 Materials for teaching farmers

The Textbook for Appropriate Technology of Dairy Farming for Extension Team includes several tables such as formula feed tables. Such tables should be converted into illustrations for the farmers. Then, proper samples which appeal to five senses of participants such as smell, touch, and sight are required for better understanding. For example, it is very difficult recognize quality of feed only from text information. If the Project prepare sample of good feed and bad feed, participants could recognize it at a glance.

Attachment 1 Training Program

THE PROJECT ON SUSTAINABLE LIVESTOCK

DEVELOPMENT for RURAL SINDH

(JICA Technical Cooperation)

Technical Training Schedule for Extension Team

(Second Training)

Dated: November-30, December 1-2, 2015



Day 1: 30 November 2015

Time	Contents	Methodology	Facilitator
09:00 am	Registration of Participant		Dr. Rukhsana
09:30 am	Recitation from Holy Quran		
09:35 am	Welcome Address by the host		Dr. Jamil Ahmed Shaikh
09:40 am	Warm-up	Counting exercise	Ms. Kawamoto
09:50 am	Review of field activity	Discussion	Ms. Kawamoto/ Dr. Rukhsana
10:35 am	Review of Extension plan and role of Extension worker	Presentation	Ms. Kawamoto/ Dr. Rukhsana
11:40 pm	Mastitis	Text Reading Discussion	Dr. Rukhsana/ Ms. Kawamoto
01:15 pm	Lunch break		
02:15 pm	Review of Feeding management	Presentation Exercise, Q&A	Dr. Rukhsana/ Ms. Kawamoto
04:15 pm	Tea Break		
04:30 pm	Review of social map		Ms. Kawamoto/ Dr. Rukhsana
05:00 pm	Close		

Day 2: 1 December 2015

Time	Contents	Methodology	Facilitator
09:25 am	Departure from the Project office		
10:27 am	Arrival at the village		
10:40 am	Social mapping & household list	Social Map Household list	Dr. Rukhsana/ Ms. Kawamoto
12:30 pm	Transect walk		
1:00 pm	Departure from the village		
2:00 pm	Lunch		
3:00 pm	Review of today's activities	Discussion	Dr. Rukhsana/ Ms. Kawamoto
4:30 pm	Plan of next activities		
5:00 pm	Close		

Day 3: 2 December 2015

Time	Contents	Methodology	Facilitator
09:30 am	Recitation from Holy Quran		
09:35 am	Review of last 2 days		Dr. Rukhsana
10:30 am	Review of Calf rearing	Presentation	Dr. Rukhsana
11:35 am	Tea Break		
12:00 pm	Review of Calf diarrhea	Exercise, Q&A	Dr. Rukhsana
12:40 pm	Reproduction	Presentation Exercise, Q&A	
01:30 pm	Lunch		
02:00 pm	Review of communication skill and reporting	Presentation Roleplay	Dr. Rukhsana/ Ms. Kawamoto
03:00 pm	Tea break		
03:15 pm	Review of the training	Discussion	Dr. Rukhsana/ Ms. Kawamoto
04:00 pm	Close		

Report on the Third Extension Team Training

April, 2016

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

As shown in Figure 1, Conduct sensitization meeting is the fourth step of the flow of extension activities in the Extension Guideline (the first version) which prepared the end of the second year. The Extension Team will conduct sensitization meeting at all pilot villages from now on. For this reason, the third Extension Team training was conducted to understand contents and important points of sensitization meeting to conduct the meeting.

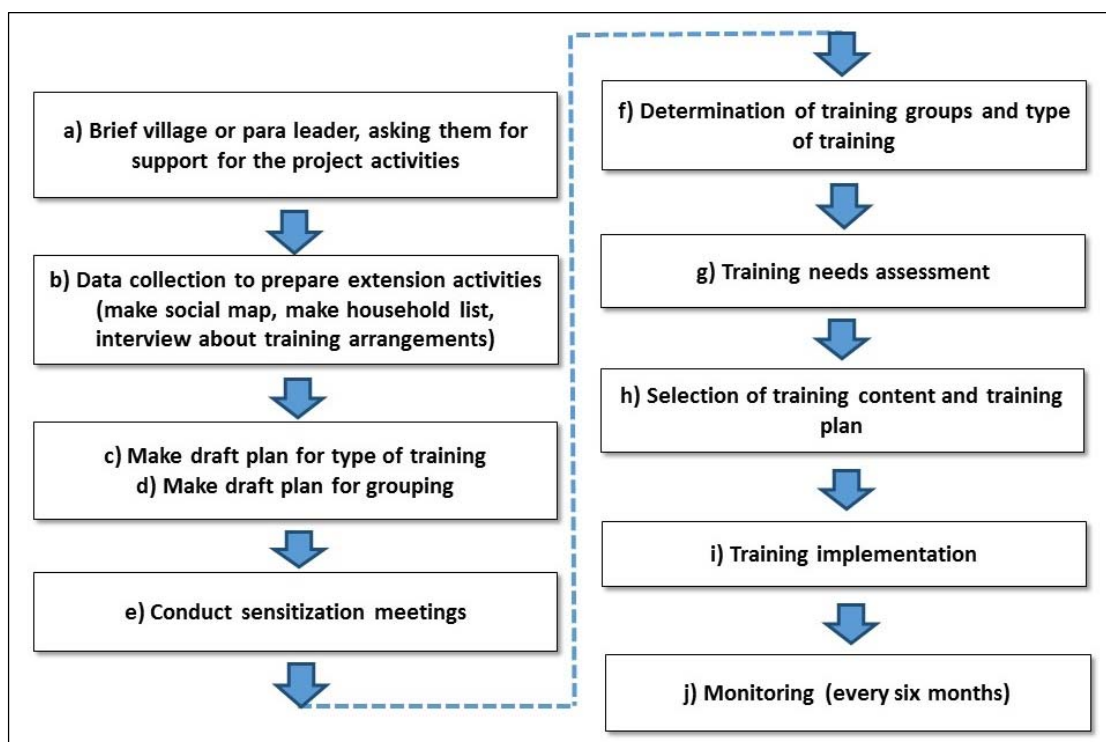


Figure 1 Flow of extension activities

1-2 Duration of the training

12th April 2016 and 13th April 2016, in total 2days

1-3 Number of participants

In total 9 participants (every male Focal Person (F/P) from the 5 Project districts, and every male Stock Assistant (S/A) from the Project Districts except TMK)

1-4 Training schedule and outline of training program

The training schedule and outline of training program is shown in Table1. Detail programs are shown in Attachment 1.

Table 1 Training schedule and outline of training program

Date	Theme	Trainer
12 Apr. (Tue)	1) Explanation for sensitization meeting program 2) Explanation for sensitization meeting materials 3) Practice of introduction on the Project activities (Individual practice and groupwork)	Dr. Rukhsana Vighio, Training C/P Ms. Mika Kawamoto, Extension/Gender expert
13 Apr. (Wed)	1) Implementation of sensitization meeting at Tayab Sand village, Badin 2) Review of the sensitization meeting	Facilitator: Dr. Rukhsana Vighio, Training C/P Assistant: Dr. Dodo Chandio, F/P Badin

2. Contents of the training

2-1 The first day

1) Explanation for sensitization meeting program

The Extension expert explained for flow of sensitization meeting and details of program. Contents of sensitization meeting consists of (1) outline of the Project, (2) introduction of the Project activities, (3) Pilot farmer's story and (4) introduction of appropriate technology and training register. It will be required 70 minutes to complete contents. Detail program is shown in Attachment 2.

2) Explanation for sensitization meeting materials

The Training C/P explained for meeting materials one by one. Training materials were large pictures which printed out on banner materials. At first, 34 materials were prepared, however, only 24 materials were selected for the meeting with the consensus of trainers and trainees due to the limitation of lecture time at the village.



A scene of lecture

3) Practice of introduction on the Project activities

List of meeting materials in Sindhi were distributed for individual practice for 20 minutes. Then, the trainees were divided into two groups and practice as a group. Each group did a rehearsal of the sensitization meeting in accordance with the meeting program.

Member of the first group were FP and SA of Badin and FP and SA of Tando Allahyar. During

the rehearsal, the Training C/P gave some comments according to circumstances. The first group completed presentation in 35 minute without pilot farmers' story. Member of the second group were FP and SA of Hyderabad, FP and SA of Matiari, and FP of TMK. The second group competed presentation in 25 minutes without pilot farmers' story.



4) Advice to the participants from the Extension/Gender expert

After the rehearsal, the Extension expert gave some comments to the trainees as follows:

- (To the first group) This meeting aims to introduction of the Project activities and collecting names of the farmers who willingly to attend Farmers' training. It is not technical training. Therefore, it is not necessary to make detail explanation for each picture. Time allocation in the training program should be kept.
- (To the second group) Speak slowly a little with big voice.

5) Advice to the participants from the Training C/P

After the rehearsal, the Training C/P gave some comments to the trainees as follows:

- Do not explain what the object of picture is doing. You should explain for the Project activity which shown in the picture.
- Sequence of explanation is very important. Do not skip any contents.
- Do not add unnecessary explanation.

2-2 The second day

1) Outline of sensitization meeting implementation

The sensitization meeting was conducted at Tayab Sand village, Badin district. The Training C/P was the facilitator and FP-Badin was the assistant. Meeting participants were 23 to 25 men. If boys and children were included, it was around 40 people. There were two biradari in this village. Sand was Muslim while Kolhi was Hindu. People from both biradari participated in the meeting.

2) Sensitization meeting

The sensitization meeting went well. It was in total 45 minutes for introduction part and pilot

farmer’s story, and 15 minutes to collect the names who willingly to attend Farmers’ Training. The whole session was one hour. Prepared pictures as meeting materials and smooth facilitation by the Training C/P could draw attention of the participants.



During introduction of the Project activities, it was explained that difference of the price between pure milk and adulterated milk would be double according to data of the whole sale market of Hyderabad.

The pilot farmer explained for calf rearing, livestock management and cleaning of shed. He said his milk production was increased after he was involved in the Project activity. However, there was no change on milk price at this moment.

Right after the pilot farmer’s story, one of the participants pointed out that both adulterated milk and pure milk were same price in this village and this was a problem. The training assistant, FP-Badin told a success story of Ghulam Hussain Jamali village, Badin district, to the farmers. If the villagers could produce milk in good quality with large volume, there would be opportunity to do business with the milk company. In case of Ghulam Hussain Jamali village, the Project arranged the meeting for the pilot farmer and Engro Foods. Then, milk of the pilot farmer passed the milk quality test of Engro Foods. After that the pilot farmers agreed with Engro foods on selling price. He supplied milk to Engro Foods with contracted volume and he got a regular income.

3) Explanation about Farmers’ training on appropriate technology and collection of farmers’ name who willingly to attend

Number of registered farmers for appropriate technology training were 16 and all of them were male. In this village, separate gender and mixed-biradari training will be conducted. Training day and time were confirmed as every Monday from 10:00am to 12:00 pm. The autaq of the village head was selected as the training venue. The sensitization meeting for female in the village will be conducted separately.

4) Review of the sensitization meeting

During review of the sensitization meeting, both FP and SA expressed many opinions. Main points of discussion are as follows:

- Time management was good.
- Preparation of contents was required for the pilot farmer before he speak.
- Both good and bad examples should be shown in the training materials.
- It seemed the pilot farmer was satisfied. Although it was busy season for the farmers, a lot of participants gathered for the meeting.
- It was better to give a chance to speak for the participants.
- Expanding of marketing channel was problems for this village.
- Common situation of dairy farming in the village should be explained before introduction of the Project activities.

3. Challenges revealed by the training implementation and its countermeasures

3-1 Sensitization meeting implementation

It is difficult to conduct the sensitization meeting alone if it is considered change of materials during the session and name collection for training register. The meeting supposed to be conducted by a pair of FP and SA or a pair of two SAs at least.

3-2 Materials for Teaching the Farmers

It was good to print out materials for sensitization meeting on banner materials as extra size of pictures. The farmers were attracted. For Farmers' Training, same format will be used for the materials.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH HYDERABAD
(JICA Technical Cooperation)**



1st Day 12th April-2016		
Time	Content	Facilitator
10:00 AM	Registration of Participants	
10:05 AM	Recitation from Holy Quran	Participants
10:10 Am	Contents of sensitization meetings (first version)	Ms. Mika Kawamoto
10:30 AM	Explain detail about sensitization meeting material	Ms. Mika Kawamoto Dr. Rukhsana Vighio
12:00 AM	Lunch	
13:00 PM	Role Play	Participants
15:00 PM	Discussion	
16:00 PM	Closing time	
2nd day 13th April-2016		
Time	Content	Facilitator
09:45 AM	Gather at the Project Office	
10:00 AM	Departure from the project office	
12:30 PM	Recitation of Holy Quran	Participants /Pilot Farmer
12:35 PM	Sensitization meeting at Village Tayyab Sand District Badin	Dr. Rukhsana Vighio Dr. Dodo Chandio
02:00 PM	Review of the visit at Badin office + Lunch	Ms. Mika Kawamoto
03:00 PM	Move to the project office	

Attachment 2 Program of sensitization meeting

Contents of Sensitization Meeting (first version)

Total required time is 70 minutes

Time required	Program	Contents
5 minutes	1. Introduction of the member	Introduction of the Project staff and Pilot farmer
5 minutes	2. Overview of the Project and importance of appropriate technology	2-1 Concept of the Project <i>(<u>Explain verbally, no materials for this section.</u>)</i> The Project aims to disseminate appropriate technology to the farmers broadly to increase their milk production with good quality and generating their income. The Project promotes that farmers would be market conscious and produce good quality of milk. Adulteration might give them benefit in short period, however, it will be a cause to lose trust from the market and consumers. Recognition from the market and consumers is crucial that farmer is high quality milk producer.
15 minutes		2-2 Introduction of the Project activities <i>(<u>Use the materials from No.1 to No.32</u>)</i> The Project is developing appropriate dairy farming technology in 8 field; farm management, marketing, feeding management, fodder, reproduction, animal health, genetic improvement and animal asset.
5 minutes		2-3 <u>To increase milk production, what should we do?</u> Feeding management will be required before everything else. If buffaloes are not given feed properly, they cannot produce good volume of milk. On top of that although buffaloes have conception problems, veterinarians cannot treat them if their body condition is bad.
5 minutes		2-4 <u>To produce good quality of milk, what should we do?</u> <i>(<u>Use the materials from No.33 to No. 37</u>)</i> It is required that 1) No adulteration and 2) Hygienic milk production

Time required	Program	Contents
10 minutes	3. Pilot farmer's story	Request to the Pilot farmers to speak to the participants about his/her experience. Topic is improvement on the dairy production after she/he joined the Project activities in terms of milk production and income generation.
10 minutes	4. Technical Training	4-1 Introduction of the Project technical training <i><u>(Use the materials from No.38-No.40)</u></i> <u>Grouping</u> The Project provides training to a group in the village. There are three types of group; 1) mixed-gender and same biradari group, 2) separate gender and mixed biradari group, and 3) separate gender and separate biradari group. Type of group will be discussed with the farmers. Number and size of group will also be discussed. <u>Training contents</u> At present, the Project can provide feeding management, animal health (mastitis) and calf rearing training. Other subjects will be added later. <u>Condition</u> The Project will provide to the farmers only technical training and advice.
15 minutes		4-2 Seeking participants for the technical training The Extension Team ask the participants their willingness to attend the technical training <Training participants Criteria> ● Small scale farmer who has less than 5 animals. Sharing is also accepted. ● Those who are doing livestock rearing by themselves. ● Training for female will be discussed later.

End

Report on the Fourth Extension Team Training

October, 2016

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The fourth Extension Team training was conducted to provide an opportunity to newly-recruited staff for their understanding of the Project activity and learning necessary knowledge and skills for extension activities. Main training themes were project orientation, team-building, social mobilization and social map and sensitization meeting.

1-2 Duration of the training

13th July 2016 to 3rd August 2016, in total 14 days

1-3 Number of participants

In total 17 participants, one Social mobilizer (S/M), one Gender specialist (G/S), five Master Trainers (M/T), and five Extension Workers (E/W)

1-4 Training schedule and outline of training program

The training schedule and outline of training program is shown in Table1. Detail programs are shown in Attachment 1 to Attachment 4.

Table 1 Training schedule and outline of training program

1) Project orientation

Date	Main theme (Lecturers were the Project staff , counterparts, the Extension expert)
13 Jul. (Wed)	1) Introduction to the Livestock Department 2) Outline of the Project 3) Outline of appropriate technology development 4) Explanation for the Extension Guideline and progress of extension activities 5) Role of extension and extension staff
14 Jul. (Thu)	1) Feeding management 2) Fodder management and development 3) Calf rearing 4) Role play (Extension activity in the village)
15 Jul. (Fri)	1) Activity of Farm management and next plan 2) Activity of marketing and next plan 3) Visit of the Watayo faqeer milk producers' group in Tando Allayah district 4) Visit of Mr. Mushtaque , the pilot farmer in Tando Allayah district
18 Jul. (Mon)	1) Animal health situation and progress of activity 2) Animal reproduction and reproduction disorder 3) Visit of Mr. Pehraj, the pilot farmer in Hyderabad district
19 Jul. (Tue)	1) Animal breeding 2) Livestock asset 3) Visit of Mr. Niaz, the pilot farmer in TMK district 4) Visit of Mr. Haji Bashir Almani, the breeder's farm

2) Team-building

Date	Main theme (Lecturers were from the Institute of Rural Management (IRM))
20 Jul. (Wed)	1) Communication skill, 2) Office ethics for newly-recruited staff
21 Jul. (Thu)	1) Time management, 2) Leadership skills and Seven habits
22 Jul. (Wed)	1) Team-building and group dynamics, 2) Conflict resolution

3) Social mobilization

Date	Main theme
26 Jul. (Tue)	1) Social mobilization, 2) Concept of participatory approaches, 3) Gender
27 Jul. (Wed)	1) Behavior and attitude of extension workers in the village 2) Facilitation skills for extension workers 3) Conflict resolution, 4) PRA tools for extension activities
28 Jul. (Thu)	1) Demonstration of social mobilization at Haji Suleman Rahu village, Matiari district

4) Social map and Sensitization meeting

Date	Main theme (Lecturers were the Training C/P and the Extension expert)
1 Aug. (Wed)	1) Lecture of Social map, 2) Practice of map drawing 3) Lecture of Sensitization meeting, 4) Group presentation
2 Aug. (Thu)	Implementation of Social map, Transect walk and Sensitization meeting at Muhammad Ibrahim Mangwano village, Hyderabad
3 Aug. (Fri)	1) Review of field activities 2) Review of technical subjects, feeding management, mastitis, calf rearing and diarrhea, and animal reproduction 3) Review of the Extension Guideline

2. Contents of the training

2-1 Project orientation (the first week)

Project orientation consisted of lectures by counterparts (C/P) and field visit. Lectures of C/P had been improved as compared with the first Extension Team training which held in October 2016. Presentation slides were prepared in English and the lectures were given in Sindhi. Contents of the Project orientation are as follows:

1) Introduction to the Livestock Department

The Project Manager explained for the structure of the Livestock Department and position of the Project in the Department.

2) Outline of the Project

The technical coordinator explained for the Project period, cost-sharing between Japanese government and Pakistani government, Project area and beneficiaries, the structure of the Project, purpose of the Project, and four outputs of the Project.

3) Outline of appropriate technology development

The Farm Management C/P explained for Output 1 and Output 2 in the PDM which related to appropriate technology development. Then, selection of pilot farmers (the first and second group) was explained. Outline of experiment of appropriate technology development at the pilot farmers' farm was also explained.

4) Explanation for the Extension Guideline and progress of extension activities

The Extension expert explained for Output 3 in the PDM which related to extension activities. In accordance with the Extension Guideline, target, structure, principle, and procedure of extension and Farmers' Training were explained. Progress of extension activities was also explained.

5) Role of extension and extension staff

The Training C/P explained for what is extension and what is livestock extension. Then she explained structure of extension and target of extension again. Role of the extension staff and required skills and behavior for the extension staff were explained.

6) Feeding management

The Feeding Management C/P explained for purpose of feeding management and progress of activities. Introduction of the retainer to use body measurement of livestock and construction of proper milking shed were also explained.

7) Fodder management and development

The Fodder Development C/P explained for fodder shortage season, suitable timing for harvesting, and technique of fodder storage. As a part of future activity, he explained for guidance to the pilot farmers for hay making during fodder shortage period, survey for fodder production improvement and the growth test of elephant grass. Progress of formula feed test and proper feeding method of formula feed were also explained.

8) Calf rearing

The Feeding Management C/P explained for purpose of calf salvation, procedure of collection of a calf from the cattle colony to the calf salvation center of the Project, calf rearing and group feeding. Then, the trainees visited the calf salvation center of the Project.

9) Role play (Extension activity in the village)

The trainees were divided into four groups for role play. Each group played an expected situation when they go to the village for extension activities. Casting and story making were done by each group.

	
A scene of role play	Visit of the calf salvation center

10) Activity of Farm management and next plan

The Farm Management C/P explained for definition of the farm management and factors which should be controlled for proper farm management. He also explained that most of the pilot farmers did not record about farm management.

11) Activity of marketing and next plan

The Marketing C/P explained for basic terms of market and marketing, elements of livestock marketing, and current situation of milk market and milk selling channel. Problems which related milk market and variation of milk price of the pilot farmers in past one year were also explained. Progress of marketing activities such as workshop, collaboration with the milk company, data collection on marketing were introduced.

12) Visit of the Watayo faqeer milk producers' group in Tando Allayah district

The trainees observed the bulk cooler of milk producers' group and made interview the leader of milk producers' group for situation of milk selling.

13) Visit of Mr. Mushtaque, the pilot farmer in Tando Allayah district

The trainees visited in the farm of Mr. Mushtaque and observed his paddock.

14) Animal health situation and progress of activity

The Animal Health C/P emphasized that prevention cost was lower than treatment cost. Vaccination and drenching were explained as methods of prevention. He also explained for major disease in the Project area such as mastitis, food and mouth disease, brucellosis. Procedure of disease diagnosis, and main medicine for treatment were also explained.

15) Animal reproduction and reproduction disorder

The Reproduction C/P explained for importance of reproduction for dairy farming. He said it was very important to improve conception rate of buffaloes to increase milk yield. As efforts of the

Project, pregnancy diagnosis by rectal palpation, promotion of reproduction record for the pilot farmers, diagnosis of reproduction disorder (for male and female buffaloes) and hormone treatment were explained.

16) Visit of Mr. Pehraj, the pilot farmer in Hyderabad district

Mr. Pehraj improved the paddock for his livestock to avoid direct sunlight and to keep good ventilation. He brought a bed into the paddock for himself to take rest at the nearest place to his animal. A clock was hanged on the wall to check feeding time.

On the other hand, his brother who rearing livestock in same site did nothing for his livestock. Livestock was exposed to direct sunlight and feeding place was not properly arranged. It was really contrasting situation.

17) Animal breeding

The Genetic Improvement C/P explained for purpose of genetic improvement, current situation of the pilot farmers and breeders, and pedigree registration.

18) Livestock asset

The Animal Asset C/P explained for definition of animal asset, calf salvation plan, situation of distributed calves by the Master plan study. Recycling and revolving of livestock were also explained.

19) Visit of Mr. Niaz, the pilot farmer in TMK district

Growth of distributed calf was observed.

20) Visit of Mr. Haji Bashir Almani, the breeder's farm

The Genetic Improvement C/P explained for the pedigree registration of the breeder's farm.

2-2 Team-building (the second week)

1) Team-building

Training in the second week was conducted by the Institute of Rural Management (IRM). IRM lecturers gave lectures to trainees.

1) Communication skill

Definition of communication skill and SMCR¹ model as elements of communication were explained. Short movies and exercises were included as a part of the lecture. It attracted the trainees well.

2) Office ethics for newly-recruited staff

¹ SMCR model consists of Sender, Message, Channel and Receiver.

The trainee learned what should do and what should not do at the working place as fundamental attitude for professionals.

3) Time management

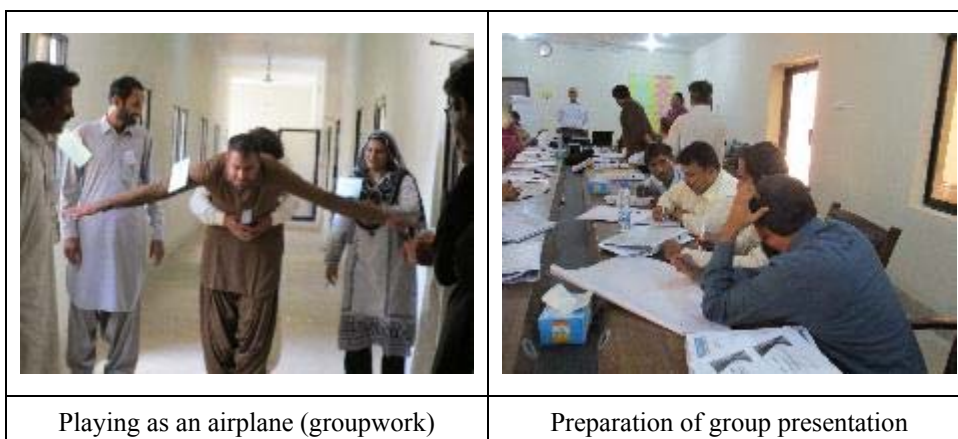
Definition of time management, five principles of time management, organization of tasks and prioritization were explained.

4) Leadership skills and Seven habits

Five elements for the leader and the 7 Habits of Highly Effective People were explained.

5) Team-building and group dynamics

Basic words related team-building, four stages of team-building (Forming, Storming, Norming, and Performing) were explained. The trainees were divided into four groups for group work. Each group chose one machine such as an air plane, television, and train. Each group member acted as a part of selected machine and they performed as a functional machine by the group.



6) Conflict resolution

Definition of conflict and conflict resolution were explained.

2-3 Social mobilization (the third week)

Training in the third week was conducted by Mr. Gopal, the Social Mobilization trainer (the S/M trainer).

1) Social mobilization

Definition of social mobilization and its stages were explained. Difference between social mobilization and community development was also explained.

2) Concept of participatory approaches

Participatory approach and kind of participation such as Passive participation and Interactive participation were explained.

3) Gender

Basic of gender, gender role and gender harassment were explained.

4) Behavior and attitude of extension workers in the village

The S/M trainer gave advice to E/W about what behavior should be and points to be considered.

5) Facilitation skills for extension workers

The S/M trainer gave advice to E/W such as listen to the villagers carefully, do not interrupt the villagers to rise questions and use positive words.

6) Conflict resolution

The Extension staff need to know about conflict resolution, however, some of the issues of the villages are beyond the Extension staff's control and responsibility. The Extension expert asked the trainees for following three questions to test their understanding for extension activities.

- (1) You become in charge of a certain village. There is a conflict between Muslim and Hindu biradari.
→ What do you do?
- (2) Many villagers suffer Hepatitis A in a certain village in your assigned district.
→ What do you do?
- (3) A certain farmer asked 'the pilot farmer received some inputs from the Project to construct a paddock. But I could not get anything from you. Why?'
→ What kind of answer do you give the farmer?

Some of E/W replied based on their duty, however, one of M/T proposed the solution of the issue which beyond his responsibility. What the Project provide to the farmer is only information and technical guidance on appropriate technology. The Extension supervisors need to explain to the Extension Team repeatedly.

7) PRA tools for extension activities

PRA tools such as a social map, flow chart, seasonal calendar, and pie diagram were explained.

8) Demonstration of social mobilization

The S/M trainer demonstrated social mobilization at Haji Suleman Rahu village, Matiari district. Adulteration was a main theme.

This village was infamous for adulteration. Even the pilot farmer did not stop adulteration. 27 farmers participated in the demonstration of social mobilization.

Facilitation of the S/M trainer was well structured with simple words. The farmers were easy to follow his facilitation. Because of good facilitation, several farmers expressed their opinion and tried to share his experience with others.

In the middle of the session, one of the farmer expressed opposing opinion against the S/M trainer. This was a good sign that the S/M facilitator could extract farmers' idea truly.

As a result of excellent facilitation by the S/M trainer, the participants decided by themselves that they would have a regular meeting to solve their problem. The village lost trust from the market due to adulteration caused by some villagers. Therefore. Milk price was not improved.

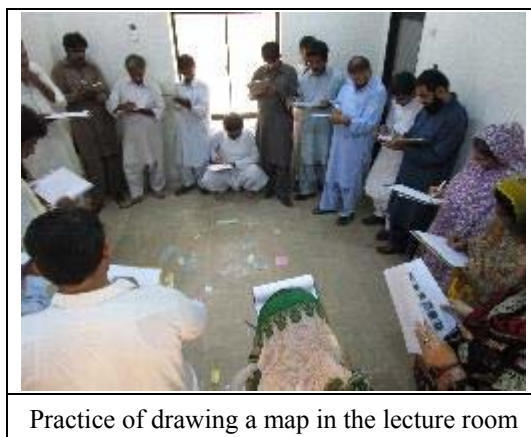


During the review session of social mobilization at the Project office, one of E/W said meeting venue was not proper condition such as high temperature and too many people in the meeting venue. In fact, the meeting venue was made of bricks and every participant could have a seat. It was a good place as field level. The S/M trainer and the Extension expert explained that it was the real situation of the village. Extension work was totally different from the work in the air-conditioned room. On top of that, the farmers were working under severe condition for agricultural work.

2-4 Social map and Sensitization meeting (the fourth week)

1) Lecture of Social map

The Extension expert gave lecture of social map and draw a virtual village on the floor of training venue. The trainees made a sketch of the virtual village for practice. Most of the trainees could draw a map as required.



Practice of drawing a map in the lecture room

2) Lecture of Sensitization meeting

The Training C/P explained for the Project activities with use of sensitization meeting materials. The trainees were divided into 5 Extension Team and a pair of G/S and S/M. All group practiced the presentation of sensitization meeting. Both M/T and E/W could make a presentation in accordance with guidance by the Training C/P. Every presentation was reviewed. Good points and points to be improved of each group were shared with the trainees.

3) Implementation of Social map, Transect walk and Sensitization meeting

The sensitization meeting was conducted at Muhammad Ibrahim Mangwano village, Hyderabad. The Focal person of Hyderabad helped to arrange the meeting. Number of households was less than 50 household, it was only 2 hours for the whole program.

On the other hand, some small points such as sitting position of the training participants and standing position of the extension staff during social map turned into some problems due to large number of participants and the Project members.



Sensitization meeting
Muhammad Ibrahim Mangwano village,
Hyderabad

Due to time limitation, household lists were not made during the social map making. The Extension Team of Hyderabad decided that they went back to the village to make household list in next day.

It was good to combine social map, transect and sensitization meeting into same day for the Extension Team training purpose, however, 'social map and transect' and 'sensitization meeting' will be conducted separately for normal extension activities.

4) Review of the Extension Guideline

The Extension expert explained for the Extension Guideline again. The trainees understood their role well as compared with the first day of the training because they were given a lot of lectures and practice in the village. The Extension expert also explained for target number of extension activities within remaining four months in 2016.

3. Observation about trainees

1) Attitude of trainees

All the trainees listened the lectures earnestly and asked many questions to the trainers. They are interested in extension activities. However, one of E/W came late for continuous four days. Therefore, the Extension expert gave a strong warning to this E/W.

2) Team work

During review session in the second day, it was planned that the participants were divided into four groups and each group made a presentation on what they have learnt from the first day. However, one of the group did not prepare the presentation because one of the members was late. Therefore, they failed to make the presentation. The Extension expert gave a warning for poor communication among the members.

3) Qualities of extension workers

In the role play of extension activity, E/W played a role actively without hesitation to M/T. It can be say that this is good quality as an extension worker.

During presentation of group work, some E/W were shy to speak in front of other audience and they could not look at the audiences' face. However, they could manage to make a presentation following by advice of the Training C/P at last.

4) Level of understanding

In the second day of the training, a quiz of 12 questions for feeding management was conducted to measure level of understanding of trainees. Some of E/W marked better score than M/T.

5) Previous experience

One M/T and two E/W among the newly-recruited extension staff worked as a private veterinarian and a stock assistant respectively before they are involved in the Project.

4. Challenges

For expansion of extension activities in future, a mobility would be a bigger problem than ability of the Extension Team. Currently, only one car is available in Tando Allahyar district.

Attachment 1 Training Program (Project Orientation)



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH HYDERABAD
(JICA Technical Cooperation)**



5 Days Technical Training Schedule for Newly Recruitment Staff

Dated: July 13-19, 2016

13-07-16	Contents	Methodology	Facilitator
09:00 am	Registration of Participant		Ms. Zahida Soomro
09:05 am	Recitation from Holy Quran		Participants
09:15 am	Introduction of Participant		Dr. Rukhsana
09:30 am	Welcome Address by the host		Ms. Mika Kawamoto
09:40 am	Introduction about Livestock Department	Presentation	Dr. Jamil Shaikh
10:00 am	Fears, Hopes and code of conduct	Round Ribbon	Dr. Rukhsana
10:30 am	Tea Break		
10:45 am	Project Orientation	Presentation	Dr. Rasool Bux Soomro
11:15 am	Progress of development of appropriate Technology	Presentation	Dr. G. M. Jiskani
12:00 pm	Question /Answer Session	Verbal Communication	Dr. G. M. Jiskani
01:15 pm	Lunch& Pray Break		
02:15 pm	Extension Plan of the Project		Ms. Mika Kawamoto
03:00 pm	Extension & Extension Worker	Presentation / Group work	Dr. Rukhsana
03:45 pm	Tea Break		
04:00 pm	Group Formation (Role Play)		Dr. Rukhsana
05:00 pm	Close		
14-07-16	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		Participants
09:05 am	Review of the Last day		Dr. Rukhsana
09:30 am	Feeding Management	Lecture/Group Discussion	Dr. Fazlani
10:30 am	Tea Break		
10:45 am	Fodder Management	Lecture/Group work	Dr. Arif
11:45 am	Fodder Production & Development	Presentation	Dr. Arif
12:45 am	Calf Salvation	Presentation	Dr. Fazlani
01:30 pm	Lunch & Pray Break		
02:30pm	Role play		
03:40 pm	Visit of Calf Salvation Experimental Center Hyd	Field Visit	Dr. Fazlani/ Dr. Arif
04:30 pm	Quiz time		Dr. Rukhsana
05:00 pm	Close		

15-07-16	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		Participants
09:05 am	Review of Last day		Dr. Rukhsana
09:30 am	Livestock Farm Management	Lecture	Dr. Jiskani
10:30 am	Tea Break		
10:45 am	Progress & Future Plan of Farm Management	Presentation	Dr. Jiskani
11:45 am	Livestock Marketing	Lecture	Dr. Iqtidar Memon
12:45 pm	Current Situation& progress of L/s Marketing	Presentation	Dr. Iqtidar
01:00 pm	Lunch & Pray Break		
02:45 pm	Field Visit		
03:30 pm	Visit of Chiller/Milk shop (TA)	Field Visit	Dr. Iqtidar/ Dr .Jiskani
04:30 pm	Visit of P/f (Mushtaque TA)	Field Visit	Dr. Iqtidar/ Dr. Jiskani
18-07-16	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		Participants
09:05 am	Review of Last day(Quiz time)		Dr. Rukhsana
09:30 am	Animal Health	Lecture/Group work	Dr. Zulfiqar
10:30 am	Tea Break		
10:55 am	Existing Situation & Progress of Animal Health	Lecture	Dr. Zulfiqar
11:20 am	Animal Reproduction	Presentation	Dr. Shahani
12:35 am	Reproduction Disorders	Lecture/Group discussion	Dr. Shahani
01:00 pm	Lunch & Pray Break		
02:00 pm	Field Visit	Field Visit	Dr. Shahani/ Dr. zulfiqar
03:00 pm	Visit of P/F Pehlaj Hyd	Field Visit	Dr. Shahani/ Dr. zulfiqar
19-07-16	Contents	Methodology	Facilitator
09:00 am	Recitation from Holy Quran		Participants
09:05 am	Review of Last day (Quiz time)		Dr. Rukhsana
09:30 am	Livestock Genetic Improvement	Presentation	Dr. Jatoi
10:30 am	Tea Break		
10:45 am	Livestock Assets	Presentation/ Group work	Dr. Naeem
11:30 am	Quiz time		
12:00 am	Views of Participant		
12:30 pm	Closing Remarks		Dr. Jamil
01:00 pm	Lunch & Pray Break		
02:00 pm	Field visit Departure		
03:30 pm	Visit of Breeder/PF (TMK)	Field Visit	Dr. Jatoi/ Dr. Naeem

Attachment 2 Training Program (Team-building)





Date: July 20, 21 and 22, 2016

DAY ONE: Wednesday – July 20, 2016		
Time	Session	Responsibility
0900	Registration of participants	Mehreen
0910	Recitation of Holy Quran verses, Welcome to Participants by Representative of JICA/IRM & Introduction of IRM	Mehreen
1015	Introduction of participants, Expectations, Fears and setting the norms	Mehreen
1016	Pretest	Mehreen
1045	Tea Break and Group Photo	Participants
1100	Effective Communication Skills	M. Noshad Siddique
1330	Lunch and Prayer break	Participants
1430	Office Work Ethics for New Office Workers	M. Noshad Siddique
1530	Tea break	Participants
1545	Cont: Office work ethics for new office workers	M. Noshad Siddique
1645	Evaluation of the day	Mehreen
1700	Group work and assignment	Mehreen

DAY TWO: Thursday – July 21, 2016		
Time	Session	Responsibility
0900	Review of the previous day and group presentations	Mehreen
0930	Time Management	Atiq Raja
1100	Tea break	Participants
1115	Leadership Skills	Atiq Raja
1330	Lunch and Prayer break	Participants
1430	Seven Habits of Highly Effective People	Agha Zahid
0330	Tea break	Participants
0345	Seven Habits of Highly Effective People	Agha Zahid
1645	Evaluation of the Day	Mehreen
1700	Group work and assignment	Mehreen

DAY Three: Friday – July 22, 2016		
Time	Session	Responsibility
0900	Review of previous day and group presentations	Mehreen
0930	Team Building and Group Dynamics	Israr Hussain Tunio
1100	Tea break	Participants
1115	Conflict Resolution through Team Building	Israr Hussain Tunio
1330	Lunch and prayer break	Participants
1430	Training evaluation & clearing MIST Closing ceremony & Vote of Thanks	IRM and JICA Team
1530	Good By	

Attachment 3 Training Program (Social Mobilization)

 3Days Training Schedule on Social Mobilization For Extension Staff <i>July 26, 27, 28 2016</i> 				
Timings	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
Day 1 (July 26, 2016)				
09.00-09.30	Recitation	Participant		
	Introduction of the Participants Expectation/ Fears and ground roles	Introductory Session	Participatory	Participants
09.30-9:45	Extension plan of the Project		Presentation/Briefing	Mika
09.45-10.45	Concept of Social Mobilization and Some Basic question for Social Development (Reason and Solution	Social Mobilization Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
10.45-11.00 Tea Break				
11.00-11.45	Key Elements of Social Mobilization Phases of social mobilization	Social Mobilization phases	Presentation/Discussion and Lecture	Gopal Das
11.45-12.45	Dialogue and programme introduction methodology for Extension worker	Programme Introduction	Discussion, Lecture and Role Play	Gopal Das /participants
12.45-01.15	Motivation skills	Steps and important of Motivation in extension work	Presentation/Discussion/ Group work /Lecture	Gopal Das
01.15-02.00 Lunch				
02.00-03.00	Concept of participatory approach	Conceptual understanding of Paritcapation	Presentation/Discussion/ Group work /Lecture	Gopal Das
03.00-03.45	Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
03.45-04.00 Tea break				
04.00-04.45	(Cont) Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das

Timings	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
Day-2 (July 27, 2016)				
09.00-09.20	Review of the previous Day	Learning of the previous Day	Participatory	Gopal Das /participants
9.20-11.00	Attitude & Behaviours of Extension worker & Community	Checklist of Attitude & Behaviours	Presentation /Discussion /Group work /Lecture	Gopal Das
11.00-11.15 Tea Break				
11.15-12.30	Communication & Facilitation Skills of Extension worker (Verbal & Non verbal communication)	Concept of Communication & Facilitation skills Type of Communication	Presentation/Discussion /Group work /Lecture	Gopal Das
12.30-1.30	Conflict (issues & Solution)	Conflict Resolution Strategy	Presentation/Discussion /Group work /Lecture	Gopal Das
1.30-2.30 Lunch Break				
1.30-2.30	Introduction of PRA Tools and their important in data collection	PRA – Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
2.30-4.30	PRA- Tools practices Social map Network diagram Seasonal Calendar Closing of the day with Tea	PRA – Tools & Techniques	Participatory discussion Lecture and Brainstorming	Gopal Das
Day 3 (July 28, 2016)				
09.00-1.30	Field Social Mobilization for Milk Adulteration (Sensitization & realization)	Social Mobilization Process for motivation	Village Haji Suleman Rahu, Matiari	Gopal Das
2.00-3.00 Lunch Break				
3.00-3.30	Training evaluation	Field Trip Review	Individual Sharing	Gopal Das
3.30-4.00	Role of Extension workers of the Project	Extension workers key responsibilities	Presentation/Discussion	Dr. Rukhsana
4.00-5.00	Closing	Feedback Comments Certificate Distribution	Comments	Participants Facilitator Livestock Department and JICA team

Attachment 4 Training Program (Social Map and Sensitization Meeting)



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)
Technical Training Schedule for Extension Team
(Social Map/ Sensitization Meeting/ Appropriate Technology)**



Dated: August 1-3, 2016

Day 1: 1st August 2016

Time	Contents	Facilitator
09:00 AM	Registration of Participants	
09:05 AM	Recitation from Holy Quran	Participants
09:30 AM	Social Map	Ms. Mika Kawamoto
10:15 AM	Tea Break	
10:30 AM	Social Map (Cont.)	Ms. Mika Kawamoto
11:15 AM	Contents of sensitization meetings (Second version) Explain detail about sensitization meeting material	Dr. Rukhsana Vighio
12:00AM	Role Play of Sensitization (Practice)	Participants
13:00 PM	Lunch	
14:00 PM	Role Play of Sensitization (Presentation)	Participants
15:30 PM	Tea break	Participants
15:45 PM	Discussion	Participants
16:45 PM	Closing time	

Day 2: 2nd August 2016

Time	Contents	Facilitator
09:30 AM	Recitation from Holy Quran	
09:35AM	Preparation of Social Map materials (Tea will be served at 10:30 AM)	
11:25AM	Departure from the project office	
12:10 PM	Social Map and Sensitization meeting at the pilot village, Ibrahim Manghwano, in Hyderabad	Dr. Rukhsana Vighio
14:05 PM	Transect walk	Dr. Rukhsana Vighio
14:35 PM	Move to the project office	
15:15 PM	Lunch	
16:15 PM	Review of the visit	Ms. Mika Kawamoto
17:15 PM	Closing	






Day 3: 3rd August 2016




Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	
09:05 AM	Review of Extension plan and role of Extension worker	Ms. Kawamoto/ Dr. Rukhsana
10:10 AM	Tea break	
10:30 AM	Review of Feeding management	Dr. Rukhsana
13:00 PM	Lunch break	
14:00 AM	Mastitis	Dr. Rukhsana
15:00 PM	Review of Calf rearing and Calf diarrhea (Tea will be served during session)	Dr. Rukhsana
16:00 PM	Reproduction	Dr. Rukhsana
16:15 PM	Review of today	Ms. Kawamoto/ Dr. Rukhsana
16:45 pm	Closing	






End





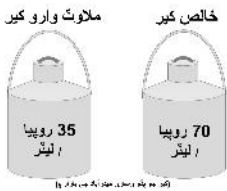

Attachment 5 List of sensitization materials (revised version)

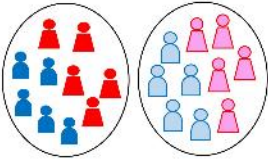
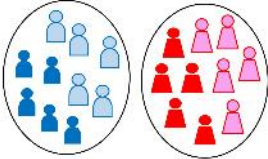
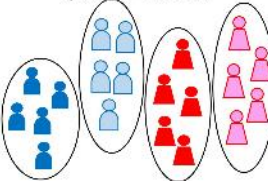
List of Sensitization Materials (Revised)

No.	theme	Picture	Talking note
1	Farm management		In our country animals are reared in traditional way. Observe hygienic condition at the parking place of animals and avoid direct sunshine and wetness.
2	Farm management		When parking animals under the trees remember to provide enough feed and plenty of water around the clock.
3	Farm management		Always feed the animals in feeding mangers who avoid loss of feed. Provide drinking water 24 hours.
4	Farm management		While milking the animals use proper type of sheds with good ventilation. Clean milking area before milking and wash your hands and milking utensil.
5	Fodder		Animal production depends on good feeding. Feed the green fodder to animals after chopping for proper digestion

No.	theme	Picture	Talking note
6	Fodder		To overcome the shortage of green fodder the project has conducted experiments successfully on Hay making
7	Animal Health		For the maintenance of animal health, Remember prevention better than cure vaccinate the animals every year timely against contagious diseases.
8	Animal Health		Drench the animals against endo parasites twice a year.
9	Animal Health		Under the Project Treat the animals against Mastitis very early stage through simple test.
10	Calf Rearing		In our country it is difficult to rear the small calves because they die due to disease.

No.	theme	Picture	Talking note
11	Calf Rearing		This project advises to rearing the calves .Keep the calves separately at clean place and avoid wetness. Use your technical skill to rear the calves. Feed the young calves separately and make sure availability of water and feed throughout the day.
12	Marketing		The best is to sale the milk as pure to get good rates. Milk adulterated water will not fetch good price. It's good to sale the milk at the doors in nearby town instead of supplying to a milk trader/ collectors middle man collect the pure milk form the village and sell it in whole sale market at nearby town.
13	Assets		Under the Project calves age 90 days will be provided to the leading Male/ Female farmer under an agreement and within no already decided in the project.
14	Reproduction		Under this project farmers get at least one calf in a year. Female animals cannot calving every year consent to the veterinary doctor.
15	Animal Genetics		The province of Sindh possess very good animal breed especially Kundhi buffalo and red sindhi Cows.

No.	theme	Picture	Talking note
16	Animal Genetics		Under the project the information regarding of animal breed is being collected by experts who save the breeds.
17	Production of good quality milk		This is pure milk.
18	Production of good quality milk		This is under adulteration.
19	Production of good quality milk		AS IF you got large quantity of milk. BUT...
20	Production of good quality milk		This is wholesale market price of milk in Hyderabad. The price of rural farmers' milk is shown the half price of commercial farmers' milk. The market doesn't trust rural farmer's milk on purity.
21	Production of good quality milk		Production of pure milk is necessary to get more income.

No.	theme	Picture	Talking note
22	Grouping for training	<p>تربیت لاء گڏيل صنف ۽ ساڳئي برادري</p> 	Mixed gender and same biradari training
23	Grouping for training	<p>تربیت لاء ڌار صنف ۽ ساڳئي برادري</p> 	Separate gender and mixed biradari training
24	Grouping for training	<p>تربیت لاء ڌار صنف ۽ ڌار برادري</p> 	Separate gender and separate biradari training

End

Report on the Fifth Extension Team Training

November, 2016

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The fifth Extension Team training was conducted from 23rd August 2016 to 24th August 2016 in total 2 days to practice the lecture of Farmers' Training with use of real training materials for farmers on feeding management. As a part of the extension team training, Farmers' Training (feeding management) was conducted at the pilot village in Matiari district.

1-2 Duration of the training

23rd August 2016 and 24th August 2016, in total 2 days

1-3 Number of participants

In total 17 participants, one Social mobilizer (S/M), one Gender specialist (G/S), five Master Trainers (M/T), and five Extension Workers (E/W)

1-4 Training schedule and outline of training program

The training schedule and outline of training program is shown in Table 1. Detail programs are shown in Attachment 1.

Table 1 Training schedule and outline of training program

Date	Main Theme
23 Aug. (Tue)	1) Review of Social map, 2) Explanation for Farmers' Training (Feeding management) 3) Practice of presentation using training materials for the farmers
24 Aug. (Wed)	Farmers' Training (Feeding management) at Gul Muhammad Ghambheer village, Matiari

2. Contents of the training

2-1 The first day

Summary of the first day is as follows:

1) Review of Social map

The Training C/P gave a feedback to the Extension Team about Social map activities which held at four villages from 3rd August 2016 to 22nd August 2016. These activities were conducted by the Extension Team with monitoring by the Extension C/P¹.

2) Explanation for Farmers' Training (Feeding management)

The Training C/P explained for program of Farmers' Training which shown in attachment 2 and training contents using by materials for Farmers' Training. The program consists of (1) explanation for feeding management using training materials, (2) making of seasonal calendar about roughage and concentrate, (3) questions and answers, and (4) visit of pilot farmer's farm. It will be 90 minutes to

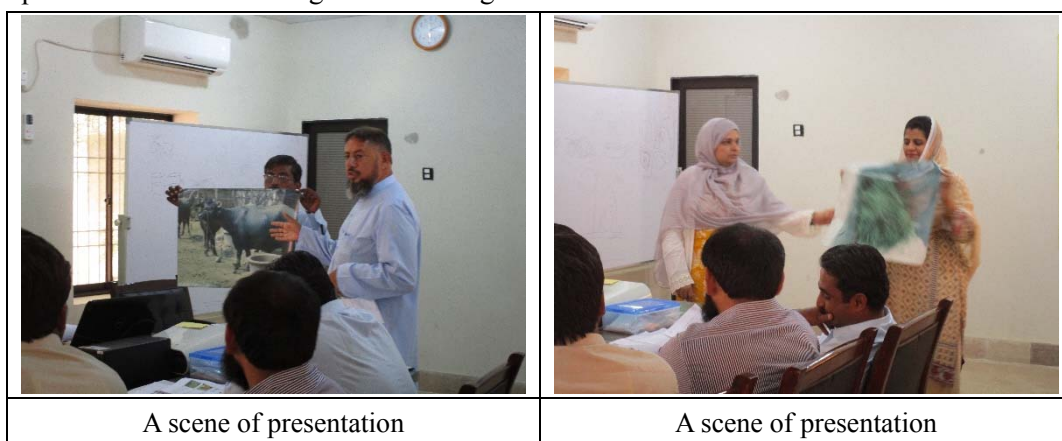
¹ Extension C/P consists of the Training C/P, Social mobilizer and Gender specialist.

complete all contents.

3) Practice of presentation using training materials for the farmers

Participants were divided into six groups (five Extension Team of each district and a pair of S/M and G/S) and they practiced presentation for Farmers' training with use of real training materials for farmers. Presentation skills of the Extension Team including E/W were improved than previous training. Results of observation are as follows:

- In case of the Extension Team of Badin district and Matiari district, M/T and E/W have a good collaborative relationship between them about work. Therefore, they could perform good teamwork. Not only M/T but also E/W are good at presentation for both of the Team. However, accuracy of message delivery should be improved through guidance of the Extension supervisors² and further practice.
- In case of the Extension Team of TMK district and Tando Allahyar district, there were some gaps between the members who have good presentation skills and who do not during the previous training. However, the member who received guidance during the previous training had improved their presentation skills. For example, they did not have any confidence in their presentation previously while they made good presentations with confidence this time. Volume of voice was also improved.
- In case of the Extension Team of Hyderabad district, all members need more practice and to improve their understanding about training contents.



2-2 The second day

Farmers' Training (Feeding management) was conducted at Gul Muhammad Ghambheer village, Matiari district. Training program consisted of (1) explanation for feeding management using training materials, (2) making of seasonal calendar about roughage and concentrate, (3) questions and

² Extension supervisors consist of the Extension expert and Extension C/P

answers, and (4) visit of pilot farmer's farm. It was 90 minutes to complete all program as planned. The facilitator of Farmers' Training was the Training C/P while training assistant was the Extension Team of Matiari district. The Fodder Development C/P participated the training as an observer.

According to the training register, number of farmers who registered for the training was 18. However, 43 farmers joined the session on the training day. The participants listened to the lecture enthusiastically and made a lot of questions. The lecture was repeated according to the request from one of the participants. At the end of the training, the facilitator asked the farmers whether training materials were easy to understand for them. Participants replied that it was easy to understand. One of the participants said it was first time for him to know standard volume of concentrate for feeding animals. This Farmers' Training was also fruitful for the Extension supervisors for following two reasons; (1) level setting of training materials for the farmers was confirmed based on reaction of the training participants toward real training; (2) planned training structure was well functioned to draw attention of the training participants.



3. Observation about trainees

- Extension staff were under severe condition due to unpaid salary since they had employed by the Department. However, they kept their motivation high toward extension activities. They participated the Extension Team training enthusiastically.
- The answer sheet of quiz which held in the previous Extension Team training were returned to the trainees with model answers. Then, top three members on the result of quiz were announced; the first, second, and third place were G/S, E/W of TMK district and E/W of Hyderabad district respectively. It seemed that some of M/T had a sense of crisis because they supposed to be superior than E/W normally.

4. Challenges

- More than double number of farmers from the training register participated in Farmers' Training unexpectedly. If this tendency would continue even after the second Farmers' Training, the training group should be divided into 2 groups for proper training arrangement.

- It was revealed that there was the gap among the Extension Team on necessary skills for extension activities such as the level of understanding, presentation skills and team work. It should be secure that every extension staff enable to conduct Farmers' Training in same accuracy and contents to disseminate appropriate technology to the farmers properly.

Attachment 1 Training Program



THE PROJECT ON SUSTAINABLE LIVESTOCK

DEVELOPMENT for RURAL SINDH

(JICA Technical Cooperation)

Technical Training Schedule for Extension Team

(Training for Farmers: Feeding management I)

Dated: August 23-24, 2016



Day 1: 23rd August 2016

Time	Contents	Facilitator
09:00 AM	Registration of Participants	
09:05 AM	Recitation from Holy Quran	Participants
09:10 AM	Review of previous activity	Participants
10:15 AM	Tea Break	
10:30 AM	Explain detail about Farmers training material	Dr. Rukhsana Vighio
11:30AM	Role Play of Farmers training (Practice)	Participants
13:00 PM	Lunch	
14:00 PM	Role Play of Farmers training (Presentation)	Participants
15:30 PM	Tea break	Participants
15:45 PM	Discussion	Participants
16:45 PM	Closing time	

Day 2: 24th August 2016

Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	Participants
09:05 AM	Review of training material	Participants
09:30 AM	Departure from the project office	
11:00 PM	Training at the village Gul Muhammad Gumbheer, Matiari	Dr. Rukhsana Vighio
12: 30 PM	Move to the project office	
14:00 PM	Lunch	
14:45 PM	Review of the visit	Ms. Mika Kawamoto
16:30 PM	Closing	

End

Attachment 2 Program of Farmers' Training (Feeding Management)

Farmers training for feeding management for increase milk production

Time: 90 minutes

1. Training program

S. No	Time	Program	Note for facilitator
1	5minutes	(1) Holy Quran (2) Introduction of team and Participants	-
2.	5 minutes	Introduction of feeding management training	<ul style="list-style-type: none">• Explain overview of this training session.
3.	25minutes	Question and explanation with material (1) Green grass (2) Dry grass (3) Roughages (4) Concentrate (5) Water (6) Feeding table of roughage (7) Feeding table of concentrate (8) Good examples and bad examples (9) Introduction of formula feed	<ul style="list-style-type: none">• Ask question to the participants and use training material to explain
4.	25minutes	Seasonal Fodder calendar	<ul style="list-style-type: none">• Ask participants their real fodder which they are giving to the animal, green grass, dry grass and concentrate
5.	10minutes	Questions and Answers	<ul style="list-style-type: none">• Extra questions from the participants will be discussed here.
6.	15minutes	Field visit	<ul style="list-style-type: none">• Field visit at Pilot farmers' farm for feeding management.
7.	5 minutes	Closing	-

2. Training material list

- Penaflex for feeding management (1)
- Seasonal Calendar format paper
- Makers (Black, Blue, Red, Green) at least 2 markers each colour
- Sample of ingredients of formula feed

Report on the Sixth Extension Team Training

January, 2017

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The sixth Extension Team training was conducted from 13th December 2016 to 16th December 2016 in total 4 days to practice the lecture of Farmers' Training with use of real training materials for farmers on Animal health, Mastitis, Calf rearing and Marketing. This training was conducted as a resident training. As a part of the Extension Team training, Farmers' Training (Animal health and Mastitis) were conducted at the pilot village in Tando Allahyar district and Matiari district.

1-2 Duration of the training

13th December 2016 to 16th December 2016, in total 4 days

1-3 Number of participants

In total 16 participants, one Social mobilizer (S/M), five Master Trainers (M/T), and five Extension Workers (E/W)

[Note] The Gender specialist (G/S) participated as a trainer from this extension team training.

1-4 Training schedule and outline of training program

The training schedule and outline of training program is shown in Table 1. Detail programs are shown in Attachment 1.

Table 1 Training schedule and outline of training program

Date	Main Theme
13 Dec. (Tue)	1) Explanation for Farmers' Training (Feeding management) and practice of lecture delivery 2) Explanation for Farmers' Training (Mastitis)
14 Dec. (Wed)	1) Review of previous day 2) Explanation for preparation of training implementation report 3) Implementation of Farmers' training (Animal health) at Maqbool Ahmed Memon village, Tando Allahyar district 4) Preparation of training implementation report
15 Dec. (Thu)	1) Comments on submitted training implementation report 2) Quiz, 3) Implementation of Farmers' Training (Mastitis) at Qaiser Detho village, Matiari district, 4) Preparation of training implementation report
16 Dec. (Fri)	1) Explanation for training materials of Farmers' Training (Calf rearing and Marketing), 2) Comments on submitted training implementation report 3) Quiz, 4) Plan for training implementation schedule of Farmers' Training (Feeding management)

2. Contents of the training

2-1 The first day

Training outline of the first day is as follows:

1) Explanation for Farmers' Training (Animal health) and practice of lecture delivery

The Training C/P explained for contents of Farmers' Training (Animal health) with use of real training materials. Then, participants were divided into the five Extension Team of each district and they practiced the lecture for Farmers' training. As a result, it was revealed that E/W had a little knowledge of animal disease. Although training materials were designed with simple contents and script of the lecture were also prepared, many of E/W could not make presentation clearly due to lack of their knowledge.



2) Explanation for Farmers' Training (Mastitis)

The Gender specialist (G/S) participated as a trainer from this extension team training and she explained for contents of Farmers' Training (Mastitis) with use of real training materials. She also demonstrated Mastitis test in the lecture room. Explanation was very smooth. However, some parts were explained based on previous experience, not the current Project. The Extension expert will be more careful about contents of message delivery and guidance to the Extension Team by Extension C/P¹ whether it follows the guidance of current Project.

¹ Extension C/P consists of Training C/P, Gender specialist and Social Mobilizer



2-2 The second day

Training outline of the second day is as follows:

1) Review of previous day

According to a report from the Training C/P and G/S, E/W were divided into two groups and each group made a presentation. Explanation of both of groups were drastically improved as compared with the previous day. It seemed that E/W did practice after the training at night.

2) Explanation for preparation of training implementation report

The Extension expert explained for the training implementation report format what should be described in each item. She distributed English format to M/T and Sindhi Format to E/W. All trainees were given report writing assignment.

3) Implementation of Farmers' training (Animal health)

Farmers' training (Animal health) was conducted at Maqbool Ahmed Memon village, Tando Allahyar district. This training consists of the lecture on animal health with training materials and scoring of disease which broke out in the village before. Detail of training program is shown in Attachment 2. Training facilitator was the Training C/P while training assistant was M/T of Tando Allahyar district. Although, number of farmers who registered for the training was 14, more than 40 farmers joined the session on the training day. Some of participants listened the training enthusiastically, however, some of participants looked to be boring. There was gap among the participants on attitude of participation. After the training, it was found out that many of training participants expected to get some incentives from the Project such as daily allowance in exchange for training participation. The Project explained to the farmers through the Extension Team repeatedly that what the Project would provide to the farmers is only technical guidance about appropriate technology. However, many of training participants in this village still expect something from the Project.



A scene of the lecture

A scene of disease scoring

For disease scoring, the facilitator asked the farmers about disease which broke out in the village before. The facilitator explained if full score was 50 how much score you would give for each disease on ‘frequency of outbreak’ and ‘damage caused by that disease’. According to the result, seven diseases broke out in this village. Frequency of outbreak of FMD was higher than other disease. The farmers recognized that the damage caused by FMD and HS were severe. The scoring sheet which used in the villages is shown in Figure 1 and result of disease scoring is shown in Table 2.

Table 2 Result of disease scoring

Name of disease	Ratio of outbreak	Damage to livestock
Faciolasis	7/50	8/50
FMD ²	15/50	10/50
Diarrhea	4/50	7/50
Stomtitics	3/50	3/50
Tympnitis	5/50	3/50
Paralysis	6/50	5/50
HS ³	9/50	13/50

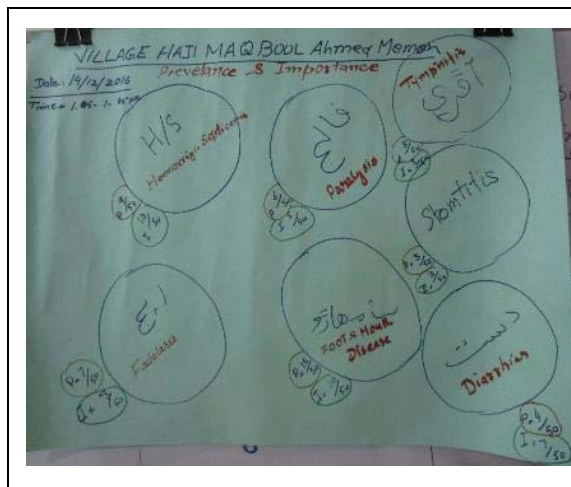


Figure 1 Scoring sheet

2-3 The third day

Training outline of the third day is as follows:

1) Comments on submitted training implementation report

All trainees prepared the training implementation report on Farmers’ Training (feeding management) in accordance with the prescribed format. Sindhi reports were checked by G/S while English reports were checked by the Extension expert. Six trainees (two M/T and 4 E/W) reflected

² Foot and mouth disease (FMD)

³ Hemorrhagic septicemia (HS)

important points into the report well, especially questions from the farmers and answers from the facilitator. Well written reports were shared among the trainees as good examples. Importance of accurate record of information were explained.

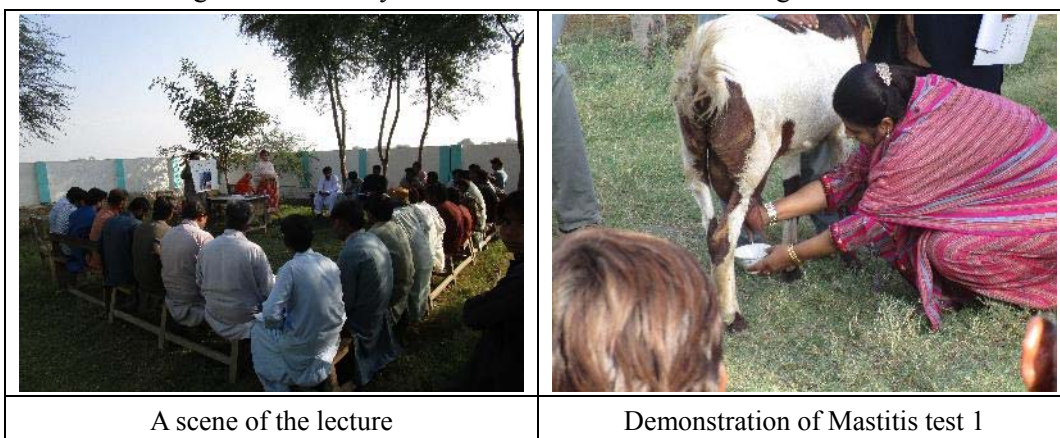
2) Quiz (Animal health)

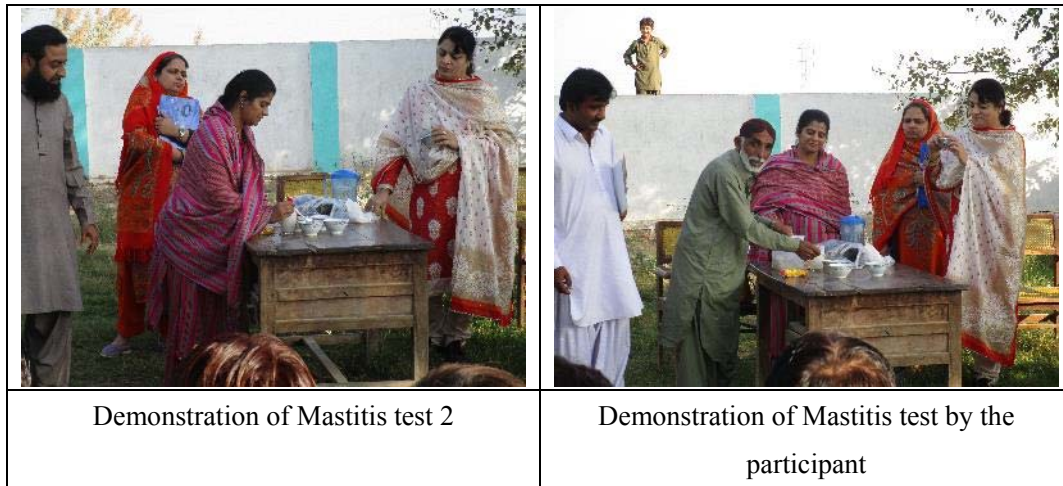
Seven questions of quiz about animal health was conducted. Five trainees got a perfect score as 70 points. It was good that two of them out of five were E/W. However, reversal situation occurred to one of the Extension Team because E/W marked the perfect score and other E/W marked 60 points while M/T marked the lowest score as 30 points. As for total score of the Extension Team, TMK team marked 200 points in the first place. The second place and the third place were Hyderabad team at 190 points and Badin team at 170 points respectively.

3) Implementation of Farmers' Training (Mastitis)

Farmers' Training (Mastitis) was conducted at Qaiser Detho village, Matiari district. This training consists of the lecture with training materials and mastitis test. Detail of training program is shown in Attachment 3. Training facilitator was the Training C/P while training assistant was M/T of Matiari district. Demonstration of mastitis test was conducted by G/S. Number of farmers who registered for the training was 16 and 25 farmers joined the session on the training day. Many animals in this village were suffered from mastitis. Therefore, the training participants were eager for learning and made a lot of questions to the trainer.

During the demonstration of mastitis test, the Project used a female goat instead of a female buffalo to show the whole process of mastitis test from cleaning of udder, milking for sampling and use of reagent. The reason why the Project used the goat is that the buffalo is too big to take to the training venue and she is very sensitive to being used for demonstration purpose. Detergent on the market was used as the reagent of mastitis test so that everyone could buy easily from the market. It seemed that the farmers enjoyed demonstration of mastitis test. After the demonstration, two farmers came in the front of other training participants and repeated procedures of mastitis test using by test tools. Both could explain procedure properly. The training participants requested the Project for another mastitis training for women in the village because many women were involved in milking animals.





2-4 The fourth day

Training outline of the fourth day is as follows:

1) Explanation for training materials of Farmers' Training (Calf rearing and Marketing)

The Training C/P explained for two subjects of Farmers' Training (Calf rearing and Marketing).

2) Comments on submitted training implementation report

The trainees prepared the training implementation report on Farmers' Training (Mastitis) during night time of the third day. Sindhi reports were checked by G/S while English reports were checked by the Extension expert as same as last time. As a result, all reports were improved based on the previous comments from G/S and the Extension expert. However, some of trainees need further advice to improve their reports due to lack of description.

3) Quiz

Ten questions of quiz from four subjects, feeding management, mastitis, calf rearing and marketing was conducted. Three trainees (two M/T and one E/W) got a perfect score as 100 points and four trainees (two M/T and two E/W) got more than 90 points. The lowest score recorded by same M/T again. As for total score of the Extension Team, Tando Allahyar team marked 285 points in the first place. The second place and the third place were TMK team at 255 points and Hyderabad team at 240 points respectively. It seemed that disclosure of individual score and team score was contributing for good and positive competition among the Extension Team and its members.

4) Plan for training implementation schedule of Farmers' Training (Feeding management)

It was prepared the plan for training implementation schedule of Farmers' Training (Feeding management) for between the middle of December 2016 to the middle of January 2017. The Training will be conducted for one time per a village in total 15 villages. M/T and E/W will perform as the training facilitator jointly. The Training C/P and G/S will monitor all training sessions. For each training, M/T and E/W will submit the training implementation report to the Training C/P and G/S while the Training

C/P and G/S will submit the training monitoring report to the Extension expert by email.

3. Observation about trainees

- The trainees kept their motivation high toward the Extension Team training. They tackled several assignments even in night time.
- Through the group presentation and quiz, the good atmosphere among the extension members was created to learn and improve their skills by competing with each other.
- There was also another good atmosphere that if one of the team member did good work, other members recognized and appreciated his work frankly. One of the E/W could not attend the first day because of a death in his family. However, he went the village to arrange the farmers' training on the second day for all trainees and the Extension supervisors. M/T of same district started to praise this E/W's work and other members also agreed.
- S/M is in the higher position than M/T and E/W according to the nature of work because she need to give proper guidance to the Extension Team as a member of the Extension supervisor. However, she did not communicate with other extension members actively. Then, score of quiz was just the middle level among all trainees. Her further effort is strongly required to be the Extension supervisors.
- There was some gap among the Extension Team about team work and presentation skills. In one of the Extension team, attitude of M/T was modest and it was difficult for him to show leadership for the attached Extension Team. Therefore, that Extension Team showed weak collaboration among the members. On the other hand, some of the Extension Team developed a good relationship for collaboration in work. Therefore, their presentation skills were drastically improved as compared with the previous training

4. Challenges

- Review of animal health and practice of vaccination will be included in next Extension Team training to enhance the Extension member s' capacity of technical aspect.
- For capacity building of the Extension Team, scoring will be applied for several aspects to make members' weak points clear objectively.
- Some of extension staff are good at writing test but weak for speaking and presentation. The Extension supervisors will provide individual guidance for that members at the Project office to give opportunity for further practice.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



**Technical Training Schedule for Extension Team
(Training for Farmers: Marketing, Calf rearing, Animal health and Mastitis)**

Dated: December 13-16, 2016

Day 1: 13th December 2016

Time	Contents	Facilitator
10:00 AM	Registration of Participants	
10:02 AM	Recitation from Holy Quran	Participants
10:05AM	Overview of the Training	Ms. Kawamoto
10:15 AM	Explain detail about Farmers training material Animal Health	Dr. Rukhsana Vighio
11:15AM	Tea Break	
11:30AM	Role Play of Farmers' Training (Practice)	Participants
12:00AM	Role Play of Farmers' Training (Presentation)	Participants
13:00 PM	Lunch	
14:00AM	Role Play of Farmers' Training (Presentation) cont.	
16:00 PM	Explain detail about Farmers' Training material Mastitis	Dr. Anisa Soomro
16:25 PM	Questions and Answers	
17:00 PM	Closing	
(Assignment for night time) Presentation practice for Farmers' Training		

Day 2: 14th December 2016

Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	Participants
09:05 AM	Review of training material	Participants
10:15 AM	Lecture for Report writing	Ms. Mika Kawamoto
11:30 AM	Departure from the training venue	
13:00 PM	Animal Health Training at the village Maqbool Ahmed Memon, Tando Allayah	Dr. Rukhsana Vighio
14:00 PM	Move to the project office	
15:30 PM	Lunch	
16:00 PM	Review of the visit	Ms. Mika Kawamoto
17:00 PM	Closing	
(Assignment for night time) Report writing on Animal health training implementation		

Day 3: 15th December 2016

Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	Participants
09:05 AM	Review of training material	Participants
10:15 AM	Quiz and comments	Ms. Mika Kawamoto
10:40 AM	Feedback about report writing	Ms. Mika Kawamoto
11:30 AM	Lunch	
12:50 AM	Departure from the training venue	
14:35 PM	Mastitis Training at the village Qaiser Detho Village, Matiari	Dr. Rukhsana Vighio Dr. Anisa Soomro
15:30 PM	Move to the project office	
17:00 PM	Review of the visit	Ms. Mika Kawamoto
17:40 PM	Closing	
(Assignment for night time) Report writing on Mastitis training implementation		

Day 4: 16th December 2016

Time	Contents	Facilitator
9:00 AM	Registration of Participants	
9:35 AM	Recitation from Holy Quran	Participants
9:40 AM	Explain detail about Farmers training material Calf rearing	Dr. Rukhsana Vighio
10:40AM	Tea Break	
10:55 AM	Explain detail about Farmers training material Marketing	Dr. Rukhsana Vighio
13:00 PM	Lunch	
14:15 AM	Quiz and comments	Ms. Mika Kawamoto
14:50 AM	Preparation of training schedule	
16:00 PM	Closing	

End

Attachment 2 Program of Farmers' Training (Animal Health)

Farmers training for Animal Health

Time: 90 minutes

1. Training program

S. No	Time	Program	Note for facilitator
1	5minutes	(1) Holy Quran (2) Introduction of team and Participants	-
2.	10 minutes	<ul style="list-style-type: none">Review of last training	<ul style="list-style-type: none">Through any activity or brain storming
3.	5 minutes	<ul style="list-style-type: none">Introduction of Animal Health training	<ul style="list-style-type: none">1 slide
4.	35 minutes	<ul style="list-style-type: none">Livestock Contagious Disease and its preventionLivestock Non-Contagious Disease and its treatmentLivestock Parasitic DiseaseLivestock Reproductive DisorderLivestock Mineral Deficiency disease	<ul style="list-style-type: none">2-14 slide
5.	10 minutes	<ul style="list-style-type: none">Prevention from Contagious Disease (Vaccination) ChartPrevention of Parasitic disease (drenching and Deworming) Chart	<ul style="list-style-type: none">15-16
6.	10 minutes	<ul style="list-style-type: none">Disease scoring activity through proportional pilling (prevalence and importance)	
7.	10 minutes	Question and Answer by the farmer	
8.		Closing	-

2. Training material list

- Pena flex for Animal Health
- Flip charts
- Beans/ seeds
- Makers (Black, Blue, Red, Green) at least 2 markers each colour

END

Attachment 3 Program of Farmers' Training (Mastitis)

Farmers training for Mastitis

Time: 90 minutes

1. Training program

S. No	Time	Program	Note for facilitator
1	5 minutes	(1) Holy Quran (2) Introduction of team and Participants	-
2.	10 minutes	Review of last training	<ul style="list-style-type: none">• Through any activity or brain storming
3.	5 minutes	<ul style="list-style-type: none">• Introduction of Mastitis	<ul style="list-style-type: none">• Sheet 1
4.	35 minutes	<ul style="list-style-type: none">• Factor effecting Mastitis• Which animal is effected in Mastitis?• Symptoms of Mastitis• Preventive Measure and Losses of Mastitis	<ul style="list-style-type: none">• Sheet 2-26
5.	25 minutes	<ul style="list-style-type: none">• How we detect Mastitis through test (Demonstration)• Experiment practice by farmer	<ul style="list-style-type: none">• By experiment
6.	10 minutes	Question and Answer by the farmer	
7.		Closing	-

2. Training material list

- Pena flex for Mastitis
- Mastitis Test Kit
- Makers (Black, Blue, Red, Green) at least 2 markers each colour

END

Report on the Seventh Extension Team Training

January 2018

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this extension team meeting are; to learn proper method of drenching; to learn about training materials on calf rearing and reproduction; and to demonstrate Farmer Training for two new subjects. It was residential training. As a part of the extension team training, Farmer Training on calf rearing and reproduction was conducted in the village in Tando Allahyar district and TMK district.

1-2 Duration of the training

In total 15 days from 15 to 17 February 2017 and 20 to 21 February 2017

1-3 Number of participants

One Social Mobilizer (S/M), five Master Trainers (M/Ts) and 10 Extension workers (E/Ws) in total 16 trainees

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detail programs is show in Attachment 1.

Table1 Outline of training program

Date	Training program
15 February (Wed)	1) Review of important points of extension activity and plan of the fourth year, 2) Drenching, vaccination and quiz, 3) General disease of livestock and its treatment and Quiz, 4) Lecture of Farmer training (calf rearing) and quiz
16 February (Thu)	1) Demonstration of drenching, 2) Implementation of Farmer Training on calf rearing
17 February (Fri)	1) Learning feeding table for calf, 2) Explanation of Farmer Training (reproduction) and practice of demonstration, 3) Practice of follow-up for Farmer Training on feeding management
20 February (Mon)	1) Implementation of Farmer Training (reproduction) and Quiz, 2) Follow-up for Farmer Training on feeding management
21 February (Tue)	1) Flow of extension activity and review of plan for the fourth year, 2) Quiz for extension activity, 3) Introduction of 50 appropriate technologies, 4) report writing, 5) Practice of questions and answers for farmers

2. Contents of the training

2-1 Review of important points of extension activity and plan of the fourth year

The extension expert made a presentation on flow of extension activities and the plan of the fourth year. Important points for extension activities, such as number of target villages and beneficiaries, were also explained to inform how to expand extension activities for surrounding villages. In addition, the extension expert explained about capacity building of extension team. There are three pillars for capacity development;

1) enhance technical knowledge and skill, 2) enhance extension knowledge and skill and 3) enhance report writing skill.

As for a report writing session, selected trainees, who wrote a report well, read his report out to other trainees. Then, it was compared between well-written reports and inadequate reports to learn difference.

2-2 Review of Animal health (drenching, vaccination and general disease)

To enhance technical knowledge of extension team and cover their weak point, lecture about Animal health (drenching, vaccination and general disease) were conducted by technical C/Ps. Field practice of drenching was carried out at Gazi Khan Lashari village, Tando Allahyar district.



Lecture on general disease of livestock



Lecture on animal health

In field practice, the extension team was divided into district teams and did drenching team by team. The Animal Health/P gave them necessary guidance such as dose for drenching, procedure of drenching etc.



Measurement of dose



Proper standing position for drenching

2-3 Lecture on Farmer Training and its practice

The training C/P explained about contents of calf rearing and reproduction training one by one. After that the trainees did practice presentation of both training topics. In the previous extension team training, it was only the focus whether trainees deliver technical message accurately or not. In this training, a presentation theme was given to each district team and trainees planned the presentation by themselves. Through this exercise, level of understanding of trainees was revealed by selection of words to prepare preparation and compilation into flip chart.

2-4 Quizzes

Trainees were informed that three quizzes would be conducted after the lectures. Therefore, all trainees concentrated to listen lectures carefully and raised more than 10 questions after the lectures. Results of quizzes are as follows:

- Quiz of drenching

The average score of 5 M/Ts was 68 points while the highest and the lowest were 91 points, 44 points respectively. The average score of 10 E/Ws was 52.8 points while the highest and the lowest were 81 points, 10 points respectively. The score of S/M was 85 points.

- Quiz of general disease of livestock

The average score of 5 M/Ts was 64.8 points while the highest and the lowest were 71 points, 55 points respectively. The average score of 10 E/Ws was 62.9 points while the highest and the lowest were 85 points, 36 points respectively. The score of S/M was 60 points.

- Quiz of calf rearing

The average score of 5 M/Ts was 68.8 points while the highest and the lowest were 84 points, 35 points respectively. The average score of 10 E/Ws was 65.7 points while the highest and the lowest were 77 points, 43 points respectively. The score of S/M was 50 points.

- Quiz of reproduction

The average score of 4 M/Ts was 90 points while the highest and the lowest were 95 points, 85 points respectively. The average score of 10 E/Ws was 78.5 points while the highest and the lowest were 100 points, 20 points respectively. The score of S/M was 90 points. The extension worker who attended Artificial Insemination training by BBSYDP marked full score and his was the highest among all extension staff.

2-5 Implementation of Farmer Training on calf rearing

Farmer Training (calf rearing) was conducted in Gazi Khan Lashari village, Tando Allahyar district. Twenty two male farmers were attended. Training C/P was the facilitator for this session. Training participants were interested in the calf rearing training and they concentrate to listen explanation by the facilitator. The extension expert asked the farmers what the difference between their custom method and training contents. The village head replied that we did not know a calf should be given hay and water until we attended this session.



2-6 Follow-up of Farmer Training on feeding management

Follow-up of Farmer Training was planned as a combination of ‘interview with semi structured format’ and ‘observation of a farm’. When the extension team conducts follow-up, they need to be careful to avoid unnecessary pressure on the farmers through posing many questions in short time. As a part of simulation, the extension expert played a role of bad extension worker and the Gender C/P played a role of good extension worker to show model interviews. Then, all trainees divided into pairs and practiced interviews for follow-up.



Field practice of follow-up was done in Chaudelo Sharif village, TMK district same venue for Farmer Training (reproduction) which will be mentioned below section. Some trainees showed their concern that the farmer might not show us their farm, however, at least 13 to 14 farmers showed us their farms and the trainees could observe farm condition. The trainees said they realized that the difference between only listen what the farmer said and observe what the farmer did.

2-7 Implementation of Farmer Training on Reproduction

Farmer Training (Reproduction) was conducted in Chaudelo Sharif village, TMK district. Thirty nine farmers were attended. Due to the security reason, the extension expert could not go to the village. According to the report from the trainees, training was conducted smoothly. The farmers said it was good training because easy to understand. Farmers welcomed the extension team.

3. Challenges revealed by the training implementation and its countermeasures

Through follow-up activity during the extension team training, the combination of 'interview with semi structured format' and 'observation of a farm' was tested. It was somehow effective and good opportunity for the extension team to know the reaction of farmers. However, follow-up is one of difficult activity among extension activities. Continuous effort for trial and error will be required to develop more effective follow-up method.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Technical Training Schedule for Extension Team

**(Review of Extension Guideline and Animal health, Follow-up Activity and Training for Farmers:
Calf rearing and Reproduction)**

Dated: February 15-17 and 20-21, 2017

Day 1: 15th February 2017

Time	Contents	Facilitator
10:00 AM	Registration of Participants	
10:02 AM	Recitation from Holy Quran	Participants
10:05AM	Review of flow of Extension activity	Ms. Kawamoto
10:35 AM	Deworming and its sampling	Dr. Zulfiqar Pathan
11:40AM	Tea Break	
11:55AM	Vaccination and sample collection	Dr. Zulfiqar Pathan
12:45PM	Livestock Diseases and their treatment	Dr. Jiskani
14:10PM	Lunch	
15:10 PM	Quiz of Animal health	
15:40PM	Ice Break (Gesture game)	Dr. Rukhsana
14:40 PM	Review of calf rearing materials	Dr. Rukhsana
15:40 PM	Quiz of Calf rearing	
16:00 PM	Tea Break	
17:00 PM	Closing	
(Assignment for night time) Report writing on today's training		

Day 2: 16th February 2017

Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	Participants
09:05 AM	Review of previous day	Participants
09:30 AM	Departure from the training venue	
11:00 AM	Village (Ghazi Khan Lashari) demonstration of drenching, calf rearing training	Dr. Zulfiqar Dr. Jiskani Dr. Rukhsana Vighio
13:30 PM	Move to the project office	
14:10 PM	Lunch	
15:10 PM	Ice Break (poetry)	
15:20 PM	Review of the visit	Dr. Rukhsana Vighio
16:00 PM	Tea Break	

Time	Contents	Facilitator
16:15 PM	Feedback about report writing	Ms. Mika Kawamoto
17:00 PM	Closing	
(Assignment for night time) Report writing on calf rearing training implementation		

Day 3: 17th February 2017

Time	Contents	Facilitator
09:00 AM	Recitation from Holy Quran	Participants
09:05 AM	Review of previous day	Participants
10:00 AM	Explanation on reproduction training materials	Dr. Rukhsana Vighio
11:00 AM	Tea Break	
11:15 AM	Group practice and presentation	
13:00 PM	Lunch	
14:00 PM	Ice Break	Dr. Anisa Soomro Ms. Mika Kawamoto
14:10 PM	Feedback about report writing	
14:25 PM	Explanation of follow-up (feeding management)	Dr. Anisa Soomro
15:25 PM	Group practice and role play	
16:00 PM	Tea Break	
16:15 PM	Group practice and role play (cont.)	
17:00 PM	Closing	
(Assignment for night time) Interview practice for follow-up		

Day 4: 20th February 2017

Time	Contents	Facilitator
9:00 AM	Review of training materials	Dr. Rukhsana Vighio
10:15 AM	Tea Break	
10:30 AM	Departure from the training venue	
12:00 PM	Farmers' Training (reproduction) and follow-up of feeding management Chaudero Sharif village, TMK	Dr. Rukhsana Vighio
14:00 PM	Move to the training venue	
15:30 PM	Lunch	
16:05 PM	Review of field activity	Ms. Mika Kawamoto
17:05 PM	Closing	
(Assignment for night time) report writing for and reproduction training		

Day 5: 21st February 2017

Time	Contents	Facilitator
9:00 AM	Registration of Participants	
9:30 AM	Feedback	Participants
10:00 AM	Explanation about Extension guideline	Ms. Mika Kawamoto
11:00 AM	Tea Break	
11:15 AM	Quiz	Dr. Rukhsana Vighio
12:00 PM	Feedback on good report	Ms. Mika Kawamoto
12:45 PM	Explanation about the list of 50 appropriate technologies	Ms. Mika Kawamoto
13:10 PM	Lunch	
14:00 PM	Ice break (Good attitude of others)	
14:45 PM	Questions and answers	Dr. Rukhsana Vighio
15:25 PM	Review of training	Ms. Mika Kawamoto
16:12 PM	Closing	

End

Report on the Eighth Extension Team Training

January 2018

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this training are; to give a feedback on Farmer Training implementation; to brief important points for marketing training; and to introduce two new subjects livestock management and animal genetics for the extension team.

1-2 Duration of the training

From 3 to 4 May 2017 in total 2days

1-3 Number of participants

Social mobilization C/P, four Master Trainers (M/Ts), ten Extension Workers (E/Ws) in total 15 trainees

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detail programs is show in Attachment 1.

Table1 Outline of training program

Date	Training program
3 May (Wed)	1) feedback to the extension team on Farmer Training, 2) explanation about livestock management and practice of presentation, 3) explanation about animal genetics, 4) Quiz
4 May (Thu)	1) briefing important points for marketing training, 2) review of quiz 3) points to consider for report writing

2. Contents of the training

2-1 Feedback about Farmer Training

At first, the Extension expert asked each district extension team about their good points. Each district team reported as follows:

- Matiari: They use dialect of that area and make simple explanation to the farmers during the session.
- TMK: They adjusted lecture sequence to make farmers understand easily.
- Badin: Both E/Ws are originally from Badin while the M/T is from other district in Sindh province. Therefore, both E/Ws are using dialect that area during training session for farmers. In addition, they pay attention to complete all contents for every training sessions.
- Hyderabad: Before start training, they are taking attendance record. Between the session, they raise review questions for farmers. Sometimes, the M/T give treatment for farmer's livestock.
- TA: Due to absence of M/T, E/Ws do not have any idea to speak out.

Then, the Extension expert gave feedback to each district extension team on Farmer Training implementation as follows:

- Badin: The team is conducting training in good way. The M/T is helping E/Ws to practice before conduct training at the village.

- TA: Their presentation skill has been improved if compared with previous training sessions. However they need to practice questions and answers more to give proper answers to the farmers.
- Hyderabad: Their team work has been improved if compared with previous situation.
- TMK: This team members have helped each other since beginning of team formulation. They are conducting Farmers Training in good way.
- Matiari: E/Ws are conducting Farmers Training in good way. However, the M/T trainer need to improve this writing skill and command of English.

After that the Extension expert explained the trainees the points to consider when the extension team contacts with the farmers.

1. Deliver technically accurate information to the farmers

One of E/W recommended herbal syrup for treatment of mastitis to the farmer. It exists as folk medicine, however, it is not proved by the Project scientifically. The extension staff should not recommend any unverified technology by the Project to the farmers.

2. Do not deny the farmers in front of others

The extension staff should not deny the farmers in front of other farmers even if the farmers shared wrong information during training session. In that case, the extension staff should talk to that person after the training without others' presence.

3. Listen carefully what the farmers say

The extension staff should carefully listen what the farmer try to say or what the farmer is asking. If it is not sure what you are asked, confirm it first. Then, give proper reply to the farmers.

4. Do not force the farmers to join in activities

The priority is the farmers. If it is convenient for farmers to conduct training, the extension staff may make an appointment. Especially, the extension staff should avoid making an appointment during busy season for the farmer and wait until the farmer have free time.

5. Do not involve yourself into village issues

In one of the pilot village, the Project conducted mixed baradari training based on the confirmation during sensitization meeting. The farmers requested to divide into two groups later because there is conflict between that groups. Therefore, the Project started conduct two training sessions for different groups in the same village. This is an example that the Project did not solve the conflict in the village but take another measure which enables the Project to conduct training.

6. Bring your water bottle to the village when you conduct the training

2-2 Explanation about new subjects, Livestock management and Animal genetics

Training C/P explained about two new subjects, namely livestock management and animal genetics. To measure level of understanding of the trainees, quizzes was conducted.

- Quiz of livestock management and animal genetics (full score:110)

The average score of 4 M/Ts was 84.5 points while the highest and the lowest were 105 points, 65 points

respectively. The average score of 10 E/Ws was 82.8 points while the highest and the lowest were 105 points, 33 points respectively. The score of S/M was 88 points.

2-3 Points to be considered for Marketing training implementation

The Marketing C/P was the facilitator for briefing of marketing training. He explained important points to be considered to conduct marketing training. The trainees learned how to collect market related information such as milk and ghee selling from the farmers through network diagram. After the lecture, the trainees drew imaginary network diagram for their practice.

Important points about marketing for this Project are; 1) Produce good quality milk, 2) Produce Hygienic milk, 3) No adulteration, 4) Group selling. There are six checkpoints; 1) how many farmers have milking animal, 2) total milk product, 3) self-consumption, 4) sales volume, 5) sales channel and 6) Price per liter. To measure level of understanding of the trainees, quiz for marketing was conducted. Results of quiz are as follows:

- Quiz of marketing (full score: 50)

The average score of 4 M/Ts was 29.5 points while the highest and the lowest were 43 points, 19 points respectively. The average score of 10 E/Ws was 25 points while the highest and the lowest were 31 points, 17 points respectively. The score of S/M was 28 points.



2-4 Presentation and report writing

To enhance presentation skill of each district extension team, opportunity of presentation was given to each team during the extension team training. At present, each extension staff accustomed to speaking out in front of others. To step up a next stage, each team was given limited time for presentation three to five minutes only and requested to keep allocated time. If they were over allocated time, the presentation was stopped by force. This exercise aimed to make presentation plan in accordance with allocated time. If they include all points which they want to speak, the time was not enough definitely.

For report writing, the trainees were reminded for following important three points when they prepare the training implementation report.

- Write detail information about the question and answer session of Farmer Training precisely.
- Count number of participants on the participants list after checked the attendance of the farmers
- Record submission date

3. Challenges revealed by the training implementation and its countermeasures

To look back on the attitude as extension staff, the trainees were given an assignment to write ‘the good trainer and their qualification.’ After that the trainees were asked if you were good trainer or not. If an answer was yes, the trainee was requested to explain what was the reason for being a good trainer. If no, the trainee was requested to think which point they need to improve and write their ideas. This kind of activity should be continued to provide opportunity for the extension staff to think about themselves to improve.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Technical Training Schedule for Extension Team

(Review of Marketing, Explanation on Genetics & Livestock management training for farmers)

Dated: May 3-4 , 2017

Day 1: 03/05/ 2017

Time	Contents	Facilitator
10:00 AM	Registration of Participants	Dr. Anisa
10:05 AM	Recitation from Holy Quran	Participants
10:10 AM	Review of field activity	Ms. Kawamoto
11:30 AM	Explanation on Livestock Management	Dr. Rukhsana
12:15 PM	Group Practice on L/S management	Dr. Rukhsana
13:00 PM	Lunch	
14:00 PM	Ice Break	Dr. Anisa
14:10 PM	Presentation by selected team	Dr. Rukhsana, Dr. Anisa
14:40 PM	Explanation on Genetics	Dr. Rukhsana
15:10 PM	Group Practice on Genetics material	Dr. Rukhsana Vighio
15:40 PM	Presentation by selected team	Dr. Rukhsana, Dr. Anisa
16:25 PM	Quiz on Genetics and livestock management	Dr. Rukhsana, Dr. Anisa
17:00 PM	Closing	

Day 2: 04/05/2017

Time	Contents	Facilitator
10:10 AM	Recitation from Holy Quran	Participants
10:10 AM	Review of previous day	Participants
11:00 AM	Review of important point of Marketing training	Dr. Iqtadar
11:30 AM	(cont.) Review of important point of Marketing training	Dr. Iqtadar
12:10 AM	Preparation of presentation on network diagram	Participants
13:00 PM	Lunch	
14:00 PM	Presentation by each group	Dr. Rukhsana, Dr. Anisa
14:50 PM	Quiz on marketing	Dr. Iqtadar
15:05 PM	Review of quiz	Dr. Rukhsana, Dr. Iqtadar
15:45 PM	Report writing on Extension activities	Ms. Kawamoto
16:10 PM	Plan for next activity	Ms. Kawamoto
16:30 PM	Closing	Participants

End

**Report on
the Ninth Extension Team Training**

January 2018

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this training are; to provide orientation about the Project activity; to give knowledge which required for the team work through team building; to give knowledge to working in the field for newly recruited the Deputy Project Manager who double post as the Master Trainer of Tando Allahyar and eight of female extension workers.

1-2 Duration of the training

In total 13 days between 16 August 2017 to 6 September 2017

1-3 Number of participants

The Deputy Project Manager who double as the Master Trainer (M/T) of Tando Allahyar, 8 female Extension workers (E/Ws) in total 9

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1 to Table 4. Detail programs are shown in Attachment 1 to Attachment 4.

Table1 Outline of training program (Project orientation 1)

Date	Main contents and the Lecturer
16 Aug (Wed)	1) Lecture of feeding management (Fodder C/P)
17 Aug (Thu)	1) Demonstration of Farmer Training on feeding management (M/T Hyderabad) 2) Lecture of livestock management (Feeding management C/P) 3) Demonstration of Farmer Training on livestock management (M/T Badin)
18 Aug (Fri)	1) Lecture of calf rearing (Feeding management C/P) 2) Demonstration of Farmer Training on calf rearing (M/T Hyderabad) 3) Lecture of Animal genetics (Genetic improvement C/P) 4) Demonstration of Farmer Training on animal genetics (M/T Badin)
24 Aug (Thu)	1) Lecture of animal health (Animal health C/P) 2) Lecture of general disease and treatment (Farm management C/P) 3) Demonstration of Farmer Training on animal health (M/T Matiari) 4) Demonstration of Farmer Training on mastitis (M/T Matiari)
25Aug (Fri)	1) Lecture of reproduction and BCS (Reproduction C/P) 2) Demonstration of Farmer Training on reproduction (M/T TMK) 3) Guidance on BCS at cattle colony (Reproduction C/P)

Table 2 Outline of training program (Team building)

Date	Main contents
21Aug (Mon)	1) Team building, 2) effective communication skill through team building
22Aug (Tue)	1) Conflict resolution by team building, 2) Role play, 3) Office ethics
23Aug (Wed)	1) Leadership skill, 2) Time management

Table 3 Outline of training program (Social mobilization)

Date	Main contents
28Aug (Mon)	1) Outline of social mobilization, 2) Dialogue with the farmers for extension workers 3) Motivation skill, 4) Concept of participatory approach, 5) Gender
29Aug (Tue)	Field demonstration of social mobilization in Haji Muhammad Sidique, TMK district Theme: Awareness improvement of the farmers to attend technical training
30Aug (Wed)	1) Behavior and attitude of extension workers in the village 2) Communication skill for extension workers, 3) Conflict resolution 4) Introduction of PRA tools

Table 4 Outline of training program (Project orientation 2)

Date	Main contents
5 Sep (Tue)	1) Lecture of Marketing (Marketing C/P) 2) Demonstration of Farmer Training on marketing (M/T TMK), 3) Quiz
6 Sep (Wed)	Demonstration of Farmer Training by the trainees

2. Contents of the training

2-1 Explanation about extension activity

The extension expert explained flow of extension activities. There are four steps; 1) preparation of Farmer Training, 2) Farmer Training, 3) follow-up of Farmer Training and 4) monitoring of farmers' activity by the appropriate technology development check list. Current structure of extension activities and line of orders were also explained. Then, the extension expert explained how to conduct social map which included in preparation of Farmer Training. Several case study of social map were explained based on the field experience. Then, the Extension expert drew an imaginary social map on the corridor of training venue and trainees practiced drawing that map on a piece of paper.

The Gender C/P explained how to conduct the sensitization meeting in the village.

For report writing, the trainees were given a home work to write what they have learnt through the orientation training into a 'training attendance report' in one piece of A4 paper. However, most of the trainees did not compose sentences. Their report is almost same as list of keywords from lecture notes. Therefore, the extension expert organized one session on report writing and explained structure of report, especially how to make a paragraph. Actual report format for extension activities were also explained. During the orientation training period, the trainees were given assignment to write a report every day. It was found that their writing skill had been improved during the training period. However, writing skill of each trainee varied. Continuous guidance will be necessary to improve further.



2-2 Lectures by technical C/Ps and demonstration of Farmer training by M/Ts

In this training, three steps were designed for learning technical matter; 1) the lectures on technical topic by the technical C/Ps, 2) demonstration of Farmer Training on technical topic by M/Ts, and 3) demonstration of Farmer Training on technical topic by the trainees. This sequence made the trainees to understand technical topics easily.



2-3 Team building

Three days training of team building was conducted by the Institute of Rural Management (IRM), a subcontractor of the Project. The Project had positive reaction from the trainees such as; I learned the difference between group and team as a first time; I never attend this kind of training; and I could have confidence to work through role play. It was also good opportunity to learn office ethics and time management, especially for female extension workers who does not have any experience for work before.

The average score of the trainees for pre-test was only 9 points while full score is 100 points. However, the average score of post-test was 75 points and most of the trainees improved their score. One of the participants drastically improved from 4 points in the pre-test to 86 points in the post-test. However, two trainees out of nine could not mark 60% of correct answers.

2-4 Social Mobilization

There days training of social mobilization was conducted by Mr. Gopal who outsourced facilitator. In the first day, the trainees learned basic and necessary knowledge to work at rural area, such as Social mobilization, and dialogue to the community.

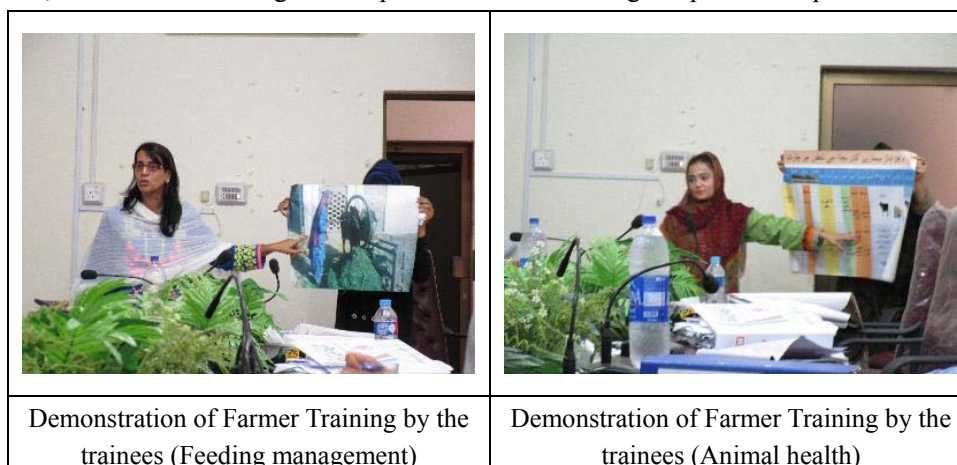
In second day, Mr. Gopal demonstrated social mobilization in Haji Muhammad Siddique village, TMK district. The objective of this session was to improve awareness of the farmers to attend technical training on dairy farming. In this village, the farmers had a sharp eye for kind of incentives. However, they did not realize that technical knowledge was useful. The districts extension team was struggling to conduct the training in this village.

Mr. Gopal was the facilitator of this session. At the beginning, he used simple words and familiar stories for the farmers. The farmers were attracted to his facilitation. Then, the facilitator asked experience of the pilot farmers and other farmers on dairy farming. The farmers really enjoyed the session and they laughed a lot even though we talked about technical training. At the end of the session, 20 farmers who participated this meeting were agreed to attend technical training here after and they would practice appropriate technology to improve their milk production. The project could show the leading facilitation to the trainees through this session.



2-5 Demonstration of Farmer training by trainees

One subject of Farmer Training was allocated for each trainee for demonstration. Subject was decided by drawing lots in the morning. Each trainee could deliver training contents well. It seems they prepared well. While selected trainee was giving training demonstration, other trainees was evaluating the performance of selected trainee in accordance with items in the monitoring sheet whether all contents were covered; whether training materials were used properly; and whether talking voice was clear and in good pace. After each demonstration, the trainees exchange their opinions each other on good points and points for improvement.



3. Challenges revealed by the training implementation and its countermeasures

- All female extension workers were qualified as a veterinarian. However, most of them did not have any experience about disease treatment. On top of that some of them never touch with buffaloes. They have no chance to give medical treatment for animal as the extension worker under the Project. However, they need to understand technical information properly to inform correct situation to technical C/Ps in case of emergency. Therefore, enhancement of technical knowledge and skill of the extension team is must. It will be considered how the skill of the extension team will be improved with a consultation with technical C/Ps.
- In this training, only one quiz was conducted with 38 questions in one and half hours. 38 questions consist of 4 questions from extension activity, 32 technical questions and 2 questions from social mobilization. As the result, the average score of the trainees was 62 points while the full score is 100. The highest and the lowest were 81 points, 22 points respectively. However, if we look at only extension questions, the average score of the trainees was 4 points while full score is 13. The highest and the lowest were 7 points, 0 points respectively. Understanding of extension guideline is one of the target of PDM indicator. To make them remember, quiz for extension activity will be repeated.

Attachment 1 Orientation Training Program (Part1)



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Training Schedule for Newly Recruited Extension Team

(Project orientation Part 1)

Dated:16 -30 August 2017

Day 1: 16/8/ 2017

Time	Contents	Facilitator
9:45	Registration of participants	
10:00	Recitation of Holy Quran	
10:05	Introduction of participants	
10:10	Welcome Address by the Project Manager	Dr. Umrani
10:20	Fears, hopes, and code of conducts	Dr. Anisa
11:00	Overview of Extension activity	Ms. Kawamoto
12:00	Preparation of Farmer Training (Social map)	Ms. Kawamoto
13:00	Lunch	
14:00	Preparation of Farmer Training (Sensitization meeting and female meeting)	Ms. Kawamoto
15:00	Lecture on feeding management	Dr. Arif
16:20	Report writing	Ms. Kawamoto
16:30	Closing	
Assignment	Training attendance report	

Day 2: 17/8/2017

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Demonstration of Farmer training (No.1: Feeding Management)	Dr. Mubeen & Dr. Anisa
11:30	Practice	Participants
12:00	Presentation	Participants
13:00	Lunch	
14:00	Lecture on livestock management	Dr. Safdar
15:00	Demonstration of Farmer training (No.8: Livestock Management)	Dr. Kabeer & Dr. Anisa
16:00	Practice	Participants
16:30	Presentation	Participants
17:00	Closing	
Assignment	Training attendance report	

Day 3: 18/8/2017

Time	Contents	Facilitator
10:00	Review of previous day	Dr. Anisa
10:30	Lecture on calf rearing	Dr. Safdar, Dr. Naeem
12:00	Demonstration of Farmer training (No.4: Calf rearing)	Dr. Mubeen & Dr. Anisa
13:00	Lunch	
14:00	Lecture on Genetics	Dr. Jatoi
15:00	Demonstration of Farmer training (No.7: Animal Genetics)	Dr. Kabeer & Dr. Anisa
16:00	Practice	Participants
16:30	Presentation	Participants
17:00	Closing	
Assignment	Training attendance report	

Day 7: 24/8/2017

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Review of previous week	Dr. Anisa
10:30	Deworming and Vaccination	Dr. Zulfiqar
11:30	Tea break	
11:45	Livestock disease and their treatment	Dr. Jiskani
13:00	Lunch	
14:00	Demonstration of Farmer training (No.2: Animal disease)	Dr. Farooq & Dr. Anisa
15:00	Practice and Presentation	Participants
16:00	Demonstration of Farmer training (No.3: Mastitis)	Dr. Farooq & Dr. Anisa
17:00	Closing	
Assignment	Training attendance report	

Day 8: 25/8/2017

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Lecture on reproduction + BCS	Dr. Shahani
11:30	Demonstration of Farmer training (No.6: Reproduction)	Dr. Iqbal & Dr. Anisa
12:30	Practice	Participants

Time	Contents	Facilitator
13:00	Lunch	
14:00	Depart from the project office	
14:40	BCS guidance at the New cattle colony	Dr. Shahani
15:40	Depart from the new cattle colony	
17:00	Closing	
Assignment	Training attendance report	

End

Attachment 2 Program of Team Building Training

Team Building Training for Extension Workers

August 21 ~ 23, 2017


Schedule		Resource Person
Day one, 22/08/2017		
0900	Registration	IRM
0910	Recitation From the holy Quran	IRM
0915	Welcome, Introduction & Pre-Test	IRM
0950	Expectations, Fears, matching the objective	Ms. Nadia
1100	Tea Break	
1130	Understanding of Team Building <ul style="list-style-type: none"> • What is team • Team Building • Group Dynamics 	Ms. Nadia
1330	Lunch and prayer Break	
1500	Effective Communication skills through Team Building	Ms. Nadia
1700	Tea Break	
1700-17-15	Wind up of the session	Ms. Nadia

Day two, 23/08/2017		
0900	Review to the previous day	Ms. Nadia
0930	Conflict Resolution through Team building	Ms. Nadia
1130	Tea Break	Ms. Nadia
1200	Role play	Ms. Nadia
1330	Lunch and prayer break	
1500	Office Work Ethics	Ms. Nadia
1700	Tea break	
1715	Wind up of the session	Ms. Nadia

Day Three 24/08/2017		
0830	Review of the previous day	Ms. Nadia
0900	Leader ship skills	Ms. Nadia
1100	Tea break	Ms. Nadia
1115	Time Management	Ms. Nadia
1330	Lunch and Prayer Break	
1430	Post-test	IRM
1500	Training Evaluation	IRM
1530	Feedback & Comments	IRM
1600	Certificate Distribution	IRM
1630	Closing Remarks	JICA, CBU, IRM
1700	End of Day & Tea	IRM

Institute of Rural Management

Attachment 3 Program of Social Mobilization Training

 3Days Training Schedule on Social Mobilization For Extension Staff <i>August 28- 30, 2017</i> 				
Timings	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
Day 1 (August 28, 2017)				
09.00-09.30	Recitation	Participant		
9:30-9:45	Introduction of the Participants Expectation/ Fears and ground roles	Introductory Session	Participatory	Participants
09.45-10.45	Concept of Social Mobilization and Some Basic question for Social Development (Reason and Solution	Social Mobilization Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
10.45-11.00 Tea Break				
11.00-11.45	Key Elements of Social Mobilization Phases of social mobilization	Social Mobilization phases	Presentation/Discussion and Lecture	Gopal Das
11.45-12.45	Dialogue and programme introduction methodology for Extension worker	Programme Introduction	Discussion, Lecture and Role Play	Gopal Das /participants
12.45-01.15	Motivation skills	Steps and important of Motivation in extension work	Presentation/Discussion/ Group work /Lecture	Gopal Das
01.15-02.00 Lunch				
02.00-03.00	Concept of participatory approach	Conceptual understanding of Participation	Presentation/Discussion/ Group work /Lecture	Gopal Das
03.00-03.45	Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
03.45-04.00 Tea break				
04.00-04.45	(Cont) Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
Day 2 (August 29, 2017)				
11.00-1.00	Field Social Mobilization for Improve the awareness of the farmers for technical training'.	Social Mobilization Process for motivation	Village	Gopal Das

2.00-3.00 Lunch Break				
3.00-4.30	Feedback session on Field	Review SM methodology Review motivation Skills To develop strategy for field dialogue	Individual Sharing	Gopal Das

Timings	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
Day-3 (August30, 2017)				
09.00-09.20	Review of the previous Day	Learning of the previous Day	Participatory	Gopal Das /participants
9.20-11.00	Attitude & Behaviours of Extension worker & Community	Checklist of Attitude & Behaviors	Presentation /Discussion /Group work /Lecture	Gopal Das
11.00-11.15 Tea Break				
11.15-12.30	Communication & Facilitation Skills of Extension worker (Verbal & Non verbal Communication)	Concept of Communication & Facilitation skills Type of Communication	Presentation/Discussion /Group work /Lecture	Gopal Das
12.30-1.30	Conflict (issues & Solution)	Conflict Resolution Strategy	Presentation/Discussion /Group work /Lecture	Gopal Das
1.30-2.30 Lunch Break				
1.30-2.30	Introduction of PRA Tools and their important in data collection	PRA – Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
2.30-4.30	PRA- Tools practices Social map Network diagram Seasonal Calendar	PRA – Tools & Techniques	Participatory discussion Lecture and Brainstorming	Gopal Das
4.00-5.00	Closing	Feedback Comments Certificate Distribution	Comments	Participants Facilitator Livestock Department and JICA team

Attachment 4 Orientation Training Program (Part2)



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)
Training Schedule for Newly Recruited Extension Team
(Project orientation Part II)
Dated: 5-6 September, 2017**



Day 1: 5/9/2017

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Review of previous week	Dr. Anisa
10:30	Lecture on marketing	Dr. Iqtadar
11:30	Demonstration of Farmer training (No.5: Marketing)	Dr. Iqbal & Dr. Anisa
12:30	Practice	Participants
13:00	Lunch	
14:00	Presentation	Participants
15:00	Quiz	Dr. Anisa
16:00	Discussion	Dr. Anisa
17:00	Closing	
Assignment	Training attendance report	

Day 2: 6/9/2017

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
13:00	Lunch	
14:00	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
16:30	Closing remarks and certificate distribution	Dr. Umrani
Assignment	Training attendance report	

End

**Report on
the Tenth Extension Team Training**

January 2018

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objective of this training is to build the district extension team with Master Trainers, male and female Extension Workers to implement extension activity in the field smoothly by the team.

1-2 Duration of the training

7 and 8 September 2017 in total 2 days

1-3 Number of participants

Five Master Trainers (M/Ts), 10 male Extension Workers (E/Ws), 8 female Extension Workers (E/Ws) in total 22

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1 to Table 4. Detail programs are shown in Attachment 1.

Table1 Outline of training program

Date	Main contents
7 Sep (Thu)	1) competition of tower making (group work), 2) experience sharing among district team members (group work), 3) Role and responsibility of the Extension team (Lecture), 4) strong point and weak point of each district team (group work) 5) ideas to improve weak points (group work)
8 Sep (Fri)	1) quiz about extension activity, 2) explanation about SOP, 3) understanding of the questionnaire of appropriate development checklist, 4) activity plan making

2. Contents of the training

2-1 The first day



Main contents for team building for district extension team were; 1) competition of tower making, 2) experience sharing among district team members, 3) Role and responsibility of the extension team, 4) strong point and weak point of each district team; and 5) ideas to improve weak points. All activities were done by group activity except one lecture. During the training, each team was given the task to discuss and compile ideas of members in the same team into a flip chart paper and make a presentation jointly. As a result, the difference among each district team and characteristic of each team were seen clearly. It was good opportunity to create common understanding among the same team members to work together. Some observations about tower making are as follows:

Condition of the tower was; 1) stand alone and 2) tall as much as possible. As for tower making materials, two pieces of flip chart papers and one roll of masking tape were distributed to each district team. Time allocation was 10 minutes for a planning time how to build the tallest tower with limited resources and limited time, and another 10 minutes for tower making.

➤ The Hyderabad team made the tower accordance with requirement. They could make the tallest tower.

They won the competition.

- The Matiari team made the second tallest tower, however, they think about height only. They forgot to make basement of the tower. Therefore, the tower could not stand alone. Although they were given 10 minutes for planning, they had just talked only two minutes and started to make the tower immediately. The Matiari team learned that it was important to understand instruction properly and make a plan before starting any activities. It was not necessary to react quickly, but they rushed themselves to win competition.
- The team of Badin, TMK and Tando Allahyar made a decorative and unique tower. However, only two conditions were important for this competition, stand alone and height. They were informed that even though they put a lot of effort to create a beautiful tower, it would not be appreciated because design was out of condition in this case.

	
<p style="text-align: center;">Tower of each team From left :Badin (yellow), Hyderabad (pink), Matiari (blue), TMK (light green), TA (blue)</p>	<p style="text-align: center;">Group work (Badin team)</p>

2-2 The second day

Main contents of second day were; 1) quiz of extension activity; 2) explanation of Standard operation procedure (SOP) for extension activity by Gender C/P ; 3) explanation about the questionnaire of appropriate technology development check list by Gender C/P; and 4) activity plan making.

The extension expert repeated the essence of extension guidelines; 1) extension activity of the Project; 2) flow of extension activity; 3) flow of training on appropriate technology; 4) current structure of extension activity; 5) role and responsibility of each extension staff. After this presentation, quiz was conducted to check the level of understanding of the extension staff. All quiz questions were related to the contents of presentation. However, score of extension staff was lower than expectation. Existing extension staff are started to forget about the contents of extension guideline because they learned about the guideline around one year ago. All members' scores were disclosed to other members and following discussion was made.

- The Project try to improve level of understanding of extension staff to the extension guideline.
- Nonetheless their quiz score was lower than others, some staff challenged to other staff as if that person

was superior than the others. The Project never accept this kind of attitude because it is not appropriate attitude as the extension staff and it could have arisen unnecessary conflict among the team members.

- M/Ts should understand the contents of extension guideline better than E/Ws because the M/Ts are in higher position than E/Ws.
- Some staff made an excuse for low score that they could not write answer properly in English. According to their quiz answer, it seems this was not language problem, but understanding.

- Quiz of extension activity (full score: 100)

The average score of 5 M/Ts was 55 points while the highest and the lowest were 95 points, 35 points respectively. Only one M/T marked more than 80 points.

The average score of 10 male E/Ws was 25 points while the highest and the lowest were 68 points, 6 points respectively. Only one male E/W marked more than 60 points.

The average score of 8 female E/Ws was 65 points while the highest and the lowest were 86 points, 25 points respectively. Five female E/Ws marked more than 60 points.

3. Challenges revealed by the training implementation and its countermeasures

- M/Ts and E/Ws need to understand contents of the extension guidelines. Minimum requirement for M/Ts and E/Ws are 80% and 60 % respectively. The Project will repeat quiz until they remember the contents of the extension guidelines. Other effective means will also be considered to improve their level of understanding

Attachment 1 Training Program



THE PROJECT ON SUSTAINABLE LIVESTOCK DEVELOPMENT for RURAL SINDH

(JICA Technical Cooperation)

10th Extension Team Training

(Team building for district extension team, SOP, ATDC questionnaires)

Dated:7-8 September, 2017



Day 1: 7/9/ 2017

Time	Contents	Facilitator
10:00	Recitation of Holy Quran	
10:05	Introduction of all extension members	Dr. Anisa
10:30	Team building for district extension team ✓ Group activity	Ms. Kawamoto
11:00	Team building for district extension team (cont.) ✓ Experience sharing among the team	Ms. Kawamoto
11:30	Tea break	
11:45	Role and responsibility of Extension team	Ms. Kawamoto
12:15	Team building for district extension team (cont.) ✓ SWOT analysis (only S and W)	Ms. Kawamoto
13:15	Lunch	
14:00	Team building for district extension team (cont.) ✓ Goal setting and sharing	Ms. Kawamoto
15:15	Tea break	
15:30	SOP for extension activities	Ms. Kawamoto
17:00	Closing	
Assignment	Training attendance report	

Day 2: 8/9/2017

Time	Contents	Facilitator
9:25	Recitation of Holy Quran	
9:30	Review of previous day	Dr. Anisa
10:00	Review of appropriate technology development check list and questionnaire	Dr. Anisa
11:00	Practice of interview including role play	Participants
13:00	Lunch	
14:00	Plan of Extension activity	Ms. Kawamoto
15:00	Discussion	participants
17:00	Closing	
Assignment	Training attendance report	

End

**Report on
the Eleventh Extension Team Training**

March 2019

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this extension team training are; to review the extension guideline; to review training materials for farmer training; and to measure the level of understanding of the extension team.

1-2 Duration of the training

In total 3 days from 20 February to 22 February 2018

1-3 Number of participants

In total 21 members, one Social Mobilizer (S/M), four Master Trainers (M/Ts), nine male Extension Workers (E/Ws) and seven female E/Ws were attended the whole session. One female E/W was absent from the training due to home remedy. One male E/W attended the training session only the first day due to sickness.

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detail programs is show in Attachment 1.

Table1 Outline of training program

Date	Training program
20 February (Tue)	1) Quiz about Extension Activity, 2) Review of Team building (Four stages of team building), 3) Explanation of extension guideline, 4) Review of farmer training materials
21 February (Wed)	1) Quiz about technical topic, 2) Review of farmer training materials 3) Practice of questions and answers for farmers (Role play)
22 February (Thu)	1) Role play (cont.), 2) Review of questionnaire for the appropriate technology development checklist, 3) Quiz, 4) Plan for next activity

2. Contents of the training

2-1 Review of team building

All extension members attended the session of team building which conducted by IRM¹ during the orientation training in their first year of joining the Project. They learned four stages of the team building. In this session, the extension team reviewed the above-mentioned point and evaluate themselves through discussion which stage they are now. After that each district extension team made a presentation to explain about their status. Through this review, the extension team understood if they do not understand and help each other well, it will be easy to drop down into the storming stage again even they are in the performing stage.

¹ IRM: Institute of Rural Management

➤ Four stages of Team building

Forming: status that a team is formed by gathered members

Storming: status that team members are still under process of understanding each other and doing work whatever they like

Norming: status that team members start to understand each other and work as a team

Performing: status that all team members are aimed at the same goals

2-2 Quiz about Extension Activity and Review of the Extension Guideline

1) Quiz about Extension Activity (the first day)

Same questions were used as the quiz which conducted on 8 September 2017 to measure how much contents the extension team could remember. This quiz was conducted before the session of explanation of extension guideline. The result is shown in Table 2. There has been 5 months gap since the previous test was conducted, however, 14 members out of 22 marked good score than the previous result. It was a good result more than expected. However, there were large differences between good score and low score.

Table 2 Result of Extension Activity Quiz (the first day)

	Score (Full score 80 points)			% of correct answers (average)	
	Highest	Lowest	Average	Previous (8 Sep 17)	1st day (20 Feb 18)
M/Ts	79	0	29	55	36
Male E/Ws	55	0	30	25	38
Female E/Ws	80	9	58	65	73

Three of M/Ts got the low score. Average percentage of correct answers of M/T is fallen from 55% to 36%. Average percentage of correct answers of male E/Ws and female E/Ws are improved from 25% to 38%, and from 65% to 73% respectively. The most improved members were one of female E/W and male E/W from Matiari district. The former improved from 56% to 100% while the latter improved from 14% to 61%.

Special guidance for the Tando Allahyah district team is required because they recorded the lowest score among their positions even as an individual. The result of two male E/Ws and one female E/W of Tando Allahyah were zero point, eight points and nine points respectively while full score was 80 points.

2) Quiz about Extension Activity (the last day)

To measure the level of fixing the knowledge to memory of the extension team, the quiz was conducted again in the last day. The result is shown in Table3.

Table 3 Result of Extension Activity Quiz (the last day)

	Score (Full score 100 points)			% of correct answers (average)		
	Highest	Lowest	Average	Previous (8 Sep 17)	1st day (20 Feb 18)	last day (22 Feb 18)
M/Ts	95	30	53	56	36	53
Male E/Ws	82	20	45	25	38	45
Female E/Ws	98	33	82	64	73	82

If it is compared average percentage of correct answers of the first day with the last day, M/Ts, male E/Ws and female E/Ws improved as from 36% to 53%, from 38 to 45%, and from 73% to 82% respectively.

2-3 Quiz about technical topic

1) Quiz about technical topic (the second day)

This quiz was dealt with the basic and important contents from training materials for Farmer Training, however, the scores were lower than expected. There was no difference of scores among positions, therefore, first place to third place were ranked from the whole of extension team. As the result, first place was male E/W of TMK, second place was M/T of Badin and third place was female E/W of Badin. The highest score, lowest score, average score and average percentage of correct answers of each position are shown in Table 4.

Table 4 Result of Technical Quiz (the second day)

	Score (Full score 90 points)			% of correct answers (average) 21 Feb 18
	Highest	Lowest	Average	
M/Ts	65	18	38	43
Male E/Ws	72	11	36	40
Female E/Ws	56	5	43	47

2) Quiz about technical topic (the last day)

To measure the level of understanding of the extension team, the same quiz as the second day was conducted again in the last day. The result is shown in Table 5.

Table 5 Result of Technical Quiz (the last day)

	Score (Full score 90 points)			% of correct answers (average)	
	Highest	Lowest	Average	Second day (20 Feb 18)	Last day (21 Feb 18)
M/Ts	84	49	68	43	75
Male E/Ws	90	43	68	40	68
Female E/Ws	90	56	77	47	86

If it is compared average percentage of correct answers of the first day with the last day, M/Ts, male E/Ws and female E/Ws improved as from 43% to 75%, from 40% to 68%, and from 47% to 86% respectively.

2-4 Review of Training Materials for Farmer Training

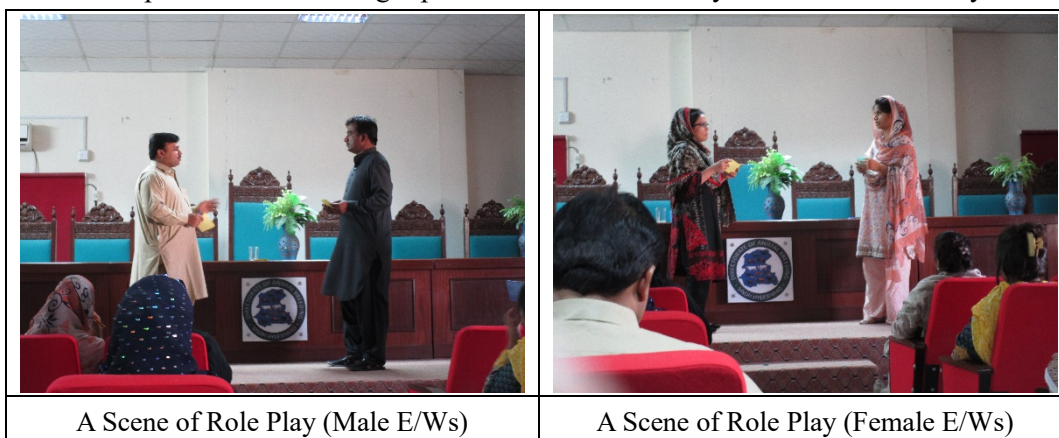
Training materials for Farmer Training in eight subjects were revised. Some pictures were replaced, and some episodes were added. It was good opportunity for male extension members especially as for review sessions of training contents because their training for the pilot villages were finished a few months ago. Revision of materials was done by plenary sessions, therefore, it was good to have common understanding among the extension team.

2-5 Practice of questions and answers for farmers

Actual questions from the farmers which the extension team got during Farmer Training were copied into cards separately. Then, each randomly-selected pair drew a card for role play. Question which used for the role play included the questions which did not make sense scientifically because it was real questions from the farmers. It was a part of practice to answer irrelevant questions during the role play. The extension team should not give the answer to irrelevant questions immediately but tried to find reasons behind before giving the answer.

For example, the question from the farmer ‘ I gave residue of millet after second harvest to my buffalo. After that my animal died. Why?’ As for this answer, it is very difficult to identify real causes of death of animal only from what farmer said. The extension team should throw questions to the farmer such as use of pesticide, condition of that animal etc., to put the facts together before they give any answer to the farmers. Even M/T could not handle some of the questions properly, therefore, this session was good opportunity for practice how to answers the farmers.

As for preparation of this session, the extension team leader extracted the real questions from training implementation reports and monitoring reports of extension activity and compiled it into spread sheets. After that those questions were copied into the cards separately. The extension expert gave instruction to the extension team leader how to organize the data by spread sheets. The training implementation reports and monitoring reports of extension activity were used effectively.



2-6 Questionnaire for the appropriate technology development checklist

Monitoring use by the questionnaire for the appropriate technology development check list is conducted not only interview to the farmers but also direct observation of farms by the extension team. However, the result is shown unusually high adoption rate of appropriate technology by the farmers. Therefore, it was confirmed how the extension team rank condition of farms as A, B, C.

2-7 Report writing (Training attendance report)

Training attendance report was assigned to the trainees as home work of the first day. All trainees submitted the report; however, the writing contents were varied from the trainee to trainee. For example, some trainees listed up the key words only into the report. Another example is that some trainees gave detail explanation what happened during the training but lack of description what him/her self learnt from the training. Some trainees described well what they learnt.

To solve this issue, the report written by one of female E/W of Hyderabad was shared among the extension team as a good example. It was a short report only half page, but it included both important points of the training and lesson learnt for herself. This report was relevant for all trainees as the first step of report writing. All trainees were instructed to write the report at least in this level. In addition, M/Ts were given an instruction to write report in English.

As the result, all reports were improved in the second day except the one which written by male E/W and female E/W of Tando Allahyah team. To improve their report writing skill, continuous guidance is required.

3. Comments about trainees

- The lowest group in rank of quiz score makes average score down significantly.
- There is obvious tendency that extension members who showing lower level of understanding than others do not take note or cannot take note properly during the sessions.
- As for preparation of this training, the extension team leader translated the extension guideline into Sindh. It helped her to understand about the extension guideline more.

4. Challenges revealed by the training implementation and its countermeasures

- The level of understanding of the district extension team of Tando Allahyah is lower than other district teams significantly. The assignment should be given to them to improve their level of understanding.
- It was revealed that many members cannot remember about extension activity clearly compared to technical topics. Therefore, it is required to repeat the quiz or other measures to fix the knowledge to their memory.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)
11th Extension Team Training
(Extension guideline review and technical review)
Dated:20-22 February 2018**



Day 1: 20/2/ 2018

Time	Contents	Facilitator
10:00	Recitation of Holy Quran	
10:05	Introduction session	Ms. Kawamoto
10:40	Quiz on extension activity	
11:25	Review of team building~ 4stages of team building	Ms. Kawamoto
12:00	Explanation about revised extension guideline	Dr. Anisa
13:00	Lunch	
14:00	Review of farmer training materials (Feeding management, Animal health, Mastitis and Calf rearing)	Dr. Anisa
15:30	Feedback on quiz result and review	Ms. Kawamoto
16:30	Closing	
Assignment	Training attendance report	

Day 2: 21/2/2018

Time	Contents	Facilitator
10:00	Recitation of Holy Quran	
10:05	Quiz on technical knowledge	
10:05	Review of farmer training materials (Marketing, Reproduction, Genetic Improvement, Livestock Management)	Dr. Anisa
13:00	Lunch	
14:00	Role play (How to reply farmers' questions)	Dr. Anisa
16:30	Closing	
Assignment	Training attendance report	

Day 3: 22/2/2018

Time	Contents	Facilitator
10:00	Recitation of Holy Quran	
10:05	Feedback on quiz result and review	Ms. Kawamoto
10:35	Role play (How to reply farmers' questions) (cont.)	Dr. Anis
13:00	Lunch	
14:00	Quiz (Extension activity and technical)	
15:30	Review of appropriate technology development check list questionnaire	Dr. Anisa Ms. Kawamoto
16:00	Plan for next extension activities	Ms. Kawamoto
16:30	Closing	

End

Attachment 2 Quiz

■ Extension

(Full score: 100 points)

- Q1 What is the extension activity of this project? (allocation 10 points)
- Q2 What is the appropriate technology? (allocation 10 points)
- Q3 Explain flow of Extension activity? (allocation 20 points)
- Q4 Explain flow of training? (allocation 10 points)
- Q5 What is the first beneficiary? (allocation 10 points)
- Q6 What is the second beneficiary? (allocation 10 points)
- Q7 Explain Extension Structure? (allocation 10 points)
- Q8 Explain your role as a Social Mobilizer/Master Trainer/Extension worker? (allocation 20 points)

■ Technical

(Full score is 90 points due to exclusion of Q8)

- Q1 Which month milk yields is peak after calving? (allocation 10 points)
- Q2 (a) How you determined body condition score (BCS) of buffalo? (allocation 5 points)
- Q2 (b) Which part you observed to determine for body condition score (BCS)? (allocation 5 points)
- Q3 Which body condition score of buffalo we consider for Harmon therapy? (allocation 10 points)
- Q4 (a) How many days before parturition concentrate should be given to animal? (allocation 5 points)
- Q4 (b) How many Kgs of concentrate should be given animal before parturition? (allocation 5 points)
- Q5 What are the advantages of green and dry fodder? (allocation 10 points)
- Q6 (a) Why hoof cutting is important? (allocation 5 points)
- Q6 (b) What is suitable timing for hood cutting? (allocation 5 points)
- Q7 Write any four principles of deworming? (allocation 10 points)
- ~~Q8 How much weight is required at the age of 2 years heifer for the conception? (allocation 10 points)~~
- Q9 How do you check reproductive capacity of bull? (allocation 10 points)
- Q10 Why is important to give colostrum to the calf as soon as possible after parturition? (allocation 10 points)

**Report on
the Twelfth Extension Team Training**

March 2019

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this extension team meeting are; to understand how to conduct baseline survey in the surrounding villages; and to understand revised training materials for Farmer Training.

1-2 Duration of the training

In total 2 days from 10 July to 11 July 2018

1-3 Number of participants

One Social Mobilizer (S/M), three Master Trainers (M/Ts), 10 male Extension Workers (E/Ws) and eight female E/Ws in total 22 trainees were attended. The Extension Team Leader, aka Gender specialist facilitated the training session as the trainer.

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detail programs is show in Attachment 1.

Table1 Outline of training program

Date	Training program
10 July (Tue)	1) Explanation about contents of baseline format, 2) Explanation about revised materials for Farmer Training
11 July (Wed)	1) Explanation about revised materials for Farmer Training(cont.) 2) Quiz, 3) Calculation for required amount of roughage

2. Contents of the training

2-1 Explanation about contents of baseline format

A lot of questions were deleted from the questionnaire for appropriate technology development check list and it was edited as the format of baseline survey. The recording sheet of farm observation was also revised. The extension expert explained these new formats to the extension team. These formats will be used both baseline survey and monitoring survey hereafter.

2-2 Explanation about revised materials for Farmer Training

The extension expert explained revised training materials for Farmer Training. Eight training subjects were reorganized as 1) feeding management, 2) livestock management, 3) animal health, 4) mastitis, 5) body measurement and BCS, 6) reproduction and genetics, 7) calf rearing and 8) marketing. Most of the contents of No.5 and No.6 were replaced. Revision of training materials was done based on the result of review during previous extension team training.

2-3 Calculation for required amount of roughage

According to the revision of the appropriate technology textbook, how to calculate proper

amount of roughage supply to a buffalo was newly added. However, the extension team could not understand how to make an equation for calculation. Multiple quizzes were given to the extension team for practice. As the result, M/Ts and female E/W understood to some extent, however, half of male E/Ws did not understand completely.

Basic calculation skill of the extension team was very poor. No one could explain meaning of percentage. In addition, at least four E/Ws and one female E/W cannot calculate single multiplication within time limit. The multiplication table for seven and eight were not memorized especially. A lot of members could not calculate division without a calculator. The extension expert requested M/Ts to give some guidance to male E/W on calculation when they have time.

2-4 Quiz about Technical Topic

The quiz about technical topic was conducted. The result is shown in Table2.

Table 2 Result of Technical Quiz (the second day)

	Score (Full score 90 points)			% of correct answers (average)
	Highest	Lowest	Average	
M/Ts	81	50	66	73
Male E/Ws	76	22	47	52
Female E/Ws	83	24	57	63

As for internal standard of the Project, M/Ts should reach to 80% of correct answers while E/Ws should reach to 60%. Two of M/Ts out of three showed more than 80% of correct answers. Five of male E/Ws out of 10 and five of female E/Ws out of eight showed more than 60% correct answers.

3. Comments about trainees

- It is still recognized that the lowest group in rank of quiz score makes average score down significantly.
- It was short duration as only two days for the training. However, it helped to have common understanding among the extension team on base line survey format and revised materials through solving their questions.

4. Challenges revealed by the training implementation and its countermeasures

It is necessary to improve calculation skill of the extension team. Proper assignment should be given to them. In terms of practical work, they will not have any trouble if they use a calculator. However, they cannot make an equation without guidance at this moment.

Attachment 1 Training Program



THE PROJECT ON SUSTAINABLE LIVESTOCK DEVELOPMENT for RURAL SINDH

(JICA Technical Cooperation)
12th Extension Team Training
(Baseline survey and revision of training materials)

Dated:10-11 July 2018



Day 1: 10/7/ 2018

Time	Contents	Facilitator
9:30	Recitation of Holy Quran	
9:35	Overview of the training	Ms. Kawamoto
9:40	Explanation about base line survey questionnaire and observation sheet	Dr. Anisa
11:10	Tea break	
11:25	Outline of revised training material for farmers (change of training subject sequence etc..)	Ms. Kawamoto
11:35	Detail explanation about revised training material (Feeding management) and exercise	Dr. Anisa
13:00	Lunch	
13:45	Detail explanation about revised training material (Livestock management and Animal health)	Dr. Anisa
15:00	Tea break	
15:15	Detail explanation about revised training material (Mastitis and BCS)	Dr. Anisa
17:00	Closing	
Assignment	Training attendance report	

Day 2: 11/7/2018

Time	Contents	Facilitator
9:30	Recitation of Holy Quran	
9:35	Detail explanation about revised training material (Reproduction and genetics)	Dr. Anisa
11:00	Tea break	
11:15	Detail explanation about revised training material (Calf rearing)	Dr. Anisa
13:00	Lunch	
13:45	Detail explanation about revised training material (Marketing)	Dr. Anisa
15:00	Tea break	
15:15	Quiz	Ms. Kawamoto
16:00	Plan for next extension activities	Dr. Anisa Ms. Kawamoto
17:00	Closing	
Assignment	Training attendance report	

End

Attachment 2 Quiz

Q1 Explain the roughage and its advantage? (allocation 10 points)

Q2 How many kg of sugar cane leaves is suitable for the 250kg of buffalo per day?
Dry matter of sugar cane is 40%? (allocation 10 points)

Q3 Which month milk yields is peak after calving? (allocation 5 points)

Q4 Explain 'how to recognize sign of sick animal according to the training material' which you will teach to the farmer? (allocation 15 points)

Q5 Explain the procedure to determine Body condition score? (allocation 10 points)

Q 6 Explain calving interval of buffalo? (allocation 10 points)

Q7 How many months the calf should be given the milk for rearing in rural area? (allocation 5 points)

~~Q8 Explain what kind of grass is suitable for hay and how to make hay? (allocation 10 points)~~

Q9 Explain how to measure heart girth? (allocation 15 points)

Q10 Explain characteristic of high milking capacity of a cow/buffalo? (allocation 10 points)

(Full score is 90 points due to exclusion of Q8.)

Report on the Thirteenth Extension Team Training

March 2019

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

This training was conducted as the orientation training about extension activity of the Project for the Department Extension Team.

1-2 Duration of the training

In total 10 days from 10 December to 21 December 2018, except weekend

1-3 Number of participants

15 regular staff of the livestock department, one Veterinary Officer (V/O) and two male Stock Assistants (S/A) for 5 districts were nominated as the trainees for this orientation training by the Department

1-4 Training schedule and outline of training program

The training session comprises of orientation part by project staff including Japanese expert and social mobilization part by the visiting lecturer. Outline of training program is shown in Table1 and Table 2. Detail programs is show in Attachment 1 and Attachment 2.

Table1 Outline of training program (Orientation)

Date	Training Program and lecturer/facilitator
10 December (Mon)	1) Team building, 2) Overview of Extension activity, 3) Social map, 4) Sensitization meeting, 5) Report writing (No.4 by the Extension Team leader, other lectures by the Extension Expert)
11 December (Tue)	1) Lecture on feeding management by Feeding Management C/P, 2) Demonstration of Farmer training (No.1: Feeding Management by M/T Hyderabad), 3) Lecture on livestock management by Feeding Management C/P, 4) Demonstration of Farmer training (No.2: Livestock Management by M/T Hyderabad)
12 December (Wed)	1) Lecture on Deworming and Vaccination by Animal Health C/P, 2) Lecture on Livestock disease and their treatment by Farm management C/P, 3) Demonstration of Farmer training (No.3: Animal Health by M/T Matiari), 4) Demonstration of Farmer training (No.4: Mastitis by M/T Matiari)
13 December (Thu)	1) Lecture on calf rearing by Feeding management C/P, 2) Demonstration of Farmer training (No.7: Calf rearing by M/T TMK), 3) Lecture on marketing by Marketing C/P, 4) Demonstration of Farmer training (No.8: Marketing by M/T TMK)
14 December (Fri)	1) Lecture on Body measurement, BCS and reproduction by reproduction C/P, 2) Lecture on Genetics by Genetics C/P, 3) Demonstration of Farmer training (No.5: Body measurement and BCS by M/T Badin), 4) Demonstration of Farmer training (No.6: Reproduction and Genetics by M/T Badin)
17 December	1) Lecture on extension activity by the Extension Expert, 2) review of Social map

Date	Training Program and lecturer/facilitator
(Mon)	by the Extension Expert, 3) Quiz on extension, 4) Quiz on technical
20 December (Thu)	Demonstration of Farmer Training by trainees
21 December (Fri)	Plenary meeting on extension activity and closing ceremony

Table 2 Outline of training program (Social Mobilization)

Date	Training program and facilitator
18 December (Tue)	1) Outline of social mobilization, 2) How to talk to villagers, 3) Behavior for the field activity, 4) Motivation skill (Trainer was Mr. Gopal, the visiting lecturer)
19 December (Wed)	1) Gender, 2) Participatory approach, 3) Communication skill (Trainer was Mr. Gopal, the visiting lecturer)

1-5 Training implementation cost

Training cost was borne by the PC-1 budget.

2. Contents of the training

2-1 Explanation about objective of the training

The extension expert spent time to explain the difference between V/O and S/A training which conducted by the technical C/P of the Project and this extension team training because half of trainees were attended V/O and S/A training before. First, this training was conducted based on the request of the Director of Animal Husbandry (DAH). Second, this training was aimed to organize an extension team by existing staff of the Livestock Department to continue extension activity in transition period from completion of the Project to establishment of the extension section in the Department. Third, all 50 appropriate technologies were dealt during V/O and S/A training while this training would deal only 19 appropriate technologies out 50 which focused for extension activity. At last, it was explained that the trainee would learn more about how to deliver technical message to the farmers than technical information itself.

2-2 Team building

Each district team competed with other district teams for paper tower making by one flip chart paper as a part of exercise for team building. One of the district team rebuild the paper tower after they observed other team's products. At last, that tower was the highest among all towers. The Project conducted this exercise in other orientation training, however, this kind of things never happened other groups before.



The tallest tower is made by Tando Allahyar team

2-3 Explanation about Extension Activity

No trainees posed questions about contents of extension activity, however, all trainees showed their concern strongly about the implementation structure of extension activity after the Project phased out. For example, ‘Should we conduct extension activity apart from the regular work as the Department staff ? ’ and ‘ What kind of incentives can we get by the extension activity?’. The extension expert replied to the trainees briefly. Then, the DAH also explained the working day and travelling allowance in the last day during the plenary meeting among stake holders.

The extension expert further explained that the target of the Project extension activity is 3,000 farmers, however, it is not set for the Department extension team at this moment. Standard number of training participants for planning was explained as 18 farmers per village.

During the first lecture for extension activity, the trainees did not pay attention to memorize contents carefully. Therefore, no one could explain the flow of extension activity later. The extension expert repeated same lecture again in the sixth day. She focused the flow of extension activity and flow of training such as extension team training, farmer training and core farmer training. After explanation by the extension expert, the extension team leader conducted a review session for extension activity by questions and answers.

2-4 Preparation of Farmer Training (Social map and Sensitization meeting)

1) Explanation of Social map and practice of map drawing

In the first day, the extension expert explained outline of the social map and drew a virtual social map on the floor. the trainees practiced drew social map onto A4 paper. The extension expert checked all the maps which drawn by the trainees.

In the sixth day, the extension expert projected each map onto the screen and made comments about good points and points need to be improved one by one. At last, she showed a model map. Many of trainees had just drawn the map as own way. However, they started paying attention to listen carefully about points for map making after their maps were exposed to the others.

2-6 Social Mobilization

The Project requested to Mr. Gopal, the visiting lecturer to conduct social mobilization session as same as the previous orientation training. According to the attitude of the trainees and contents of training attendance report, the trainees learned many important points from Mr. Gopal, especially for communication skill.

2-7 Quiz

1) Calculation of roughage supply (the third day)

Although fodder C/P explained calculation of roughage supply to the trainees in the second day, no one could answer the quiz correctly. It was revealed that many of trainees did not understand basic mathematics such as percentage, fraction and decimal. Even V/O could not explain why 10% should be converted into 0.1 or ten hundredth for calculation.

2) Basic mathematics (the fourth day)

Two questions were given to the trainees; 1) calculation of roughage supply, 2) calculation of number of male training participants from the total number of training participants and the ratio of male to female. As the result of the former question, no one could answer correctly again while five trainees out of 10 gave correct answers for the latter. Level of understanding of the trainees about mathematics was quite low. Therefore, the extension expert stopped further explanation and gave them assignment until the trainees memorized how to solve the problems. Three of S/A were qualified as DVM, however, they could not solve the problems.

3) Calculation drill (the fifth day)

As a calculation exercise, the trainees answered for simple multiply during the morning review session. However, not only S/A but also some of V/O could not do multiply properly.

4) Quiz for extension activity (the sixth day)

The result of extension quiz is shown in Table 3. Two of V/O and S/A 2 recorded low scores. Although the extension team leader explained about extension activity in Sindhi right before the quiz, the result of quiz remained as low score relatively. One of S/A from Hyderabad was contributing to increase average score of S/As because his level of understanding was quite higher than other S/As.

Table 3 Result of Extension activity Quiz

Position		Score (Full score 100 points)		
		Highest	Lowest	Average
V/O	5 persons	75	25	53
S/A	9 persons	55	0	16

5) Quiz for technical topic (the sixth day)

The result of technical quiz is shown in Table 4. It was better score than the extension quiz, however, some of trainees could not answer to the question about their original work such as drenching.

Table 4 Result of Technical Quiz

Position		Score (Full score 100 points)		
		Highest	Lowest	Average
V/O	5 persons	84	50	61
S/A	10 persons	62	3	28

2-8 Demonstration of Farmer Training by Trainees

Each district extension team conducted demonstration of Farmer Training one in the morning and another in the afternoon. Subject allocation was done by lot. Preparation time was given 20 minutes and demonstration time was maximum 30 minute for each demonstration. Subject allocation for demonstration of Farmer Training by each district team is shown in Table 5.

Table 5 Subject Allocation for Demonstration of Farmer Training by Trainees

District team	Subject (a.m.)	Subject (p.m.)
Badin	Body measurement and BCS	Feeding management
Tando Allahyah	Mastitis	Reproduction and genetics
Tando Muhammad Khan	Animal Health	Mastitis
Matiari	Reproduction and genetics	Marketing
Hyderabad	Livestock management	Calf rearing

The extension expert observed demonstrations by the district team of Hyderabad, Badin and Matiari. Their demonstrations were good, and they were ready for Farmer Training expect S/A of Matiari.



2-9 Report writing

The extension expert gave the lecture about report writing in the first day of the training. She started to explain very basic information such as what is a sentence, what is a paragraph etc. The trainees assigned to submit training attendance report every day. Theme of report was what they learnt from the training sessions for each day. English reports were checked by the extension expert while Sindhi reports were checked by the extension team leader. The trainees submitted reports in the morning and the reports were returned same day with the comment from the extension expert or the extension team leader. This way was somehow burden for the organizer of the training, however, it made easy to know how the trainees understand the training contents objectively.

3. Comments about trainees

- At the beginning of the training, although the trainees were listening the lectures calmly, they were attending the training because of the letter from their boss. As time went by, the trainees were interested in extension activity gradually.
- Seven trainees out of 13 attended V/O and S/A training which conducted by technical C/Ps before.
- One of V/O attended SOP training in 2017.
- Some of S/A did not speak out during the training sessions. The lecturers posed a lot of questions intentionally and let them speak out how they understand training contents.
- The Project proposed that two of S/A of Matiari and one of S/A of Tando Allahyah should be replaced. Both of S/A of Matiari understood nothing. One of them submitted the training attendance report once, however, another S/A never submitted the report. S/A of TA showed that his level of understanding was lower as compared to his qualification of DVM. He had experience working as the member of tentative extension team of the Project and he attended six times of training which organized by JICA including V/O and S/A training. However, it seems he could not improve his capacity even though he had enough chances. The result of quiz for three disqualified trainees is shown in Table 6. In addition, the result of the quiz is just a part of basis for the judgement. Attitude during the sessions and other factor were considered comprehensively for the judgement.

Table 6 Result of the Quiz of Trainees who Disqualified as the Extension Member

	Technical (Full score 100)	Extension (Full score 100)
Matiari S/A (1)	8	4
Matiari S/A (2)	3	0
Tando Allahyah S/A (1)	32	No record due to early leave without permission

4. Future Extension Activity by the Department Extension Team

At the last day of the training, the stakeholder meeting was held with presence of DAH and

Mr. Humayoon, the focal person of the Department Extension Team. The extension activity by the Department Extension Team was discussed.

The Project proposed to replace two of S/A of Matiari and one of S/A of Tando Allahyah based on their performance during the training.

As the result of the meeting, the extension activity by the Department Extension Team will be started from three districts, Hyderabad, TMK and Badin. The Project further proposed that a plenary meeting among stakeholders should be held after around three sessions for Farmer Training is completed. Then, field experience of the leading extension teams should be shared to remaining two districts teams, Tando Allahyah and Matiari before they start extension activity.

It was agreed that the Department Extension Team will be engage in regular work as the Department staff for three days and extension work for two days per week. The Department Extension Team has limited time for extension activity, therefore, they will start activity for only one village at the beginning. The extension expert shared the name list of villages where the Project Extension Team is currently working. The Department Extension Team conduct extension activity for other villages.

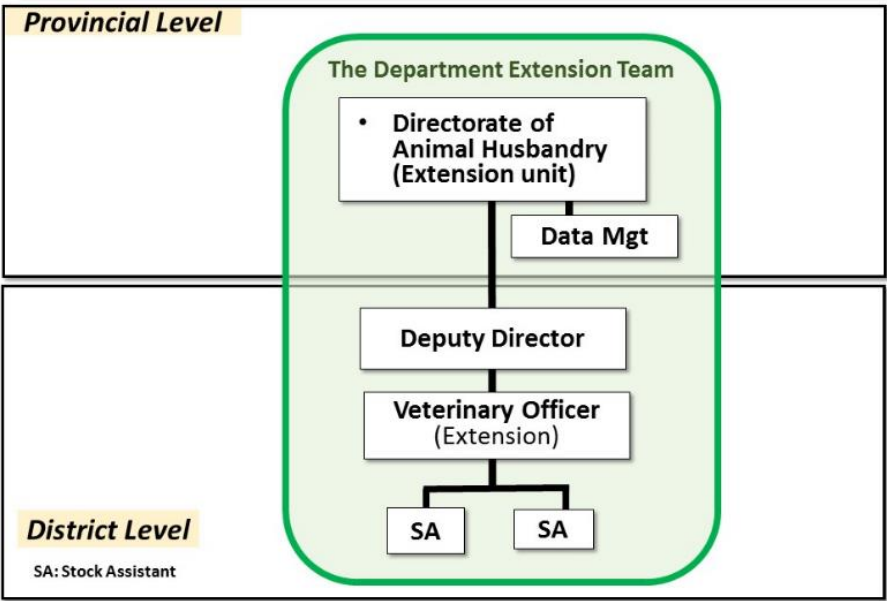


Figure1 Extension Structure by the Livestock Department

Attachment 1 Training Program (Orientation)



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Training Schedule for the Department Extension Team

Dated: 10 -21 December 2018

Day 1: 10/12/ 2018

Time	Contents	Facilitator
9:45	Registration of participants	
10:00	Recitation of Holy Quran	
10:05	Introduction of participants	
10:15	Welcome Address by the Extension leader	Dr. Anisa
10:20	Team building	Dr. Anisa and Ms. Kawamoto
12:00	Overview of Extension activity	Ms. Kawamoto
13:00	Lunch	
14:00	Preparation of Farmer Training (Social map)	Ms. Kawamoto
15:30	Preparation of Farmer Training (Sensitization meeting)	Ms. Kawamoto
16:30	Report writing	Ms. Kawamoto
17:00	Closing	
Assignment	Training attendance report	

Day 2: 11/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Lecture on feeding management with Q&A	Dr. Arif
11:30	Demonstration of Farmer training (No.1: Feeding Management)	Dr. Mubeen & Dr. Anisa
12:00	Practice	Selected participants
12:30	Presentation	Participants
13:00	Lunch	
14:00	Lecture on livestock management with Q&A	Dr. Safdar
15:00	Demonstration of Farmer training (No.2: Livestock Management)	Dr. Mubeen & Dr. Anisa
16:00	Practice	Participants
16:30	Presentation	Participants
17:00	Closing	
Assignment	Training attendance report	

Day 3: 12/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous week	Dr. Anisa
10:30	Lecture on Deworming and Vaccination with Q&A	Dr. Zulfiqar
11:30	Lecture on Livestock disease and their treatment with Q&A	Dr. Jiskani
13:00	Lunch	
14:00	Demonstration of Farmer training (No.3: Animal Health)	Dr. Farooq & Dr. Anisa
15:00	Practice and Presentation	Participants
16:00	Demonstration of Farmer training (No.4: Mastitis)	Dr. Farooq & Dr. Anisa
17:00	Closing	
Assignment	Training attendance report	

Day 4: 13/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Lecture on calf rearing with Q&A	Dr. Safdar, Dr. Naeem
11:30	Demonstration of Farmer training (No.7: Calf rearing)	Dr. Iqbal & Dr. Anisa
12:30	Practice and presentation	
13:00	Lunch	
14:00	Lecture on marketing with Q&A	Dr. Iqtadar
15:00	Demonstration of Farmer training (No.8: Marketing)	Dr. Iqbal & Dr. Anisa
16:00	Practice	Participants
16:30	Presentation	Participants
17:00	Closing	
Assignment	Training attendance report	

Day 5: 14/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Lecture on Body measurement, BCS and reproduction with Q&A	Dr. Shahani
12:00	Lecture on Genetics with Q&A	Dr. Jatoi
13:00	Lunch	
14:00	Demonstration of Farmer training (No.5: Body measurement and BCS)	Dr. Kabeer & Dr. Anisa

Time	Contents	Facilitator
14:30	Practice and presentation	
15:00	Demonstration of Farmer training (No.6: Reproduction and Genetics)	Dr. Kabeer & Dr. Anisa
15:45	Practice and presentation	
17:00	Closing	
Assignment	Training attendance report	

Day 6: 17/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous week	Dr. Anisa
10:30	Follow-up and monitoring	
13:00	Lunch	
14:00	Quiz on extension	Participants
15:00	Quiz on technical	Participants
16:30	Discussion	Dr. Anisa
17:00	Closing	
Assignment	Training attendance report	

Day 7: 18/12/2018

Time	Contents	Facilitator
10:00-17:00	Social Mobilization	Mr. Gopal

Day 8: 19/12/2018

Time	Contents	Facilitator
10:00-17:00	Social Mobilization	Mr. Gopal

Day 9: 20/12/2018


Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
13:00	Lunch	
14:00	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
17:00	Closing	

Day 10: 21/12/2018

Time	Contents	Facilitator
9:55	Recitation of Holy Quran	
10:00	Review of previous day	Dr. Anisa
10:30	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
13:00	Lunch	
14:00	Demonstration of Farmer Training (30 minute per participants including feedback)	Participants
17:30	Closing remarks and certificate distribution	Dr. Junejo, DG

End

Attachment 2 Training Program (Social Mobilization)

	<p>2Days Training Schedule on Social Mobilization For the Department Extension Staff <i>December 18- 19, 2018</i></p>	
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Day 1 (December 18, 2018)

Time	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
9.55	Recitation			
10:00-10:15	Introduction of the Participants	Introductory Session	Participatory	Participants
10.15-11.00	Concept of Social Mobilization and Some Basic question for Social Development (Reason and Solution	Social Mobilization Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
11.00-11.45	Key Elements of Social Mobilization Phases of social mobilization	Social Mobilization phases	Presentation/Discussion and Lecture	Gopal Das
11.45- 12.45	Dialogue and programme introduction methodology for Extension worker	Programme Introduction	Discussion, Lecture and Role Play	Gopal Das /participants
12.45- 13.15	Motivation skills	Steps and important of Motivation in extension work	Presentation/Discussion/ Group work /Lecture	Gopal Das
13.15-14.00 Lunch				
14.00-15.00	Concept of participatory approach	Conceptual understanding of Participation	Presentation/Discussion/ Group work /Lecture	Gopal Das
15.00- 15.45	Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
15.45- 16.45	(Cont) Key Concept of Gender Gender Dissemination Gender Equality & Equity	Conceptual understanding on Gender Role of men & women in Livestock activities	Presentation/Discussion/ Group work /Lecture	Gopal Das
16:45-17.00	Q&A			
17.00	Closing			

Day 2 (December 19, 2018)

Timings	Topics/Activities	Description of the activity	Mode of Activity	Facilitator/ R P
9.55	Recitation			
10.00-10.20	Review of the previous Day	Learning of the previous Day	Participatory	Gopal Das /participants
10.20-12.00	Attitude & Behaviours of Extension worker & Community	Checklist of Attitude & Behaviors	Presentation /Discussion /Group work /Lecture	Gopal Das
12.00-13.30	Communication & Facilitation Skills of Extension worker (Verbal & Non verbal Communication)	Concept of Communication & Facilitation skills Type of Communication	Presentation/Discussion /Group work /Lecture	Gopal Das
13.30-14.15 Lunch Break				
14.15-15.00	Conflict (issues & Solution)	Conflict Resolution Strategy	Presentation/Discussion /Group work /Lecture	Gopal Das
15.00-15.45	Introduction of PRA Tools and their important in data collection	PRA – Concept	Presentation/Discussion/ Group work /Lecture	Gopal Das
15.45-16.30	PRA- Tools practices Social map Network diagram Seasonal Calendar	PRA – Tools & Techniques	Participatory discussion Lecture and Brainstorming	Gopal Das
16.30-17.00	Feedback & Comments		Comments	Participants Facilitator Livestock Department and JICA team
5:00	Closing			

End

Attachment 3 Quiz

- Extension (Full score 100 points)
- Q1 What is the extension activity of this project? (allocation 10 points)
- Q2 What is the appropriate technology? (allocation 10 points)
- Q3 Explain flow of Extension activity? (allocation 20 points)
- Q4 Explain flow of training? (allocation 10 points)
- Q5 What is the first beneficiary? (allocation 10 points)
- Q6 What is the second beneficiary? (allocation 10 points)
- Q7 Explain Extension Structure? (allocation 10 points)
- Q8 Explain your role in the extension activity? (allocation 20 points)
-
- Technical topic (Full score 100 points)
- Q1 Which month milk yields is peak after calving? (allocation 10 points)
- Q2 (a) How you determined body condition score (BCS) of buffalo? (allocation 05 points)
- Q2 (b) Which part you observed to determine for body condition score (BCS)? (allocation 05 points)
- Q3 Which body condition score of buffalo we consider for Harmon therapy?? (allocation 10 points)
- Q4 (a) How many days before parturition concentrate should be given to animal? (allocation 05 points)
- Q4 (b) How many Kgs of concentrate should be given animal before parturition? (allocation 05 points)
- Q5 What are the advantages of green and dry fodder? (allocation 10 points)
- Q6 (a) Why hoof cutting is important? (allocation 05 points)
- Q6 (b) What is suitable timing for hood cutting? (allocation 05 points)
- Q7 Write any four principles of deworming? (allocation 10 points)
- Q8 How do you check reproductive capacity of bull? (allocation 10 points)
- Q9 Why is important to give colostrum to the calf as soon as possible after parturition? (allocation 10 points)
- Q10 How many kg of natural grass is suitable for the 280kg of buffalo per day? Dry matter of natural grass is 10%. (allocation 10 points)

**Report on
the Fourteenth Extension Team Training**

March 2019

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

The objectives of this extension team training are; to understand revised extension SOPs; and to understand difference between follow-up and monitoring

1-2 Duration of the training

In total one and half days from 24 January to 25 January 2019

1-3 Number of participants

One Social Mobilizer (S/M), four Master Trainers (M/Ts) and 10 male Extension Workers (E/Ws) and six female E/Ws in total 21 trainees were attended. Two female E/Ws were absent due to sickness. The extension team leader, aka Gender Specialist facilitated the training session as the trainer.

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detail programs is show in Attachment 1.

Table1 Outline of training program

Date	Training program
24 January (Thu)	1) Confirmation of achievement, 2) Explanation on the revised extension guideline and additional SOPs, 3) Preparation of question guide for follow-up by group work
25 January (Fri)	1) Practice of questions and answers for the farmers by the plenary discussion on model answers, 2) Preparation of activity plan for absence period of the Extension Expert

2. Contents of the training

2-1 Level of achievement of indicators

The extension expert reported the contents of discussion in the steering committee meeting which held 23 January 2019. Then, she also explained level of achievement of the Project target for output 3 as of 31 December 2018.

In surrounding villages, total number of participants who attend training session is 840 (Male 446, Female 394) and total number of participants who attend training session more than 2times is 532 (Male 257, Female 275) from the beginning of training, August 2018 to 31 December 2018. If it is added the number of participants in the pilot villages on top, total number of participants who attend training session more than 2times is turned to be 2,163 (Male 1,188, Female 975). Percentage of achievement for the target 3,000 (Male 2,000, female 1,000) is male 59.4% and female 97.5%.

2-2 Explanation on the revised extension guideline and additional SOPs

The extension expert explained contents of revised extension guideline and additional SOPs for baseline, follow-up and monitoring. The method of follow-up was not clearly set before. Frequency of follow-up depended on each district extension team. Therefore, the procedure of follow-up is clearly set by the revised extension SOP, such as frequency of village visit as one or two times per month and use of a question guide when the extension team give advice to the farmers. In addition, the extension team confused follow-up with monitoring. The extension expert explained that follow-up is for promotion of understand of the farmers toward appropriate technology while monitoring is for measurement of adoption rate of appropriate technology by the farmers.

2-3 Preparation of question guide for follow-up by group work

The extension team divided into four groups and two subjects were allocated to each group. They had discussion among group members and listed up 10 relevant follow-up questions as the question guide for each subject. Each group made a presentation for their question guide. The question guide for eight subjects were finalized by the plenary discussion and it is shown in Attachment 2. It was good exercise to use knowledge and experience of the extension team.

2-4 Practice of questions and answers for the farmers by the plenary discussion on model answers

As the first step, the extension team wrote their answers to the following four real questions from the farmers on the quiz paper. Then, the model answers were reviewed by plenary discussion. Through this discussion, the extension team could learn each other.

Q1 One female asked “my buffalo is very weak so many ecto and endo parasites, milk production is very low. What I should do”?

Q2 Famer asked “should my buffalo not conceived 2-3 years What can I do”?

Q3 Farmer asked “My calf is very weak, lick the walls dirt and cloths why”?

Q4 Farmer asked how long should I give milk to calf?

2-5 Preparation of activity plan for absence period of the Extension Expert

1) Discussion on baseline survey

The extension team pointed out that baseline survey was a hindrance in smooth extension activity in surrounding villages. As the flow of extension activity, Farmer Training will be started after social map, sensitization meeting and baseline survey. However, the extension team could not conduct Farmer Training in some surrounding villages even though other activity was smoothly conducted until sensitization meeting. According to the extension team, it seems the farmers misunderstand baseline survey as a survey for input provision. Method of baseline survey reminds the farmers of interviews for input and financial resource provision by other NGOs. Therefore, the farmers have an expectation for incentives in wrong way, and they realize they can get nothing except technical information and

knowledge at last as the extension team explains repeatedly. Then, they give up joining extension activity.

When the extension team was doing extension activity in the pilot villages, Farmer Training was started right after sensitization meeting. Therefore, the farmer gradually understood importance of knowledge and changed their mindset. However, there is time lag between sensitization meeting and Farmer Training due to existence of baseline survey in case of the surrounding villages. The farmers lose their interest toward the training and the extension team struggles to gather the farmers for the training.

As the conclusion, the baseline survey will be continued in the surrounding villages because not all villages cooperative for extension activity. Extension activity can be suspended if it is difficult to continue. In that case, an alternative village will be identified. Extension activity can be restarted for suspended villages if they want.

2) Second monitoring of farmer's activity in the pilot villages

The check list of monitoring timing was distributed among the extension team. It was agreed that the second monitoring for pilot villages would be started from February 2019. As for the first monitoring, target was set for all farmers who attended more than two times of training sessions. However, the target of second monitoring will be set by random sampling from the farmers who attended more than two times of training sessions based on the result of discussion during the final evaluation mission. 100 samples will be chosen for male and female farmers each. Sampling will be done by the extension expert.

3) Data management

Data management has been done by the assistant who employed by JICA budget in accordance with instructions of the extension expert. However, the Project period will transit as the monitoring phase and the contract of the assistant will be terminated in the end of January 2019. Therefore, extension activity related data such as number of training participants will be compiled at the district level and it will be reported to the extension team leader. Person in charge of data management for each district were assigned. It was mainly M/Ts and female E/Ws.

3. Comments about Extension Team

- The extension team became able to express several opinions based on their experience in the field.

4. Challenges revealed by the training implementation and its countermeasures

- It is big challenge whether extension activity and data management are conducted smoothly during monitoring phase. The extension expert will keep in close contact with the extension team leader to check progress.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Training Schedule for the Project Extension Team

Dated: 24 -25 January 2019

Day 1: 24/1/ 2019

Time	Contents	Facilitator
9:45	Registration of participants	
9:55	Recitation of Holy Quran	
10:00	Evaluation of achievement and performance and of Extension Team	Ms. Kawamoto, Dr. Anisa
12:00	Explanation of revised Extension guideline	Ms. Kawamoto, Dr. Anisa
12:30	Preparation of question guide for follow-up	Participants
13:00	Lunch	
13:45	Preparation of question guide for follow-up (Cont.)	Participants
15:00	Plenary discussion on question guide	Ms. Kawamoto, Participants
17:00	Closing	
Assignment	Training attendance report 1) Difference between Follow-up and monitoring 2) Difference between Question guide and questionnaire	

Day 2: 25/1/2019

Time	Contents	Facilitator
9:30	Recitation of Holy Quran	
9:35	Quiz	
10:30	Plenary discussion on model answer of the quiz	Dr. Anisa, Participants
11:30	Extension activity in future	Ms. Kawamoto, Participants
13:00	Lunch	
14:00	Closing	

End

Attachment 2 Question guide for follow-up

Feeding Management

- Q1: Do you remember what is good feeding for animal?
- Q2: What kind of feed is used to increase milk production in milking animals?
- Q3: What is the benefit of green grass?
- Q4: What is the benefit of dry grass?
- Q5: Why we should feed chopped grass to animals?
- Q6: What is the importance of concentrate ration?
- Q7: (If Possible) why 24 hours availability of water is necessary?
- Q8: How many times do you give water?
- Q9: What should you give to animal to keep body condition good and improve milk production?
- Q10: Why the use of feeding trough is necessary for feeding?
- Q11: How much quantity of concentrated ration is used for buffalo before/ after parturition?

Livestock Management

- Q1: What is the proper method to tie the animal?
- Q2: What is the importance of bathing?
- Q3: What is the importance of grazing?
- Q4: What is the benefits for hoof cutting?
- Q5: What is the benefits of farm cleaning?
- Q6: What is the suitable environment for enhancing milk production in animals?
- Q7: What are the side effects to restrict animal from grazing?

Animal Health

- Q0: How do you recognize your animal healthy or sick?
- Q1: What are Livestock contagious disease? Its type in animals.
- Q2: What are the symptoms of FMD?
- Q3: What are the symptoms of HS?
- Q4: What are the preventive measures against contagious disease?
- Q5: What are non-contagious disease in livestock animals?
- Q6: What are parasitic disease?
- Q7: How many times you drench your animal in a year?
- Q8: What you should not do before and after drenching?
- Q9: What are the reason of mineral deficiency disease in animal?

Mastitis

- Q1: What is the causes of mastitis if milking animals?

- Q2: What kind of losses farmer and animal will get when there is mastitis in animal?
- Q3: What is the importance to do surf test?
- Q4: How often do you do surf test?
- Q5: What is the proper position of fingers for milking?
- Q6: What are the sign of Mastitis?
- Q7: What should you do to avoiding your animal get mastitis?
- Q8: What are the preventive measures against mastitis?
- Q9: What is suitable condition of floor for milking animal?
- Q10: If you find mastitis effected animal what you should do? Do you separately milking?

BCS

- Q1: Why it is necessary to measure body weight of animal?
- Q2: How to estimate the body weight of animals?
- Q3: What is the importance to know about body condition score in buffalo and cattle?
- Q4: What is the BCS for that animal (Look at real animal)?
- Q5: If your animal is in BCS 2 condition the how to improve health/ body condition of that animal?
- Q6: What kind of problem may caused if your animal in BCS 4.0 and more?

Reproduction and Genetics

- Q1: What is the ideal BCS of conceiving?
- Q2: How long does it take until next parturition?
- Q3: How many years will be taken until first heat sign?
- Q4: Do you know silent heat sign?
- Q5: Do you know how long heat sign continue? What is the best period for breeding?
- Q6: Do you record event of reproduction?
- Q7: Do you know about characteristic of high milking capacity of cow/ buffalo?
- Q8: Do you know about good characteristic bull?

Calf Rearing

- Q1: Do you apply antiseptic to new born calf's ?
- Q2: After parturition at what time feed colostrum to calf ?
- Q3: What is the importance of colostrum?
- Q4: If farmer practiced " Do you clean nipples?
- Q5: Do you rear calf as artificial methods?
- Q6: Do you give water to calf?
- Q7: In hot season, How do you rear you calf?
- Q8: Do you feed hay to calf's?
- Q9: Do you know how to make hay?

Q10: can you recognize the calves body condition according to its nutritional level?

Milk Market

Q1: Do you sell milk?

Q2: What is the disadvantage of adulteration?

Q3: Do you produce bi-product and sell it?

Q4: Do you sell milk individual or group ?

Q5: What are the benefits of group milk selling?

**Report on
the Fifteenth Extension Team Training**

June 2019

**The Project on Sustainable Livestock Development for
Rural Sindh in Islamic Republic of Pakistan**

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1. Outline of the training

1-1 Purpose of the training

To give guidance to the extension team on current activities in the village, the extension expert organized the fifteenth extension team training. Main contents were 1) collection of good practice and bad practice in the village 2) review of extension activity in this period, and 3) confirmation of observation standard of livestock shed and its environment.

1-2 Duration of the training

In total two days from 27 June to 28 June 2019

1-3 Number of participants

Participants were four (4) Master Trainers (M/Ts) and nine (9) male Extension Workers (E/Ws) and eight (8) female E/Ws in total 21. The extension team leader, aka Gender Specialist and the extension expert facilitated the training session as the trainer.

1-4 Training schedule and outline of training program

Outline of training program is shown in Table1. Detailed program is show in Attachment 1.

Table1 Outline of training program

Date	Training program
27 June (Thu)	1) Introductory exercise, 2) confirmation of the progress of extension activity, 3) village profile making 4) Reflection of each step of the extension activity
28 June (Fri)	1) Reflection of each step of the extension activity(continuous) 2) Confirmation of the standards of observing animal breeding sites with photos 3)re-confirmation of the rules for field work 4) plan of extension activity

2. Contents of the training

2-1 Collection of successful and failed cases

Each district extension team discussed and compiled good case studies and bad case studies in the village to use this information for village profile making. Only representative episode from each district was shared among all members. For example, the Hyderabad team shared the following story. "A female farmer has a female buffalo, but that buffalo could not conceive for three years. After the female farmer attended technical training sessions, she improved feed for her buffalo. On top of that she became she could detect heat sign of her buffalo. Therefore, she could bring a bull for mating with her female buffalo in good time and it was successful for conception. It was October 2018." After sharing story from each district team, the extension expert gave them advice that when you collect information about success and failed story, it was important to record who was the subject of story and when it was

happened. In addition, the expert also mentioned the importance of observing farmers' behavior in certain continuous period, not just one time. If the farmers stop to do practice after one time trial, a success story cannot be a success story anymore. In contrast, it seems it is not a success story, but the farmers continuously do some activity, it could be turned as a success story.

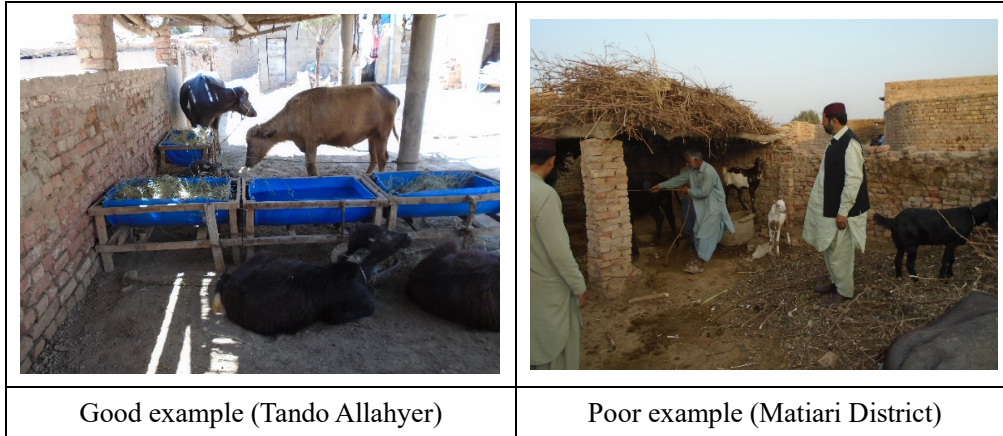
2-2 Reflection of each step of the extension activity

The extension expert checked the level of understanding and memorization of each extension members by oral test form on; what kind of preparation is required before you go to the field; what is the procedure of extension activity etc. It was revealed that some of the extension members remember things vaguely and their preparation was not enough. Therefore, all extension members exchanged their opinion and knowledge about preparation for field activity among them. In addition, the extension expert reminded all extension members the correct procedure and preparation of activity using by extension materials, *Extension Guideline* and *Teaching Guide for Extension Team*. In particular, some of the extension members forgot to submit data and report to the Project Office and they did not share information to the district officers. Therefore, all necessary reporting and information sharing process was reviewed.

2-3 Confirmation of the standards of observing animal breeding sites with photos

Each district extension team member shared their pictures to other members to compare case studies and discuss observation standard. As a plenary session, participants use same pictures and express their opinion for grading such as good, medium, and poor from both point of view the farmers' practice and environment of rearing buffaloes. Economic status and available resources for making livestock shed varies from farmers to farmer and district to district. Therefore, it was meaningful that all extension members looked at the same picture and giving a grade at same time with exchanging their opinion. It was helpful to improve accuracy of their observation skill on baseline survey and monitoring activity.

The extension expert also gave them advice on angle of photographing. All extension members were requested to bring some pictures of good and poor case studies. They brought suitable pictures as requested, however, the angles of pictures were problem for some pictures. For example, they supposed to take picture of whole image of livestock shed to check surrounding environment, however, they focused on the person who standing aside of livestock shed. Therefore, that picture became an unclear picture what they really wanted to show. To avoiding such kind of mistakes, the extension expert explained that they should decide a subject of picture such as person, animal, facility or environment before they took pictures. They should focus on the subject when they took pictures.



4. Challenges revealed by the training implementation and its countermeasures

Fuel provision from the Livestock Department to the extension team has been stopped since March 2019. Many activities were planned for this period such as the second monitoring in the pilot villages; preparation of Farmer Training including social map and sensitization meeting; and implementation of the Farmer Training in the surrounding villages. However, it is very difficult to continue extension activities in the field without fuel and our progress is behind schedule. At the end of this training session, the extension team and the project manager discussed way forward. However, the issue was not solved. Therefore, Japanese side decided to provide minimum fuel only for July and August to the extension team for their field activities.

Attachment 1 Training Program



**THE PROJECT ON SUSTAINABLE LIVESTOCK
DEVELOPMENT for RURAL SINDH
(JICA Technical Cooperation)**



Training Schedule for the Project Extension Team

Dated: 27-28 June 2019

Day 1: 27/6/ 2019

Time	Contents	Facilitator
9:15	Registration of participants	
9:25	Recitation of Holy Quran	
9:30	Introductory exercise (What is this ?)	Ms. Kawamoto
10:00	Progress of Extension activity	Ms. Kawamoto, Dr. Anisa
11:00	Tea break	
11:15	Preparation of village profile for surrounding villages	Ms. Kawamoto, Dr. Anisa
13:00	Lunch	
13:45	Review of extension activity	Ms. Kawamoto, Dr. Anisa
15:45	Closing	

Day 2: 28/6/2019

Time	Contents	Facilitator
9:30	Recitation of Holy Quran	
9:35	Presentation of Success stories	Ms. Kawamoto, Dr. Anisa
10:45	Review of extension activity (cont.)	Ms. Kawamoto, Dr. Anisa
11:30	Tea break	
11:45	Picture analysis to improve observation skill	Ms. Kawamoto, Dr. Anisa
12:40	Rules for Field work	Ms. Kawamoto, Dr. Anisa
13:00	Lunch & Prayer	
14:00	Future plan for extension activity	Ms. Kawamoto, Dr. Anisa
15:00	Meeting with the Project Manager	The Project Manager
16:30	Closing	

End

Appendix T4-1 Training Needs Assessment of Department Officers

Baseline Survey

Present State Survey on the Livestock Department Officers

(1) Training Needs Assessment

Based on the institutional weakness identified at the M/P Study, the Project Team has proposed the following 11 themes for the capacity building of the Department on institutional management as well as project management. The Project Team first assessed whether these 11 themes would actually meet the needs of the Department, through the Training Needs Assessment (TNA).

Training Themes

Strategic planning of project, Project monitoring & evaluation. Leadership, Decision making, Reporting, Conflict resolution, Communication, Social mobilization, Gender consideration, Farmers organization, Entrepreneurship development

a) Purpose of the Training Needs Assessment

The TNA was to verify the 11 themes as prospective for the scheduled project management training to the officers of the Department. It also examined additional training needs from the officers for the future training planning.

b) Assessment Period

The TNA was conducted in May 2014 for a month.

c) The Target of the Training Needs Assessment

The TNA was conducted with 51 officers from all the directorates at the Department. Attachment 7.1.1 (1) shows the profiles of the respondents. The age, basic pay scale (BPS), and experience of the respondents illustrate that most of them are in their middle to senior positions in their respective Directorates.

Table The Profile of the Needs Assessment Target

Age	Number	BPS	Number	Directorate	Number	Length of service	Number
21 - 30	1	17	36	DG Office	3	1 – 5	4
31 - 40	3	18	12	Planning	3	6 – 10	0
41 - 50	19	19	2	AH	22	11 – 15	0
51 - 60	28	20	1	AB	15	16 – 20	12
Total	51	Total	51	CVDL	6	21 – 25	11
				Poultry	2	26 – 30	20
				Total	51	31 – 35	4
						36 – 40	0
						Total	51

d) Methodology of the Training Needs Assessment

The methodology of the TNA was through questionnaire survey, asking the respondents to mark

their degree of necessity at 5 different levels on the proposed 11 themes. It also asked the needs for additional trainings at an open-ended question.

e) Result of the Training Needs Assessment

The result of the TNA is referred to Attachment 7.1.1 (2). The majority of the respondents indicated that all 11 themes were either “Very important” or “Important”, there being some differences in degree among the themes. For instance, the themes related to project management, like Strategic planning of project, and Project monitoring & evaluation, attracted higher margin on “Very important”. On the other hand, many respondents regarded the themes related to the activity with farmers, like Social mobilization, Gender consideration, Farmers organization and Entrepreneurship development as “Important” or lower.

In addition, computing attracted biggest responses as additional training needs (10 responses), followed by data handling (4).

(2) Selection of Training Institutes

a) Training Themes and Outline

The Project Team drew up the training outline based on the result of the TNA as shown in the table below.

Table Project Management Training Outline

<p>1. Strategic planning of project</p> <ul style="list-style-type: none"> - Project planning in relation to the Department’s mission - Project planning based on the evaluation of project performance - Project planning in coordination with other projects in the Department for achieving the same goal - Planning and allocation of project budgets and other resources
<p>2. Project monitoring and evaluation</p> <ul style="list-style-type: none"> - Regular/adhoc monitoring of project during implementation - Management of project budgets - Problem identification - Project evaluation and reflection of the result for the next
<p>3. Leadership</p> <ul style="list-style-type: none"> - Setting vision and mission of organization - Goal setting, and coordination of the staff’s activities heading to the goal - Involvement of staff by allocating roles and responsibilities - Development of staff capacity - Awards and penalties
<p>4. Decision making</p> <ul style="list-style-type: none"> - Rational and clear sequence heading to right direction - Flow of command - Value for decision
<p>5. Reporting</p> <ul style="list-style-type: none"> - Flow of report on progress, problems, countermeasures, achievements - Reporting structure
<p>6. Conflict resolution</p> <ul style="list-style-type: none"> - Situation diagnosis - Relational development with stakeholders - Execution of power - Negotiation and mitigation
<p>7. Communication</p> <ul style="list-style-type: none"> - Transmitting and exchanging facts and information

<ul style="list-style-type: none"> - Communication with livestock farmers - Communication tools for extension services
<p>8. Social mobilization</p> <ul style="list-style-type: none"> - Survey of rural society and social structure - Motivation to rural farmers
<p>9. Gender consideration</p> <ul style="list-style-type: none"> - Gender-sensitive survey - Involvement of women in project activities - Empowerment of women
<p>10. Farmers' organization</p> <ul style="list-style-type: none"> - Establishing and strengthening of farmers' organization - Rational of establishment - Rules of organization
<p>11. Entrepreneurship development</p> <ul style="list-style-type: none"> - Business orientation of pre-entrepreneur - Planning marketing strategy - Simple financial management

b) Selection of Training Institute

The Project Team decided to conduct the project management training through the sub-contracted training institute, which was to be selected through the following process:

Selection Process and Criteria

The selection of sub-contracted training institute was done through 2 stages. First, the Project Team carried out a primary screening based on the past training record and reputation based on the information from the Department officers. This process was followed by a tender of training proposal and cost estimate. The proposals and estimates were assessed by the Project Team with the criteria set in Evaluation of the proposals for project management training“. (Attachment 7.1.1 (3))

Result of Selection Process

The primary screening allowed the Project Team to list 4 training institutes in Pakistan, namely IRM, University of Veterinary and Animal Sciences (UVAS), Management and Professional Development Department, and National Institute of Management. After the invitation of tender to these 4 institutes, IRM and UVAS expressed interest and submitted training proposal and cost estimate before the deadline. These proposals and estimates were carefully assessed based on the above-mentioned criteria by the Project Team, and finally IRM was short-listed as the sub-contracted training institute, due to their deeper understanding of training outline and the proposed training plans.

(3) Implementation of Training

The Project Team assigned IRM to conduct 9 themes, while the Non-Formal Education Promotion Project (NFEPP) of JICA was to cover the remaining 2 themes. The table below shows the training schedule.

Training themes	Training institute	Period
Social Mobilization	IRM	October 22 nd -24 th
Strategic planning of the project	IRM	October 27 th -29 th
Communication	IRM	October 30 th -31 st
Conflict resolution	IRM	November 5 th
Monitoring & Evaluation	IRM	November 6 th -7 th
Gender	NFEPP	November 11 th
Farmers organization	NFEPP	November 12 th -14 th
Leadership	IRM	November 17 th -18 th
Decision-making	IRM	November 19 th
Reporting	IRM	November 20 th -21 st
Entrepreneurship	IRM	November 24 th -26 th

The training was conducted for 1 month as a pilot training for the next project years since the Project Team planned to hold the project management training at a year-long basis from the second year. Each training was expected to host 20 participants, who were to be proposed by respective Directorates of the Department.

Institute of Rural Management

a) Preparation of the training

As mentioned earlier, the Project Team assigned 9 themes to IRM. IRM thereby began to prepare for the training in discussion with the Project Team. The Project Team requested IRM to develop a training work plan, including a training schedule, training outlines for each 9 theme, and CVs of resource persons for each training. The final training schedule and the training outline are referred to Attachment 7.1.1 (4).

b) Development of Training Feedback Sheet

The training feedback sheet was developed by the Project Team, which was for the training participants to assess the quality of the trainings at end. (Attachment 7.1.1 (5))

c) Preparation of Certificates and Consensus on Certification Criteria

The Project Team and IRM agreed to issue certificates to the participants to the training. The formats of certificates were proposed by IRM, and approved by the Project Team. The Project Team requested to hold Pre and Post Test to the participants at the beginning and the end of each training, except Conflict Resolution and Decision-Making training which were scheduled to be held only for 1 day. These test results are to be marked by IRM and those participants who scored more than 70% of mark are to be awarded the Completion Certificate, while the others receive the Attendance Certificate.

d) Preparation and Logistics of the Training

The teaching materials and equipment were prepared by IRM according to the instructions given

by the Project Team. The Project Team arranged the training venue.

e) Results of Each Training

e)-1 Social Mobilization

Training Contents

The Social Mobilization training emphasized the importance and effectiveness of mobilizing people respecting their own norms and cultures at rural community. It covered the concept of mobilization and its process, and also introduced Social Mapping as one of the Participatory Rural Appraisal (PRA) tools to the participants. The trainers used a case study from community mobilization experience at Aga Khan Rural Support Programme (AKRSP) in Northern Pakistan.

Result of the Post Test

The result of the Post Test showed that among 19 participants 11 managed to receive pass mark. In addition, all the participants showed increase their mark from the Pre Test, average from 41% to 67%, demonstrating the fact that they had deepened their understanding of the topics.

Result of Feedback Sheet

The feedbacks from the participants were generally positive, with overall satisfaction marked at 3.5 in average. The participants indicated more use of graph/chart-making activities and more examples from actual experience to deepen understanding of the topic. The majority of them (12) want to take part in advanced courses in this topic if available.

e)-2 Strategic Planning of Project

Training Contents

The Strategic Planning of Project training covered the effective project planning methods through the development of log frame. The training began with explaining vision, mission statement, and goal of each organization to make sure that the prospective project will fit into them. The trainers then introduced SWOT analysis and other analytical tools for planning before going through the log frame development including Risk analysis and indicator setting. The training involved a number of group works which at last all groups managed to develop their own log frame.

Result of the Post Test

5 of 20 participants passed the Post Test while the average mark increased seven-fold from the Pre Test, from 3% to 21%. It is worth noted that among 10 participants who scored less than 10% mark at the Pre Test, 4 managed to get pass mark at the Post Test.

Result of Feedback Sheet

The feedbacks from the participants were positive, average 3.6 mark at overall satisfaction, although a quarter of respondents (5) mentioned their discontent on the time duration and wanted to increase trainers to help their learnings. Also, three quarter of respondents (15) mentioned that they want to participate advanced course if available.

e)-3 Communication Skills

Training Contents

The Communication Skills training explained to the participants about various meaning of non-verbal communication like gesturing, facial expression, etc. The trainer also introduced basics of conflict management and team-building exercise. The trainers utilized movies and role plays to help the participants to understand the difference in views and perceptions based on different environments and positions, and how to build effective team through communication.

Result of the Post Test

The 14 out of 21 participants passed the Post Test, with average mark increased from 12% to 66%.

Result of Feedback Sheet

The feedback from the participants showed that overall satisfaction was 3.6 mark in average. It also illustrates their preference on workshop style training to lecture style training on this topic, where they rated the trainer of the former session highly. .

e)-4 Conflict Resolution

Training Contents

The Conflict Resolution training introduced how to understand and deal with conflict among team members. It covered conflict source analysis, stakeholder analysis, and conflict management. This training involved various interactive sessions, such as discussion among the participants after watching conflict scenes from movies, role-playing and group works.

Result of the Post Test

This one-day training did not hold the Pre and the Post Test.

Result of Feedback Sheet

Overall, the respondents were generally satisfied with the training, with average overall satisfaction marks at 3.4. However, one quarter (5) of them indicated that the training was different from what they had expected. Some participants requested to link the topic to the livestock sector which is familiar to them, making it easier to understand for them.

e)-5 Project Monitoring & Evaluation

Training Contents

The Project Monitoring & Evaluation training covered monitoring and evaluation part of the log frame. As the same participants from the Strategic Planning of Project attended the training, the trainer clarified Check and Action part of PDCA cycle, explaining how to develop monitoring and evaluation structure in the project, analyze the data obtained, and set indicators. The training involved various group works to deepen understanding on the log frame of the participants.

Result of the Post Test

19 out of 21 participants of the training managed to pass the Post Test, with average mark improved from 36% to 83%, which showing remarkable improvement from the Strategic Planning of Project.

Result of Feedback Sheet

The overall satisfaction of the training for the participants scored average 3.3 mark. Some

comments include their willingness to learn about project implementation, and also field work on this topic.

e)-6 Leadership

Training Contents

The Leadership training explained the role of leadership in organization and at the execution of activities. It demonstrated the importance of vision/mission/goal-setting in organization as well as project management. Based on this, the trainer differentiated the role of leaders and manager, and illustrated how the good leadership will make an impact on organization by referring to team-building skills and motivation skills. The most participants of the training were in their senior positions in their respective directorates.

Result of the Post Test

The Post Test result shows 14 out of 17 participants pass the test, with the average mark increased from 18% at the Pre Test to 72%.

Result of Feedback Sheet

The result of feedback sheet from the participants showed the average overall satisfaction mark at 3.4. There are several comments on training manner. For example, “Some aspects of training were not properly explained by the trainers” and “through group work we can understand easily, only lecture not enough”, referring that one of the trainers spent most of time on lecture without much exercise or group work.

e)-7 Decision-making

Training Contents

This one day training focused on how to make decision at various levels. The trainers linked problem analysis to situation analysis in order to identify available solution to the issues raised. Then, the session moved to analyze the possible internal/external influences on the decision as well as the possible consequence of it, before reaching the final decision.

Result of the Post Test

This one-day training did not hold the Pre and the Post Test.

Result of Feedback Sheet

The participants responded to the feedback sheet with average 3.5 overall satisfaction mark. Their comments in general were very positive, such as “The trainer was excellent person and covered the subject area in one day and kept us engaged in the discussion and learning process”; and “It is seems to be nice and I achieved my goal”.

e)-8 Reporting

Training Contents

The Reporting training covered both how to improve quality of report writing, and how to develop effective reporting structure in the organizations. The trainers first explained about what report is, types of reports, difference between good/bad reports, data analysis and technical tips. The training then helped the participants to illustrate reporting structure at the Department, sorting out of flow and identifying respective responsible persons.

Result of the Post Test

11 participants out of 16 managed to pass the Post Test, with average mark increased from 16% to 68%.

Result of Feedback Sheet

The participants indicated the overall satisfaction as average 3.5 mark. The tone of the most comments was also positive, such as “Really we thankful to JICA for availing this opportunity. We learn new skills. We need more refresher courses”; and “If these training continues, it can develop our knowledge”.

e)-9 Entrepreneurship Development

Training Contents

The Entrepreneurship Development training covered the characteristics and requirement of entrepreneur, and actual process of business development like marketing and development of business plan. The participants engaged to develop their own business plan at group exercise, and presented it with explaining why they decided to target this service/products.

Result of the Post Test

9 participants out of 19 managed passed the Post Test, with average mark increased from 26% to 66%.

Result of Feedback Sheet

The overall satisfaction rate of the participants was 3.6 at average. Some participants also mentioned that they want to participate further trainings related to this topic, as “Field visit about entrepreneurship”, “Advantage of business” and “I would like if any training is available on the "failure of entrepreneurs”.

JICA Non-Formal Education Promotion Project

a) Preparation of the Management training

NFEPP conducted Gender Consideration training and Farmers Organization training based on their experience in the NFEPP in Punjab province. This was a part of inter-project collaboration, which was one of the aims of this project.

b) Development of a Work Plan

NFEPP Project Team developed a training work plan based on the training outline presented by the Project Team for both topics. After the draft work plans were submitted, both Project Teams discussed to finalize the work plan.

c) Implementation of the Management Training

c)-1 Gender Consideration

Training Contents

This one day training focused on what gender consideration is, and how to include it into livestock project activities. The trainers first introduced PRA tools, such as an annual cropping calendar, a

daily timetable and Social Mapping to raise awareness of the women's role in rural area. Then, the trainers conducted several role plays to deepen understanding the feeling of women in rural area in general and when receiving project activities. Seven out of 22 participants were female.

Result of the Post Test

This one-day training did not hold the Pre and the Post Test.

Result of Feedback Sheet

The training participants showed their overall satisfaction mark at average 3.3. The participants mentioned mostly positive comments, while some of them expressed their dissatisfaction on training material, training equipment, and logistic arrangement.

c)-2 Farmers Organization

Training Contents

The Farmers Organization training focused on the role of farmers' organization in the livestock sector in rural Sindh. The training identified the forms of organization in rural area, demonstrated the benefits and obstacles of forming group, and explained the process of developing organization. This training involved various exercises to allow the participants to realize by themselves that this concept is not new in Pakistan, but under-utilized. The trainers also covered necessary capacity building, both institutional and human resource, to achieve this goal.

Result of the Post Test

19 participants out of 21 managed to pass the Post Test, with average mark increase from 30% to 74%.

Result of Feedback Sheet

The feedback sheet from the training indicated that overall satisfaction mark was average 3.3. Some participants suggested that they want to take part social mobilization training in the future, while the other requested filed work with farmers.

(4) Conclusion

The training was 23 days, hosting 75 participants in total. Breakdown of the participants from each Directorate is as follow.

Directorate	Number
DG Livestock Office	3
Animal Husbandry	33
CVDL	12
Poultry	15
Animal Breeding	2
Planning and Monitoring	4
Project Counterparts	6
Total	75

In addition, the numbers of participants completed, and attended (those who failed the Post Test) at each theme are indicated in the table below. All participants for the one day trainings received Completion Certificate.

Training Themes	No. of Participants in total	No. of Participants Completed	No. of Participants Attended
Social Mobilization	19	11	8
Strategic planning of the project	20	5	15
Communication	20	14	6
Conflict resolution	20	20	0
Monitoring & Evaluation	21	19	2
Gender	22	22	0
Farmers organization	21	20	1
Leadership	17	13	4
Decision-making	17	17	0
Reporting	16	11	5
Entrepreneurship	19	9	10
Total	212	161	51

The box below illustrates major comments from the participants in post-test feedback sheet at each training.

- This was a good learning opportunity because it was the first time to participate trainings as such.
- The training time was too short.
- The training speed was too fast to understand enough.
- Participatory learning like group work and role play is an effective learning tool. Only lecture is boring.
- Please include field activity.
- I do not like the Post Test.
- Attitude of participants and the degree of participation to the training should be included in the Post Test. Also, test with action should be considered, not just written tests.
- Food was not good.
- I would like to utilize the new knowledge learnt at the training to my work.
- I would like to pass the knowledge learnt to fellow officers at my Directorate
- More case related to livestock and the Department should be included in the trainings

Attachment (1)

**RESULTS OF THE NEEDS ASSESSMENT FOR NON-TECHNICAL (PROJECT MANAGEMENT)
TRAINING TO BE IMPARTED TO THE OFFICERS/STAFF OF THE LIVESTOCK
DEPARTMENT**

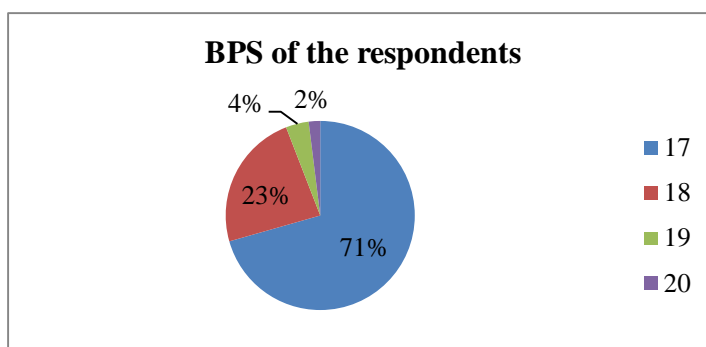
Profile of the respondents

1) Age of the respondents

Age	Number
21 - 30	1
31 - 40	3
41 - 50	19
51 - 60	28
Total	51

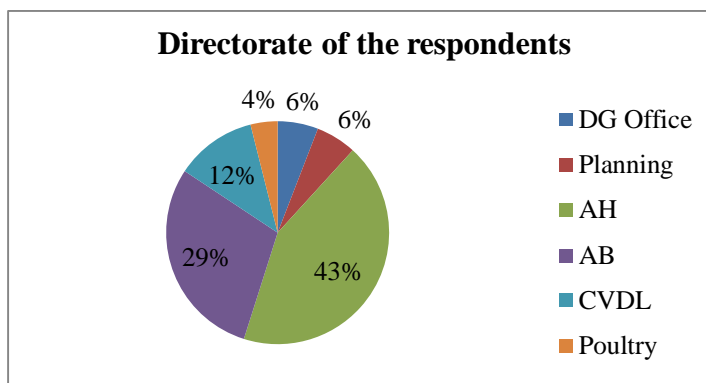
2) BPS of the respondents

BPS	Number
17	36
18	12
19	2
20	1
Total	51



3) Directorate of the respondents

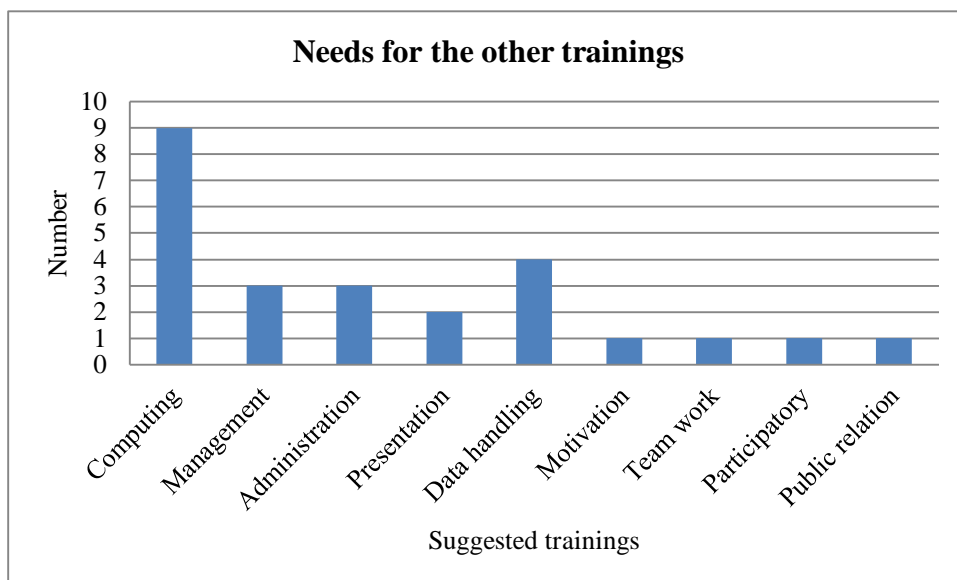
Directorate	Number
DG Office	3
Planning	3
AH	22
AB	15
CVDL	6
Poultry	2
Total	51



4) Length of service by the respondent

Length of service	Number
1 - 5	4
6 - 10	0
11 - 15	0
16 - 20	12
21 - 25	11
26 - 30	20
31 - 35	4
36 - 40	0
Total	51

5) Needs for the other trainings mentioned by the respondents



**RESULTS OF THE NEEDS ASSESSMENT FOR NON-TECHNICAL (PROJECT MANAGEMENT) TRAINING TO BE IMPARTED
TO THE OFFICERS/STAFF OF THE LIVESTOCK DEPARTMENT**

Details of the Needs

Sr. #	Name	Designation	BPS	Directorate	Age	Length of service (Y)	Remarks
01	Dr. Ali Akbar Soomro	DG	20	DG Office	56	28	The training on above subjects is also important to run the department but the knowledge of administration along with rules and regulations is very important for those officers who are going to promote to supervisory section, so the trainings like NIPA/any other institutes may be promoted for the mental up-gradation of technical & Non-technical staff.
02	Dr. M Ibrahim Shaikh	VO	17	DG Office	45	17	The training on above subjects is also important to run the department but the knowledge of administration along with rules and regulations is very important for those officers who are going to promote to supervisory section, so the trainings like NIPA/any other institutes may be promoted for the mental up-gradation of technical & Non-technical staff please.
03	Dr. Noor-un-Nisa	VO	17	DG Office	46	17	
04	Dr. Aslam Pervez	Director	19	CVDL	57	31	For Directorate of Veterinary Research & Diagnosis, CVDL Sindh, among non-technical subjects: leadership, decision making, strategic planning, communication, gender considerate and monitoring & evaluation are important areas for senior staff, some may be arranged beside technical training.
05	Dr. Dost M Soomro	Project Director	18	CVDL (Vaccine)	60	36	Decision-making, problem solving and Communication skills.
06	Dr. Atta M Chand	SRO	18	CVDL	58	31	
07	Dr. Parkash Dewani	RO	17	CVDL	56	28	Presentation skills, Analysis of base line data, Motivation & Interactive discussion

08	Dr. Talib Hussain Chandio	RO	17	CVDL	56	28	Decision making, problem solving, Communication and Social mobilization skills
09	Dr. M H Qureshi	RO	17	CVDL	42	17	Presentation skills, Approach and motivation skills and effective report writing are also important
10	Dr. Liaquat Ali Abro	VO	17	AH	51	18	
11	Dr. Siraj A Issani	Director	18	AH	56	25	Data collecting procedures, structures of data making, Management patterns of Livestock Farms, Marketing system, Farming system in Sindh
12	Dr. Barkat Ali Lakho	VO	17	AH	42	17	Farm management and skill of Manager, GIS and disease modeling (Outbreak investigation), Outbreak mapping, financial management, budget management (Specially during official duty), Refresher for proper handling and restrain, specimen collection & Artificial insemination etc.
13	Dr. Aftab A Pathan	VO	17	AH	46	20	
14	Dr. S Noman Ali	VO	17	AH	51	22	Farm management and skill of Manager, GIS and disease modeling (Outbreak investigation), Outbreak mapping, financial management, budget management (Specially during official duty), Refresher for proper handling and restrain, specimen collection & Artificial insemination etc.
15	Dr. Hirzullah Bhutto	VO	17	AH	47	22	
16	Dr. Rukhsana Vighio	VO (CP)	17	AH	51	20	
17	Dr. Zulficar A Pathan	VO (CP)	17	AH	44	18	Computer skills training programme for C/Ps
18	Dr. M Arif Khan	VO (CP)	17	AH	44	18	Computer training
19	Dr. Safdar A Fazlami	VO (CP)	17	AH	36	04	Computer training
20	Dr. Naeem S Ansari	VO (CP)	17	AH	47	22	Computer skill training
21	Dr. G M Jiskani	VO (CP)	17	AH	44	17	Basic computer skills trainings needed to C/P
22	Dr. Ali A Shahani	VO (CP)	17	AH	49	22	Basic computer skills training is needed to me
23	Dr. M Mubarak Jatoi	VO (CP)	17	AH	48	22	
24	Dr. Iqtidar A Memon	VO (CP)	17	AH	46	22	M/S Office computer training
25	Dr. Nobat Khan	VO	17	AH	48	22	Situation of environment (Flood/drought), ownership of project by community, Toll for income generation & transparency, Team work, Harmony, Participatory approach, evaluation impact of project on community

26	Dr. Saleem A Soomro	VO	17	AH	49	22	
27	Dr. Ahmed Sethar	VO	17	AH	49	22	The training on TOT in livestock sector for livestock officers is must. The training for improvement of dairy milk, livestock management should be must. Also training on Artificial Insemination is very need. Our rural Sindh is backward area in awareness especially in awareness of rural area 70% work livestock sector performed by women; project should be started for women skills in rural Sindh.
28	Dr. Zulfiqar A Mahar	VO	17	AH	36	04	
29	Dr. Khadim Hussain Soomro	ADCO	18	AH	56	31	Above trainings are necessary but I think one important training is keen required in respect of management skill and knowledge from any reputed institute like NIPA
30	Dr. Saeed A Abbasi	VO	17	AH	44	18	Training on EIA is important, management & Administration. Training on cash transfer vouchers, PR Public relation with small farmers, Training on livestock fattening/milking is meet the soaring demand of people of Pakistan
31	Dr. Kabir Ahmed	VO	17	AH	54	28	IT Trainings, Administrative courses, Office management skills, Human skills to work towards a higher level of productivity, Business management
32	Dr. Tauseef Umer Farooqi	Director	18	Poultry	58	28	Non-technical training of Nutrition Laboratory and Pathology division. Technical: Strengthening of Nutrition laboratory on international standard level, motivation of poultry farmers/house wives along with technical assistance
33	Dr. Khair M Khaskeli	PD	18	Poultry	55	30	The training on above subjects is also important to run the Department smoothly, please
34	Dr. Jamil A Shaikh	Director	19	Planning	55	28	Data analysis, Computer training
35	Dr. Nuzhat Jabeen	Statistical Officer	17	Planning	30	04	
36	Mr. Ayub Bhagat	DD	18	Planning	53	25	
37	Dr. M Hasan Ansari	DDLDP	17	AB	46	28	
38	Dr. Mushtaq A Daudpoto	DDLDP	17	AB	58	28	

39	Dr. Chando Mal	DDL	17	AB	57	28	
40	Dr. M Ibrahim Leghari	DDL	18	AB	60	36	
41	Dr. M Hasil Leghari	DDL	17	AB	60	28	
42	Dr. Kabir A Khanzada	DDL	17	AB	54	28	
43	Dr. Nasarullah Soomro	DDL	18	AB	60	36	
44	Dr. Madad A Leghari	DDL	17	AB	55	28	
45	Dr. Shamsuddin Soomro	DDL	18	AB	57	33	
46	Dr. Aejaz A Khokhar	DDL	18	AB	56	31	
47	Dr. Ali Asghar Ujjan	DDL	17	AB	56	28	
48	Dr. S Turab A Shah	DDL	17	AB	54	28	
49	Dr. Ghulam Nabi Shahani	DDL	18	AB	60	31	
50	Dr. M Shahzad Thaheem	VO	17	AB	34	04	
51	Ghulam H Solangi	VO	17	AB	43	18	

- PS:

AH = Animal Husbandry

AB = Animal Breeding

Attachment (2)

**NEEDS ASSESSMENT FOR NON-TECHNICAL (MANAGEMENT) TRAINING TO BE IMPARTED TO THE OFFICERS/STAFF
OF LIVESTOCK DEPARTMENT
UNDER THE PROJECT ON SUSTAINABLE LIVESTOCK DEVELOPMENT for RURAL SINDH**

Objective: To plan training for non-technical (management) subjects, the skills/knowledge you consider important, but you think the trained man power is not available in the Livestock Department, are assessed.

Please check to the most suitable one (from “Not very important” to “Very important”) in each of the following to be considered for training to the Department by outsourcing to a training institute.

Name: _____

Position: _____

Directorate: _____

Date: _____

Contents of Training	Please check one					
	Very important	Important	somewhat Important	Not very important	No need	Not applicable
1. Strategic planning of project - Project planning in relation to the Department’s mission - Project planning based on the evaluation of project performance - Project planning in coordination with other projects in the Department for achieving the same goal - Planning and allocation of project budgets and other resources	23	8				
2. Project monitoring and evaluation - Regular/adhoc monitoring of project during implementation - Management of project budgets - Problem identification - Project evaluation and reflection of the result for the next	17	13		1		
3. Leadership - Setting vision and mission of organization - Goal setting, and coordination of the staff’s activities heading to the goal - Involvement of staff by allocating roles and responsibilities - Development of staff capacity - Awards and penalties	21	8	1		1	
4. Decision making - Rational and clear sequence heading to right direction - Flow of command - Value for decision	16	12	2		1	
5. Reporting - Flow of report on progress, problems, countermeasures, achievements - Reporting structure	23	18	2		1	

Contents of Training	Please check one					
	Very important	Important	somewhat Important	Not very important	No need	Not applicable
6. Conflict resolution - Situation diagnosis - Relational development with stakeholders - Execution of power - Negotiation and mitigation	6	25	9		1	
7. Communication - transmitting and exchanging facts and information - Communication with livestock farmers - Communication tools for extension services	17	10	5			
8. Social mobilization - Survey of rural society and social structure - Motivation to rural farmers	9	17	7			
9. Gender consideration - Gender-sensitive survey - Involvement of women in project activities - Empowerment of women	9	14	8			
10. Farmers' organization - Establishing and strengthening of farmers' organization - Rational of establishment - Rules of organization	11	20	11	2		
11. Entrepreneurship development - Business orientation of pre-entrepreneur - Planning marketing strategy - Simple financial management	7	22	8	1	1	

Please list up other non-technical subjects of training that you think necessary to improve management skills and knowledge of yourself and your staff.

Thank you very much

Project Team, the Project on Sustainable Livestock Development for Rural Sindh

Attachment (3)

Evaluation of the proposals for project management training

score: A=excellent, B=good, C=moderate, D=poor, E=unacceptable

September 11, 2014

Evaluation point				
Cost	score	remarks	score	remarks
Estimated cost in total				
Estimated cost covers all necessary expense.				
Experience and capability				
The training institute has adequate experience in the similar training.				
Approach and methodology				
The training institute understands the purpose of the training well.				
The training institute assigns adequate human resources to conduct the trainings (lecturers and coordinators).				
Basic contents of each training will meet the objective of its topic.				
The implementation structures of the trainings are logical, feasible, and reliable.				
Overall, this training program will be a good opportunity for the participants.				
Schedule				
The schedule is reasonable to conduct the trainings.				
Other points				
The training institute has responded timely.				
Other factors (to be specified)				
Overall assessment				



Institute of Rural Management

Training Outlines

Project Management Training under the Project on Sustainable Livestock Development for
Rural Sindh JICA Technical Cooperation



1. *Training on Social Mobilization*
2. *Training on Strategic Planning of Project*
3. *Training on Communication Skills*
4. *Training on Conflict Resolution*
5. *Training on Project Monitoring & Evaluation*
6. *Training on Leadership*
7. *Training on Decision Making*
8. *Training on Reporting*
9. *Training on Entrepreneurship Development*

1. *Training on Social Mobilization*

Resource Person (Rafique Ahmed, Gopal das, Sartaj Abbasi & Israr Tunio)

Objectives:

To learn how efficiently rural society can be understood with the PRA method, and how effectively rural people are motivated and mobilized by you so that they may be interested in and participate to the activities that you are planning to implement in rural areas, and eventually they may become confident in taking actions by themselves.

Contents:

Concept of social mobilization, Steps of Social Mobilization

- Concept of Social Mobilization
- Community structure (para- Biradari) and their decision making process
- Village level mobilization process and their activities on para & village level
- Major steps of social mobilization
- How social mobilization part of community development

Programme Introduction/ first dialogue; Methodology & Their Steps

- To understand steps of programme introduction (PI) which cover following steps
- Methodology of (PI)
- Requirement of (PI)
- Objectives of (PI)
- Outcome of (PI)

Understanding on Organization

- What is Organization and its historical background
- Old organizational structure without NGOs and their decision making process
- Community group formation strategy
- Why organization is important in development with movie

Role of PRA approach in social mobilization:

- Difference between community and society
- Why there is need to mobilize people
- Role of community, society and stakeholders in development.
- What is PRA?
- Pillars of PRA

Intro to social map and understanding community structures:

- Tools and techniques in PRA
- Intro to social map
- Practical steps
- Practice social map
- Understand its usage for empowerment, mobilization, active participation, data collection, planning and monitoring

Situation Analysis of poverty, criteria of poor and Poverty Ranking:

- Classification of socio-economic classes in society
- What differentiates each class, criteria development for each class
- No. of Households in each class
- How to mobilize marginalized segments of society
- Steps from ignorance to empowerment

Power structures using Venn diagram networking using network diagram:

- Understand power structures in society
- Power within, power from and power to concept
- Power relations
- Influences on decision making
- Whose reality counts

Livelihood framework, livelihood options for poor:

- Intro to livelihood framework
- Livelihood of poor
- Falling into poverty and coming out of poverty
- Asset creation for poor

Motivational Skills

- What is Motivation?
- How to motivate peoples
- Check list for motivational skills
- Self-Motivation
- Group Motivation
- Different between Motivation and Mobilization
- Attitude & behavior for motivation

Participation

- What is participation?
- On what level participation is important?
- Benefit of participatory decision making

Conflict and problem solving approach through Team Building

- Understanding conflict
- Levels of conflict
- Team building exercise
- Stages of team building

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

2. Training on Strategic Planning of Project

Resource Person (Noor Bajeer)

Objectives:

To learn how the annual plans of the Department or the Directorate, or the project plan is prepared, taking into consideration the relevant policies, development strategies, other guiding plans, and the realities on the ground.

Contents:

Why organization needs strategic plan?

How to develop Strategic Plan (Analysis Tools)

SWOT Analysis

Portfolio Analysis

Stakeholder Analysis

8 S – Framework (Logical Framework Analysis)

Hierarchy of objectives

Result Chain i.e. Input, output, outcome and impact

Developing Strategies for desired outcome

Developing Indicators to measure changes

Risk Assessment/ Mitigation Measures

Tracking & Control/ Means of Verifications/Reporting

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review

- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

3. *Training on Communication Skills*

Resource Person (Javeed Shaikh, Imtiaz Bughiyo & Gopal das)

Objectives:

Enabling participants to learn how effectively messages or information is transferred among the people, particularly within the Department, department to department, organization to organization and with livestock farmers.

Contents:

Effective Communication

- Concept
- Elements of Communication
- Communication Process
- Communication Types (Verbal & Non Verbal Communication)

Body Language

- Concept
- Elements
- Effective Body language

Barriers of Effective Communication

- Concept
- Types of Barriers
- Handling Barriers

Active Listening & Effective Speaking Skill

- Concept
- How listening differs from hearing?
- Tips for Active Listening
- How speaking differs from talking?
- Tips for Effective Speaking

Conflict (Types, Stages and Analyses)

- Concept
- Types and stages of conflict in the workplace
- How to analyze and understand Conflict?

Conflict Management - A communication skills approach

- Concept
- How to develop effective conflict resolution strategies?
- Positive communication and problem solving skills
- Understanding the Conflict Resolution Process

Group dynamics and team buildings through communication

- Concept
- Why group dynamics matter?
- The role of Effective Communication in Group dynamics and team buildings

Community Interaction & Facilitation Skills

- Concept
- Community Interaction & Facilitation Skills - Inviting all voices and points of view and creating awareness
- Community Interaction & Facilitation Skills for community development and social movements.

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

4. *Training on Conflict Resolution*

Resource Person (Israr Hussain, Javeed Shaikh & Jami Chandio)

Objectives:

To enable participants to learn why a conflict with other people arises, how such conflict needs to be dealt, managed, and solved.

Contents:

Understanding Conflict

- Levels of conflict
- Types of conflict
- Stages of conflict
- causes of conflict

Relations development with stakeholders through Conflict Resolution/Management Techniques

- Importance of stakeholders
- Conflict Management techniques
- Building relationship/trust building exercise

Negotiation and Mediation Skills

- Concept
- Understanding the Negotiation and Mediation process
- Developing basic negotiation and facilitation skills and practicing techniques
- Dispute resolution and reaching agreement

Role of behavior in conflict management

- Types of behaviors (passive, aggressive and assertive)
- Exercise: behaviors increase conflict and behaviors decrease conflict

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

5. *Training on Project Monitoring & Evaluation*

Resource Person (Noor Bjaeer)

Objectives:

To enable participants to learn how monitoring and evaluation of the activities are conducted, and how the results of the evaluation are reflected to the plan to the next stage.

Contents:

M&E I:

- Introduction of Monitoring & Evaluation terminologies and concepts

M&E II:

- Monitoring & Evaluation techniques
- Advantages and Disadvantages of various monitoring and evaluation techniques
- Why Planning, Monitoring and Evaluation?

M&E III:

- Role of LFA throughout the project life cycle particularly in monitoring and evaluation

M&E IV:

Data analysis, means of illustrating data, Report formats and Report writing

M&E V: Key steps for Developing M&E system in a project

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils

- Pens
- Large projection screen

6. *Training on Leadership Management*

Resource Person (Wali Zahid)

Objectives:

To learn with what qualifications a leader needs to be equipped, how a leader interacts with his/her staff.

Contents:

Leadership Training:

- Definition & concepts of Leadership & Management
- Who is Leader? Qualities of a good leader
- Leadership styles
- Leadership & Organizational Change
- Effective Communication Skills
- Team building and group dynamics
- Problem solving approach and conflict resolution skills in a leader
- Motivational skills

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

7. *Training on Decision Making*

Resource Person (Wali Zahid)

Objectives:

To learn how decision needs to be made and how result of the decision needs to be conveyed to others, and how your decision will affect the behavior of the others.

Contents:

Module I: Problem Solving:

- Making a problem statement: what to solve
- Problem-solving is a team (not alone) process
- 3 top problem-solving techniques

Module II: Decision Making:

- Decision-making continuum: from authority to delegated
- Rational decision-making process
- Using gut or intuitive decision-making

Module III: Decision Making:

- Understanding decision-making from RIDO Scale
- What is your preferred decision-making style?
- Why consultative decision-making is the best bet

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media

- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

8. *Training on Reporting*

Resource Person (Aftab Akhuwand)

Objectives:

Enabling participants to learn how a report is written, and how a reporting structure in the Department needs to be established so that important actions can be taken by right persons at right time.

Contents:

Introduction of report writing

- What is report? and why report require
- What are different types of reports?
- What reports require in project cycle
- Pre-requisite for report development: Information availability
- Source and shape of information (Facts and figures)
- Analysis of available information
- Sorting/cleaning the information

Group work in data analysis

Structuring your report

- Consolidating the information
- structuring for standard report (style and language)
- Drafting the report (Merging the section/sequence of report)
- Designing of titles, sub-headings and numbering systems
- templates for reports
- How to write executive summary
- 3 Cs in Report (Skills require for good reporting)

Group work on developing summary

Does and Don't in Report Writing

- getting the right style and tone
- using plain English
- getting rid of jargon
- revising your report
- editing/spelling/grammar
- Receiving feedback and incorporating
- Editing for the final version

Group work on critical review of developed reports

Presentation of report

- graphics, illustrations and photos
- case studies/success stories/box matters
- How to write the case study
- Report consolidation in presentation

Group work on writing success story

Establishing reporting system in the department

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pens
- Large projection screen

9. *Training on Entrepreneurship Development*

Resource Person (Ikhtiyar Ahmed Khoso, Imran M. Khan & Waheeda Mahesar)

Objectives:

The participants will learn how effectively entrepreneurship is developed and strengthened for the farmers, taking the rural conditions into consideration.

Contents:

Various Types of Economic Activities

- Advantages and Disadvantages of wage earning
- Advantages and Disadvantages of self-employment
- Activity based learning-Issues to be considered before initiating an enterprise

Concepts of and entrepreneurship

- Entrepreneur
- Social Entrepreneurship
- Micro, Small enterprises
- Video

Planning for an Enterprise

- What is planning
- Importance of planning
- Factors to be considered in making a good business plan
- Factors to be considered in Business Planning
- Group Activity

Market Survey

- Role Play
- The market survey and its preparation
- Types of information to be collected during survey

Capital and its Sources

- Sources and ways to mobilize capital/credit

Costing Goods

- Variable and Fixed costs
- Activity of costing goods

Marketing Goods

- Niche market
- Strategies for increasing sales

Keeping Accounts

- Ledger
- Receipt Book
- Stock Register

- Activity

Business Plan

- Business plan development
- Business plan development-case study and group activity
- Group Presentation

Methodology:

- Brain Storming
- Lectures
- PowerPoint Presentation
- Energizer
- Assignments
- Role Players
- Daily session Review
- Theoretical Session-interactive lectures
- Small Group Activities
- Relevant Ice Breakers
- Quizzes
- Sharing Guided Experience
- Practical Work Specific to Training

Required Material:

- Multi Media
- Flip Charts
- White Board
- Color paper
- Laptop
- Markers
- Roll of masking tape
- Pencils
- Pens
- Large projection screen

Attachment (5)

Evaluation sheet for the training

Please feel free to write your opinion on the training that you have participated. The results of the evaluation will be used for the improvement of the training for the next years.

Training theme _____

Date _____

Your name _____

(1) Please circle applicable score for each.

	Disagree		Agree	
1: Training contents				
The training contents covered what you had expected.	1	2	3	4
Training materials were well-prepared.	1	2	3	4
Duration (hours) of the training was appropriate to understand the contents.	1	2	3	4
2: Trainers				
Explanation of the trainer was clear.	1	2	3	4
Facilitation of participants' activities by the trainer was good.	1	2	3	4
The trainer conducted the training enthusiastically.	1	2	3	4
The trainer welcomed question and answered well.	1	2	3	4
3: Facility/Equipment				
Training facility was appropriate for lecture and activities.	1	2	3	4
Equipment used for the training was appropriate.	1	2	3	4
4: Overall satisfaction of the training				
The training increased your knowledge/skills.	1	2	3	4
The training, including logistic arrangement, was well organized.	1	2	3	4
Overall satisfaction	1	2	3	4

(2) Any additional comments regarding your score of the above?

(3) Will you like to participate into the training with the same theme if we conduct it in the next year? (Please circle one)

1. Yes, I want to participate into the training with the same theme with the same contents again.
2. Yes, I want to participate into the training with the same theme if it is advanced course.
3. No, I will not participate into the training if it is with this theme.

(4) If you choose “3”, please choose the reason (circle one).

1. I have learnt enough regarding this theme.
2. I am interested in this theme, but the training contents need to be improved.
3. I am interested in this theme, but the trainer needs to be improved.
4. This theme does not meet my interest.
5. Others (specify)_____

(5) Please describe if there is any other theme that you are interested to learn.

Thank you for your cooperation.

LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

EXTENSION ACTIVITY

REVISED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 18.11.2016

REVIEWED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 18.11.2016

Table of Contents:

1. SOP for Development of Training Materials for Farmer Training
2. SOP for Social Map
3. SOP for Sensitization Meeting
4. SOP for Baseline Survey
5. SOP for Farmer Training
6. SOP for Follow-up after Farmer Training
7. SOP for Monitoring Farmer's Activity
8. SOP for Car Management

SOP for Extension Activity 1

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	02
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Dr. Anisa Soomro	Approval	N/A

Development of Training Materials for Farmer Training

1. Purpose

To develop effective and understandable training materials for farmers

2. Scope

This SOP will be applied on all training materials for Farmer Training

3. Implementation Structure

This SOP will be implemented by Extension Leader and Master Trainers.

4. Responsibilities

Extension Leader and Master Trainer are responsible for developing Training Materials for Farmer Training

5. Prerequisites

Textbook

6. Procedure

Step1 Training program should be prepared.

Step2 Think story line for training subject based on Textbook

Step3 Choose suitable pictures for the story line and think suitable description for each picture.

Step4 Compile pictures and its descriptions in a table as talking notes.

Step5 Take some pictures from field and put into the talking notes, if necessary.

Step6 Arrange the picture format for panaflex printing

Step7 Send picture data to printing company for panaflex printing

7. Expected Results

Panaflex for Farmer Training, List of training materials with talking notes and training program


8. References

Text book

9. Definitions

1. **Text book**- Textbook for Appropriate Technology of Dairy Farming for Extension Team
2. **Panaflex**- Banner material
3. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
4. **Master Trainer**- A person who monitor farmer training and extension related activities in the village.

SOP for Extension Activity 2

	Livestock and Fisheries Department.	SOP #	01
		Revision #	01
	Project: Project Sustainable livestock development.	Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	17-Nov-2016
SOP Author	Dr. Farzana Ayaz	Approval	N/A

Social Map

1. Purpose

To collect necessary data about physical and social structure of the target village

2. Scope

This SOP will be applied on Social Map making in the villages of five pilot districts, Hyderabad, Matiari, Tando Allahyar, Tando Muhammad Khan and Badin

3. Implementation Structure

This SOP will be implemented by Extension Leader, Social mobilizer and Extension Team.

4. Responsibilities

Extension Team facilitates Social map making, collect necessary data, and report to Extension Leader.

Extension Leader and Social mobilizer monitor the performance of Extension Team.

5. Prerequisites

Notes, stationary and registration forms for household list

6. Procedure

1. Extension Leader contacts with Extension Team to make appointment.
2. Master Trainer contacts with key person in the village. (If the key person has conflict with other villagers, Extension Team communicates with other villagers directly.)
3. The key person ask other farmers for suitable date, time and venue. Then, he/she informs to Master trainer.
4. Master trainer communicates with Extension Leader for date, time and venue.
5. Extension Team conducts Social map at the village.
6. During Social map making, Extension Team should collect data carefully.

7. After completion of Social map making, Master trainer submits a report to Extension Leader.

7. *Expected Results*

1. Social Map of the village
2. Household list


8. *References*

1. Extension Guideline

9. *Definitions*

1. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
2. **Extension Team**-Master Trainers and Extension Workers

SOP for Extension Activity 3

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	01
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Dr. Anisa Soomro	Approval	N/A

Sensitization Meeting

1. Purpose

To introduce project activity to farmers to prepare training register

2. Scope

This SOP will be applied for sensitization meeting in five pilot districts, Hyderabad, Matiari, Tando Allahyar, Tando Muhammad Khan and Badin

3. Implementation Structure

This SOP will be implemented by Extension Leader, Training specialist, Social mobilizer and Extension Team.

4. Responsibilities

Extension Team makes appointment with a village and facilitates the sensitization meeting and collects necessary data. Extension Leader develops the sensitization materials. Extension Leader and Social mobilizer monitor the sensitization meeting.

5. Prerequisites

List of sensitization material, meeting program, panaflex for sensitization meeting, stationary and registration forms

6. Procedure

Points to be consider before planning meeting

1. Facilitator must be follow the cultural norms, customs, Religious behavior of Villagers and assure their dress cord and attitude with the villagers
2. Extension Team ensures the Routine/seasonal activities of the farmers.

Conducting Meeting

1. Extension leader contacts Extension Team to make an appointment for sensitization meeting at the village.
2. Extension Team contacts the key person in the village. (If the key person has conflict with other villagers, Extension Team communicates with other villagers directly.)
3. Master trainer informs Extension Leader about training time and venue.
4. Extension Team conducts sensitization meeting at the village. For female farmers, female extension workers should conduct sensitization meeting.
5. During the meeting, Extension Team shows the panaflex to give information about project activities and motivate farmers to attend the training.
6. At the end of session, Extension Team should collect the name of farmers who have buffaloes/cows and take interest in attending a training session as a training register.

After Meeting

After completion of the sensitization meeting, Extension Team should make the report and submit to Extension Leader

7. Expected Result

1. Training register


8. References

1. Extension Guideline

9. Definitions

1. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
2. **Extension Team**-Master Trainers and Extension Workers

SOP for Extension Activity 4

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	0
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Dr. Anisa Soomro	Approval	N/A

Baseline Survey

1. Purpose

To check current practice ratio of farmers about livestock management and condition of farms before starting the Farmer Training

2. Scope

This SOP will be applied for Baseline survey

3. Implementation Structure

This SOP will be implemented by Extension Leader and Extension Team

4. Responsibilities

- Extension Team is responsible for conducting Baseline Survey and submits questionnaire and observation sheet of the farm to Extension Leader.
- Extension leader is responsible for compiling the data from Extension Team

5. Prerequisites

- Questionnaire
- Observation sheet

6. Procedures

1. Extension Team makes an appointment with farmer using mobile phone and set the day, time and venue.
2. Master trainer informs Extension Leader about the schedule.
3. Extension Team confirms the schedule before a day from farmer in case of emergency/postponed.
4. Extension Team checks vehicle/motor bike and its fuel before going to the village.
5. Extension Team should reach before 15 minutes at the village.
6. Extension Team conducts baseline survey for the farmers who registered in the training register
7. Master trainer submits all questionnaires and observation sheets to Extension Leader.

7. *Expected Results*

1. Current situation of the farmer and farms will be identified.


8. *References*

1. Appropriate technology development check list

9. *Definitions*

1. **Appropriate technology development check list**-List of 50 appropriate technologies with Rank A, B, C which developed by the Project
2. **Questionnaire** (Appropriate technology development check list questionnaire) a questionnaire for the farmers which focused Rank A appropriate technologies.
3. **Observation sheet** -Check list for observation of animal farm
4. **Training register**- A list of the farmers' name who registered to attend the farmer training during sensitization meeting.
5. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
6. **Extension Team**-Master Trainers and Extension Workers

SOP for Extension Activity 5

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	0
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Master Trainers Dr. Mubeen Soomro, Dr. Kabir Kalhoro, Dr. Farooq Pathan, Dr. Iqbal Memon	Approval	N/A

Farmer Training

1. Purpose

To disseminate appropriate technologies to small scale livestock farmers for an increase in milk production and assets for their livelihood.

2. Scope

This SOP will be applied for Farmer Training in 8 subjects, Feeding management, Livestock management, Animal health, Mastitis, Body measurement and BCS, Reproduction and genetics, Calf rearing and Marketing.

3. Implementation Structure

This SOP will be implemented by Extension Leader and Extension Team

4. Responsibilities

- Extension worker is responsible for conducting Farmer Training and submit training implementation report to Master trainer.
- Master trainer is responsible for monitoring Extension workers' activity and submit monitoring report to Extension Leader

5. Prerequisites

- Training pictorial material (panaflex)
- Reporting proforma
- Attendance sheet
- Necessary stationaries and materials for demonstration/activity during the training session such as Mastitis kit, flip charts and markers
- Note book
- Pen

6. Procedures

1. Extension Team makes an appointment with farmer using mobile phone and set the day, time and venue.
2. Master trainer informs Extension Leader about the schedule.
3. Extension Team confirms the schedule before a day from farmer in case of emergency/postponed.
4. Extension Team checks vehicle/motor bike and its fuel before going to the village.
5. Extension worker should reach before 15 minutes at the selected venue.
6. Extension worker conducts training based on the talking notes which prepared by SOP1.
7. While extension worker is conducting training, Master trainer monitors Extension worker's performance. However, if training sessions are conducted in different places in same time, Master trainer may choose which training session should be monitored.
8. After completion of training session, extension worker should prepare training implementation report and submit to Master trainer.
9. Master trainer should prepare training monitoring report and submit to Extension leader together with training implementation report from Extension worker.

7. Expected Results

1. Implementation of proper feeding.
2. Less wastage of feeding.
3. Data of fodder will be collected with the help of seasonal calendar.


8. References

1. Extension Guideline
2. Text book

9. Definitions

1. **Text book**- Textbook for Appropriate Technology of Dairy Farming for Extension Team
2. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
3. **Extension Team**-Master Trainers and Extension Workers

SOP for Extension Activity 6

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	0
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Dr. Anisa Soomro	Approval	N/A

Follow-up after Farmer Training

1. Purpose

To give technical guidance to the farmers after Farmer Training

2. Scope

This SOP will be applied for Follow-up after Farmer Training

3. Implementation Structure

This SOP will be implemented by Extension Leader and Extension Team

4. Responsibilities

- Extension Team is responsible for conducting follow-up after Farmer Training and sharing their findings to Extension Leader.
- Extension leader is responsible for giving necessary advice to Extension Team

5. Prerequisites

Question guide for follow-up

6. Procedures

1. Extension team should visit the target villages once or twice a month after completion of Farmer Training. The visiting schedule can be arranged by the Extension team flexibly without permission from Extension Leader.
2. Extension Team reports their findings to Extension Leader.

7. Expected Results

1. Farmers can remember and practice what they have learnt during Farmer Training


8. References

1. Teaching guide for Extension Team

9. Definitions

1. **Teaching guide for Extension Team-** A guide book which explained about extension activity. Question guide for follow-up is included.
2. **Extension Leader-** -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
3. **Extension Team-**Master Trainers and Extension Workers

SOP for Extension Activity 7

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP #	01
		Revision #	0
		Implementation Date	25-Nov-2016
Page #	1 of 2	Last Reviewed/Update Date	21-Jan-2019
SOP Author	Dr. Anisa Soomro	Approval	N/A

Monitoring Farmers' activity

1. Purpose

To find out practice ratio of the farmers on appropriate technology Rank A after six months from the end of a series of training

2. Scope

This SOP will be applied for Monitoring Farmers' activity

3. Implementation Structure

This SOP will be implemented by Extension Leader and Extension Team

4. Responsibilities

- Extension Team is responsible for conducting monitoring farmers' activity and submits questionnaire and observation sheet of the farm to Extension Leader.
- Extension leader is responsible for compiling the data from Extension Team

5. Prerequisites

- Questionnaire
- Observation sheet

6. Procedures.

This activity should be started after six months from the end of a series of training sessions

1. Extension Team makes an appointment with farmer using mobile phone and set the day, time and venue.
2. Master trainer informs Extension Leader about the schedule.
3. Extension Team confirms the schedule before a day from farmer in case of emergency/postponed.
4. Extension Team checks vehicle/motor bike and its fuel before going to the village.
5. Extension Team should reach before 15 minutes at the village.

6. Extension Team conducts monitoring the farmer who attended Farmer Training more than two times.
7. Master trainer submits all questionnaires and observation sheets to Extension Leader.

7. Expected Results

1. Practice ratio of the farmers will be identified.


8. References

1. Appropriate technology development check list

9. Definitions

1. **Appropriate technology development check list**-List of 50 appropriate technologies with Rank A, B, C which developed by the Project
2. **Questionnaire** (Appropriate technology development check list questionnaire) a questionnaire for the farmers which focused Rank A appropriate technologies.
3. **Observation sheet** -Check list for observation of animal farm
4. **Training register**- A list of the farmers' name who are registered to attend the farmer training during sensitization meeting.
5. **Extension Leader**- -A person who is the head of extension activity. For PSLD project, it is Gender specialist.
6. **Extension Team**-Master Trainers and Extension Workers

SOP for Extension Activity 8

	Livestock and Fisheries Department. Project: Project Sustainable livestock development.	SOP Number	01
		Revision Number	02
		Implementation Date	25-Nov-2016
Page Number	1 of 3	Last Reviewed/Update Date	21-Jan 2019
SOP Author	Master Trainers Dr. Mubeen Soomro, Hyderabad Dr. Kabir Kalhoro, Badin Dr. Farooq Pathan, Matiari Dr. Iqbal Memon, TMK	Approval	N/A

CAR MANAGEMENT

1. Purpose

To make sure the car is available in good condition for travelling and effective manner to be taken for the safety of car.

2. Scope

Car management-SOP is benefited for each master trainer and driver to carry out the project activities within the nominated districts (Hyderabad, Tando Allahyar, Tando Muhammad Khan, Matiari, Badin), smoothly, timely and without anxiety.

3. Implementation Structure

Car management will be implemented under the supervision of Project Manager, Deputy Director, Master Trainer, Female Extension worker and Driver.

4. Responsibilities

Project Manager is responsible for issuing budget for car management.

Master Trainer is responsible for checking the implementation of car management and report to the Extension Team Leader and the Project Manager

Female Extension worker is responsible for using the car to go to the villages only with the permission from the Master Trainer.

Driver is responsible for car management.

5. Prerequisites

- Driver License
- Registration book of the car
- Car manual (Ref-01)
- Logbook
- Car tool kit
- Spare tire

6. Procedure

RULES TO FOLLOW THE PROCEDURE

1. Master Trainer will only use the car with driver.
2. Car manual will be followed (Ref-01)
3. Use safe route to travel at destination.
4. Don't cross the speed of 70km/hour.
5. Park car at safe side in the villages.

6.1 REGULAR CASE PROCEDURE

1. Checking of car will be done by driver. (According to the check list)
2. Get fuel from nearby filling station selected by project manager.
3. Examine the car on the mileage of 1,000 KM, 5,000 KM and 10,000 KM at Pak Suzuki Official workshop at Zeeshan Autos at Auto Bhan Road near Railway Crossing Latifabad for oil change, tuning of fuel system and detailed checking. Vehicles shall be maintained and repaired there in consultation with the Project Manager.
4. Reach back at district office before 4:00 PM and Park the car at district office.
5. Note routinely the mileage travelled in logbook.

6.2 EMERGENCY CASE PROCEDURE

1. Take safety measure in the case of accident and reach at nearby hospital as quick as possible and inform for help to focal person/deputy director and inform to the farmers.
2. Inform to farmer and extension supervisor in the case of late due to the reason of other car problem and take immediate steps to resolve it.

6.3 CONDITIONAL CASE PROCEDURE

1. In the case of security risk of car parking at district office, master trainer discuss with project manager and deputy director for counter measures.
2. For emergency maintenance, Mater trainers need to discuss with the Project manager for deal.

7. Expected Results

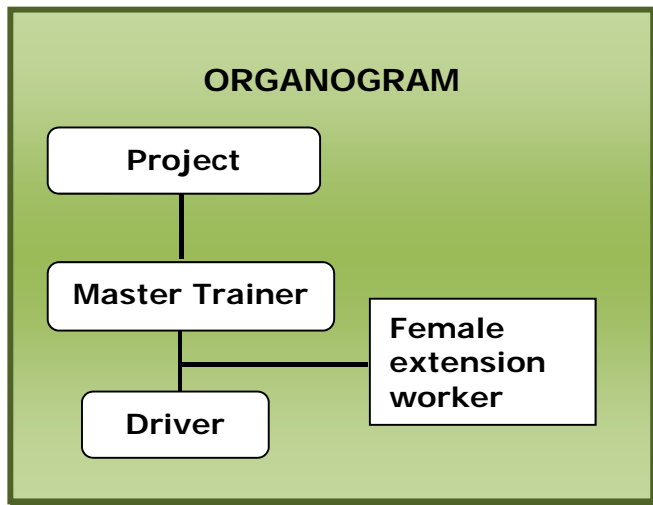
1. Car will be in good travelling condition all the time.
2. Less chances of fatigue and accidents.

8. References

- Ref-1 Car manual provided by Suzuki cars.

9. Definitions

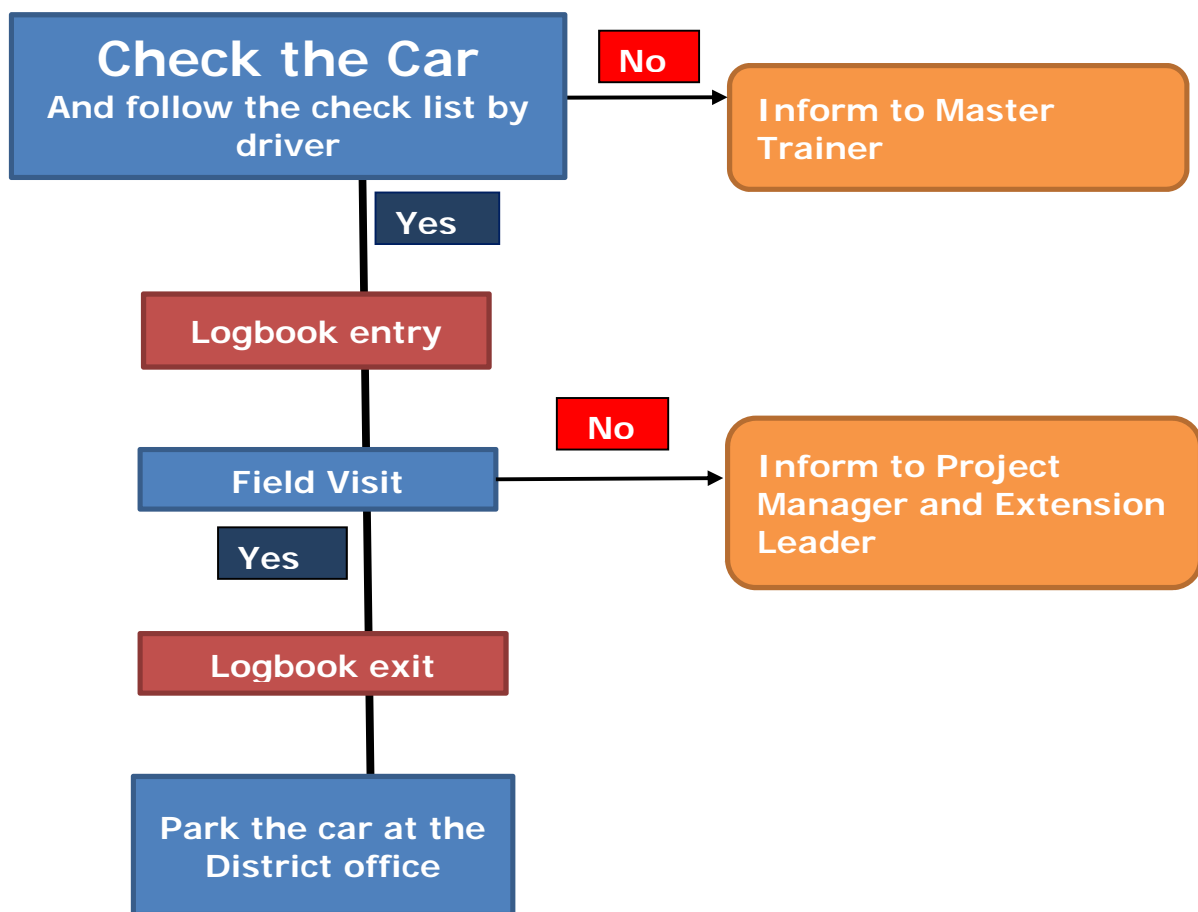
1. **Extension Leader**-A person who is the head of extension activity. For PSLD project, it is Gender specialist.
2. **Master Trainer**- A person who monitor farmer training and extension related activities in the village.



Check List

S.no	Items
1	Daily cleaning of car.
2	Check fuel
3	Engine oil
4	Water in radiator
5	Break oil

FLOW CHART



LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

TECHNICAL TRAINING
FOR VETERINARY OFFICERS
AND STOCK ASSISTANTS

REVISED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 13.10.2017

REVIEWED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 17.10.2017

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1. INTRODUCTION

1.1 PURPOSE	<ul style="list-style-type: none"> ● To ensure the effectiveness & efficiency of the training of VO's, SAs, to sustain the initiatives taken by PSLD in the project areas. ● To ensure the learning outcomes of trainings by applying the set of standards activities.
1.2 SCOPE	<p>This SOP will be applied in designing, organizing & evaluating trainings of V.Os & S.As working in project areas (Five Pilot Project Districts (PSLD)).</p> <p>The trainings will strengthen collaboration of veterinary services in between the project staff and Departmental staff to provide effective and quality services to livestock farmers for sustaining the efforts taken by PSLD (JICA) project in targeted districts.</p>
1.3 SOP in Flow Chart	<pre> graph TD A((Initiation / Responsibilities of Focal Person)) --> B((Selection of Trainees & Resource Person)) B --> C((Selection Of Training Venue)) C --> D((Development of training Schedule / Plan)) D --> E((Develop training Material & Logistic)) E --> F((Implementation of Training)) F --> G((Evaluation of Training)) G --> H((Closing of training)) H --> I((Budget & Finance)) I --> A </pre>
1.4 RESPONSIBILITIES	Director General Livestock Sindh and Project Manager, PSLD

2. PROCEDURES

STEP -1 Pre- Training	2.1 Development of training plan / schedule 2.1.1 Set the objectives of the training 2.1.2 Select the training theme / topics
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- 2.1.3 Decide contents of the training
- 2.1.4 Decide duration of the training
- 2.1.5 Decide date and time of the training
- 2.1.6 Prepare training plan
- 2.1.7 Get consensus between CBU/focal person and resource person (C/Ps)
- 2.1.8 Get approval from the relevant authorities

2.2 Budget and Financial requirement

2.2.1 Necessary financial arrangement is made by the office of the Project manager.

2.3 Nomination and responsibilities of Focal Person(member of CBU)

2.3.1 Nominate a focal person from CBU by chairperson CBU/DG

RESPONSIBILITIES OF FOCAL PERSON

- He/ She will develop the detailed Training activity Plan.
- Focal Person will coordinate with all relevant Stakeholders including CBU, resource person & Training participants.
- Coordinate participant's selection process along with departmental authorities as per set criteria.
- Assist the Chairperson of CBU to finalize the list of trainees / Participants.
- Assist the Chairperson of CBU to finalize the Resource Persons.
- Ensure facilities available at training venues.
- Ensure the availability of all training materials at a training venue, i.e.: Equipment, Stationary and field visits (One week before start of training).
- Agreement will be signed between CBU and Institute/venue on agreed TORs.
- Assist the chairperson to ensure the availability of all required Logistics i.e. Boarding & Lodging, accommodation & Food.
- Finalize the Training commencement date.
- He / She will be responsible to monitor Training activities on daily basis. He/she will prepare a monitoring report at the end of training.
- He / She will print the certificates before one week of training.
- He / She will design closing ceremony & certificate distribution.
- CBU chairperson is responsible to submit the comprehensive training report to higher authorities.

2.4 Selection of resource persons

2.4.1 Allocate concerned C/P

RESPONSIBILITIES OF RESOURCE PERSON

- He / She must develop session plan and contents as per nature of field.
- He / She will prepare and provide training materials as per sessions.
- He / She will organize field visit of concerned topics.
- He / She will arrange pre- and post-test of participants.

2.5 Selection of trainees

2.5.1 CBU will send a request letter to executive directors for nomination of training participants

2.5.2 Nomination of training participants by Additional / Deputy Directors of concerned districts and sent to CBU for further selection as per set criteria.

2.5.3 Selection finalized by Project Manager through the recommendation of CBU in consultation with resource person.

2.5.4 Issue invitation letters by Project Manager to each participant and same information also shared with concerned additional directors.

2.6 Selection of Venue

2.6.1 Training venue must have a well-developed / well equipped training hall, air conditioned with maximum sitting capacity and wash rooms

2.6.2 Necessary accommodation facilities for trainees

2.6.3 Training venue must have alternative electricity backup system (stand by generator).

2.7 Preparation of necessary training materials required

2.7.1 Check list of materials (attachment) by resource person as per the requirements

2.7.2 Ensure the availability of required necessary training materials on training venue before one week of commencement of the training by focal person

Note:

- The quantity of Training materials depends on the number of participants, duration of training & requisition of Resource Person.

2.8 Logistic arrangement

2.8.1 Focal Person must ensure the following Logistics arrangements.

	<ul style="list-style-type: none"> • Confirmation of participants 2 days before the training • Boarding & Lodging facilities • Transportation for field exposure visits • Accommodation with all required room accessories.(Separate for Male & Female) • Quality Food Arrangement including refreshment • Safe Drinking water Availability • Availability of tap water • Preparation of attendance sheet, registration sheet and so on • Certificates Printing • Arrangement of closing ceremony
<p>STEP-2. During Training</p>	<p>2.9 Implementation of training</p> <p>2.9.1 Ensure the registration of trainees at training center.</p> <p>2.9.2 Ensure availability of Training material according the training requirement before start of training.</p> <p>2.9.3 Ensure availability of participants and resource person.</p> <p>2.9.4 Inauguration of Training on set date by all stakeholders.</p> <p>2.9.5 Training activities must be followed according to the schedule.</p> <p>2.9.6 Time management is key part to run the training activities smoothly.</p> <p>2.9.7 CBU chairperson / focal person must ensure healthy environment at the training venue.</p> <p>2.9.8 Monitoring of all training activities on daily basis by FP</p> <p>2.10 Evaluation of the training at the final day</p> <p>2.10.1 Develop technical evaluation Format and conduct pre- and post-test as per standards for Participants by resource person.</p> <p>2.10.2 A well-defined questionnaire on training sessions must be developed by resource person and CBU</p> <p>2.10.3 Verbal Feedback from participants.</p> <p>2.10.4 The result report will be prepared by CBU</p> <p>2.11 Closure of training</p> <p>2.11.1 Closing ceremony remarks from higher authority will be organized by CBU</p> <p>2.11.2 Closing ceremony includes following program;</p> <ul style="list-style-type: none"> ● Feedback / views from participants & R.P regarding the whole training ● Comments of all guests ● Certificate distribution
<p>STEP - 3. Post Training</p>	<p>3.1 Final reporting</p> <p>3.1.1 Final report will be prepared by CBU and submit to all concerned authorities</p>

	<p>3.2 Follow up of training</p> <p>3.2.1 Conduct follow up of application of technical guidance of appropriate technologies in the field by all concerned C/Ps</p>
GLOSSARY	Focal person (FP), Resource person (RP), Capacity building Unit (CBU), Counter parts (CPs)
ATTACHMENTS	Check List of training materials

Attachment



CHECK LIST OF TRAINING MATERIALS

Training materials

- Laptops
- Multimedia with Screen
- Printer
- Sound System
- Digital Camera
- Extension cables
- Data cable
- Internet Device
- Theme Banner
- Trainees Bag
- Name Tags
- File Box
- Note Pad
- Attendance Sheets for participants
- Ball points & Pencils with Erasers & Sharpners
- Multi-color permanent & board markers
- Paper rims
- Color sheets
- Tissue paper boxes
- Glue sticks
- Flip charts & clip charts
- Scissors, stapler pin holder & punch machine

LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

SALVATION OF 90 DAYS FEMALE
BUFFALO CALVES AT CALF SALVATION
EXPERIMENTAL CENTER AND
DISTRIBUTION TO FARMERS

REVISED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 13.10.2017

REVIEWED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 17.10.2017

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1. Introduction

1.1. Purpose

The purpose of this Standard Operating Procedure (SOPs) is to ensure efficient and effective procedures for 90 days female buffalo calves salvation at calf salvation center and distribution to the small-scale farmer/beneficiary

1.2. Scope

Salvation of female buffalo calves of genetically potential mother from slaughtering and distribution to eligible small scale rural farmers of Sindh Province to increase their assets. Applicable for the technical staff calf salvation center

1.3. Pre-Requisite

Fully functional status of Calf Salvation Center with trained staff and availability of funds to carry out necessary activities in time.

2. Procedure

2.1 Constitution of Calf Salvation and Distribution Committee (CSDC)

Calf Salvation and Distribution Committee (CSDC) constituted by Executive Director of Animal Husbandry, the committee members include Focal Person¹ and Deputy Director (LS/AH) of District of the target area.

Main roles of the CSDC are:

- Final selection of calf supplier and beneficiary farmers
- Agreement with calf supplier and beneficiary farmers
- Resolve conflicts arise at any stage
- Develop distribution system of calves to beneficiary farmers
- Develop mechanism to collect Payment from beneficiary farmers and paid to supplier farmers

¹ Focal Person is livestock department officer BPS18 who is nominated by the Executive Director Animal Husbandry and assigned by the Secretary, Livestock and Fisheries. Focal person is assigned as detailement basis and work as a supervisor of calf salvation scheme and report to the Executive Director AH.

- Conduct monitoring of the field activities every 6 months and report to the Director General.
- Collect monthly progress report from VO of calf salvation center and VO and SA of the districts.
- Give approval of field activities developed by the focal person designed for the area and send direction to the field staff for implementation.
- Collect expenditure statement submitted by VO of calf salvation center and field staff (T.A/D.A), get approval for necessary payment.

2.2 Selection of day old Female Buffalo Calf supplier farmer:

- 2.2.1 Follow developed questionnaire for selection of day old Female Buffalo Calf supplier farmer (VO/SA of the cattle colony).
- 2.2.2 Conduct survey for selection of day old Female Buffalo Calf supplier farmers (VO/SA of the cattle colony).
- 2.2.3 Check that supplier farmers are maintaining quarantine and implementing health calendar at his farm (VO/SA of the cattle colony).
- 2.2.4 Enlisting day old Female Buffalo Calf supplier farmers (Staff of Focal Person).
- 2.2.5 Final selection and approval of day old Female Buffalo Calf supplier on scoring basis (CSDC).

2.3 Agreement between the Calf Salvation Committee and Selected Calf supplier Farmer:

- 2.3.1. Get approval from CSDC and sign by focal person and a supplier farmer following developed agreement document (on stamp paper) for purchase of day old Female Buffalo Calf. The agreement has to have 2 witness on both sides and attested by oath commissioner.
- 2.3.2. Make payment to calf supplier by focal person through cross cheque with acknowledgment.

2.4 Selection of beneficiary farmer for receiving of 90 days old Female Buffalo Calf

- 2.4.1. Follow developed questionnaire for selection of beneficiary farmer. Document attached (VO/SA).
- 2.4.2. Focal person request Deputy Director of the district to assign VO/SA for survey according to annual plan.
- 2.4.3. Conduct survey for selection of beneficiary farmers to receive 90 days Female Buffalo Calf (VO/SA).

2.4.4. Send lists to focal person for enlisting and submit to CSDC for final selection by focal person.

2.4.5. Final selection by CSDC based on score and observation of concerned VO/SA.

2.5 Mechanism for receiving day old Female Buffalo Calf from supplier Farmer:

- 2.5.1. Information from calf supplier farmer to VO in-charge calf salvation center about buffalo near to parturition.
- 2.5.2. VO/SA calf salvation center and worker will visit the farm a few hours before parturition for observation. VO/SA must wear protective cloths and rubber boots and maintain self-hygiene.
- 2.5.3. Placement of neat & clean plastic sheet on floor near delivery place and put the calf on it immediately after birth to avoid contamination (VO/SA).
- 2.5.4. Wipe and clean mucus from the nostrils and natural orifices of calf (VO/SA).
- 2.5.5. Take the calf near to mother to lick the calf (VO/SA).
- 2.5.6. Clean the body of calf with disinfected piece of towel (VO/SA).
- 2.5.7. Check umbilical cord of new born calf and apply tincture iodine (VO/SA).
- 2.5.8. Cleaning of udder and teats with disinfected piece of towel (worker of supplier farm).²
- 2.5.9. After discarding first few streaks of colostrum, feed the colostrum as early as possible (worker of supplier farm).
- 2.5.10. Purchase 3L colostrum and feed the colostrum (10% of body weight) 1.5L two times in a day to female calf with the help of finger as early as possible (VO/SA).
- 2.5.11. Maintain temperature of colostrum as per prescribed method (38-40 °C) at center (VO/SA).
- 2.5.12. Check body temperature of new born calf (VO/SA).
- 2.5.13. Inject injection OTC LA according to body weight as per specification (VO/SA).
- 2.5.14. Record all the observation in the record book (VO/SA).

² In case if calf is male, leave a calf with mother and leave the farm.

2.6 Transportation of day old female buffalo calf from supplier farm to the calf salvation center:

- 2.6.1. Arrange/Hire vehicle (Suzuki pick up) for transportation of a calf by SA/Worker.
- 2.6.2. Female buffalo calf must be shifted to calf salvation center as early as possible after parturition (2-3hrs) (SA /worker).
- 2.6.3. During transportation the calf must be protected from direct wind and extreme sun light and ensure proper bedding (SA /worker).

2.7 Receiving and care of day old female buffalo calf at calf salvation center:

- 2.7.1. Make necessary biosecurity measures before arrival of calf at calf salvation center (VO).
- 2.7.2. After arrival of female buffalo calf make availability of fresh and clean water in-front of calf (SA /worker).
- 2.7.3. After one-hour rest take rectal temperature, measure body weight, heart girth and apply ear tag. If any health issue treats accordingly and keep medical health record (VO /SA).
- 2.7.4. In case of death at the center, post mortem is carried out by VO and samples should be submitted to the CVDL (VO). Report from CVDL should be filed and submitted to CSDC.
- 2.7.5. Transfer the calf in already disinfected calf hatch and feed second feeding of colostrum 1.5L Maximum 2L (maintain temperature of colostrum at 38 to 40⁰C) (SA /worker).
- 2.7.6. Inform arrival of calf at center to focal person (VO).
- 2.7.7. Ensure maintenance of quarantine, biosecurity and disinfection at calf salvation center. Information must be displayed at the entrance. Biosecurity guideline document attached (VO).
- 2.7.8. Make sure that necessary medicine, first aid kit and Postmortem Kit must be available at calf salvation center (VO).

2.8 Care of female buffalo calves from 2nd day to 60 days at calf salvation center:

- 2.8.1. Body temperature of calf must be recorded every day in the morning
- 2.8.2. Feeding the warm milk at 38⁰C to 40⁰C to calf, milk 1.5 L in morning and 1.5 L in evening
- 2.8.3. Increase milk up to 4 L per day after one week.
- 2.8.4. Reduce milk up to 2 L from 7th week

- 2.8.5. Milk provide up to 60 days and the intake of calf starter feed reach up to 700g to 1 kg per day, then stop milk (Wean the calf)
- 2.8.6. Ensure availability of clean drinking water for 24 hours
- 2.8.7. Increase the amount of the calf starter and hay to develop the rumen of calf
- 2.8.8. Ensure daily cleaning of utensils and calf center
- 2.8.9. Move the calf hatch from one place to another place on daily basis. In case of fixed calf hatch, clean hatch every day.
- 2.8.10. Weekly measure the body weight and heart Girth of calf and record
- 2.8.11. Daily measurement of feed intake by calf
- 2.8.12. Vaccination and drenching must be providing as per health calendar. (Attached)
- 2.8.13. Anti-septic spray must be sprinkled on the floor of the calf canter and the shed on alternate day

2.9. Care of female buffalo calves from 61 to 90 days at calf salvation center

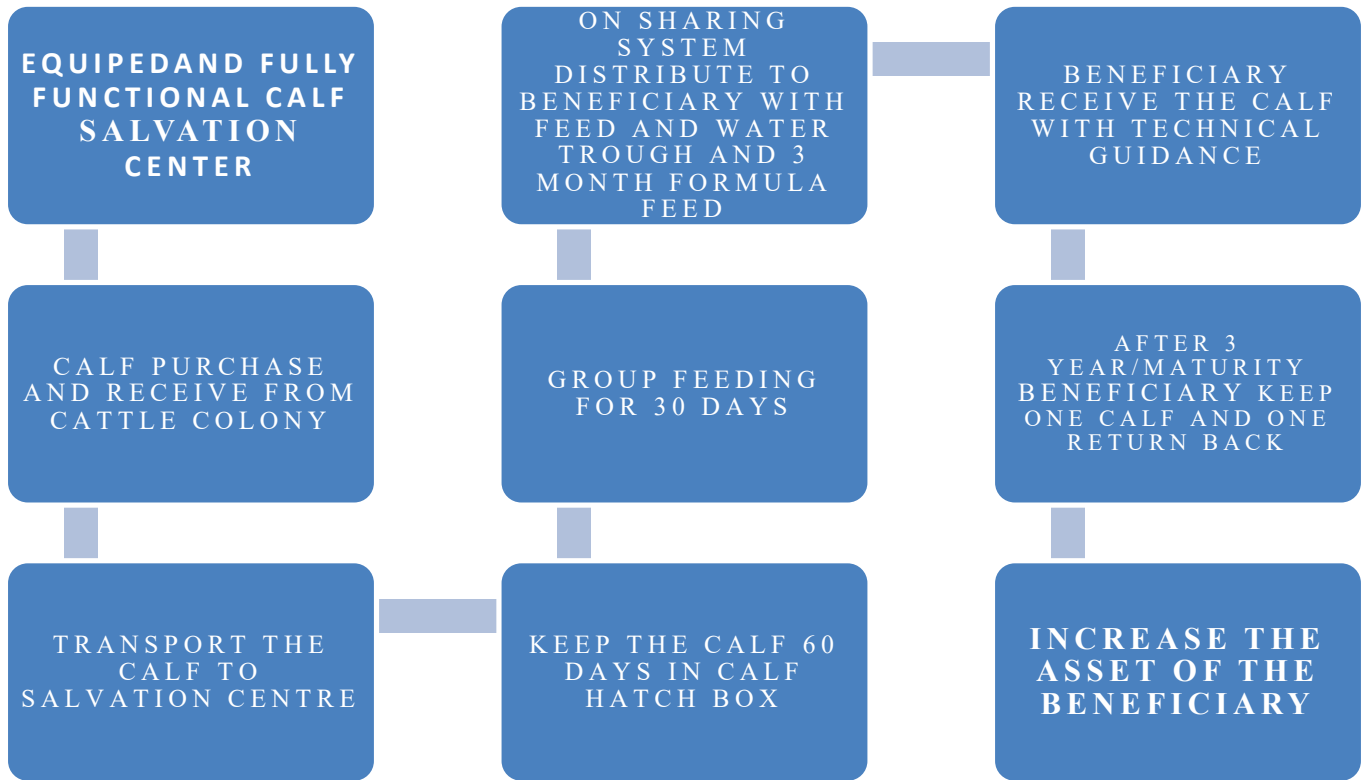
- 2.9.1. Calf must be shifted from calf hatch box to paddock for group feeding.
- 2.9.2. Ensure availability of fresh water, hay and calf starter.
- 2.9.3. If the calf cannot take the feed up to 800 gm per day, that calf cannot distribute and keep at center further few more days

2.10. Distribution of 90 days old female buffalo calf from calf salvation center to the beneficiary farmer:

- 2.10.1. Female buffalo calf must be shifted to beneficiary farmer after assurance that calf is physically fit and trained on bucket milk feeding (SA /worker).
- 2.10.2. Inform to focal person when a calf is ready to distribute (VO).
- 2.10.3. Check and confirm availability of required quantity of fresh milk (minimum 4L) at beneficiary farm (focal person).
- 2.10.4. Receive instruction from focal person about beneficiary for supply of few days female buffalo calf (VO).
- 2.10.5. Arrange transportation (Focal Person).

- 2.10.6. During transportation the calf must be protected from direct wind, extreme sun light and properly tied with soft rope to avoid injury (SA /worker).
- 2.10.7. Transport a calf in early morning in summer season (SA/worker).
- 2.10.8. Provide proper bedding during transportation (SA /worker).
- 2.10.9. After arrival at beneficiary farmer's place unload calf from vehicle and shift the calf to clean dry and shady place separate from other animals and provide clean fresh water (SA /worker/beneficiary farmer).
- 2.10.10. Provide plastic bucket (having 5L capacity), feed and water trough along with wooden stand to beneficiary (SA /worker).
- 2.10.11. Collect money from beneficiary by cash (VO/SA). Deposit amount to Government scheme account (Focal person).
- 2.10.12. Orientation must be in local language and provide hard copy of manual to farmer (VO /SA).
- 2.11. Provision of Formula Feed
 - 2.11.1. Develop distribution plan of formula feed by focal person.
 - 2.11.2. Follow distribution plan (VO).
 - 2.11.3. Provide calf starter feed for first two months; feed calf rearing feed from four months to six months age (SA /worker).
- 2.12. Health coverage for 90 days old female buffalo calf during rearing at beneficiary farmer place
 - 2.12.1. Developed Health calendar (according to the recommendation of the concerned district deputy director: Attached health calendar is an example for the guideline only) must be followed by In-charge Veterinary center/Dispensary near beneficiary farmer's village which included timely vaccination, scheduled De-Worming and emergency treatment. Attached health calendar (VO /SA in concerned district).
- 2.13. Monitoring of ongoing activity to verify that procedure is according to set standard (CSDC)
 - 2.13.1. Follow developed monitoring proforma and conduct monitoring according to schedule (Deputy Director of concerned district).
 - 2.13.2. Send report to focal person every month (after 15th day of every month).
 - 2.13.3. Keep record and input data onto database (Focal Person).
 - 2.13.4. Compile report and submit to CSDC (Focal Person).

3. Flow Chart



SOP ON CALF SALVATION AND DISTRIBUT

4. Glossary

Glossary	
CSDC	Calf Salvation and distribution Committee
CP	Counter Part
PSLD	Project on Sustainable Livestock Development for Rural Sindh
VO	Veterinary Officer
SA	Stock Assistant
FDCD	Few Days Calf Distribution,
CP	Crude Protein
TDN	Total Digestible Nutrient,
DM	Dry Matter.

Appendices:

Appendices 1: Questionnaire for selection of farmer for distribution of buffalo calves

QUESTIONNAIRE FOR SELECTION OF FARMER FOR DISTRIBUTION OF BUFFALO CALVES

1	Interview Details		Score
1.1	Name of Interviewer:		
1.2	Date of Interview:		
1.3	Name of Respondent:		
1.4	Relationship of respondent against expected signer:		
	In person	Spouse Son Daughter Other member of family Other	(In person, spouse, son, daughter 3, others 1)
2	General Information of Farmer		
2.1	Name:	Contact Number:	
2.2	Address:	Village & District:	
2.3	Age:		(40y-50y) 3, (below 40y-25y) 2, (above 55y-below 25y)-50
2.4	Sex:	<input type="checkbox"/> Male <input type="checkbox"/> Female	Female 3, Male 1
2.5	Marital status:	<input type="checkbox"/> Married <input type="checkbox"/> Single <input type="checkbox"/> Widow	(Widow 3, Married 2, Single 1
2.6	Occupation of the respondent:	<input type="checkbox"/> Tenant _____ <input type="checkbox"/> Agri: Labor <input type="checkbox"/> Land lord _____	Tenant/Land lord(2-3 acre) 3, Agri: Labour 2, Tenant/Land lord(4-5 acre) 1
2.7	Do you have experience in rearing buffalo/Cattle?	<input type="checkbox"/> Yes, How many years _____ <input type="checkbox"/> No	(if yes 3, No: -50)
2.8	Do you have experience in sharing in buffalo?	<input type="checkbox"/> Yes, How many years _____ <input type="checkbox"/> No	If yes 3, No: 1
2.9	Keeping animals inside residential area	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes 3, No: 1
2.10	Female involved in Livestock work?	<input type="checkbox"/> Yes <input type="checkbox"/> No	If Yes 3, No 1
2.11	Is a farmer cultivating fodder or not?	<input type="checkbox"/> Yes _____ Acres <input type="checkbox"/> No	If yes 3, No 1
2.12	Does a farmer has free access to Natural Grasses (Chabbhar)?	<input type="checkbox"/> Yes <input type="checkbox"/> No but can purchase <input type="checkbox"/> No not at all	If yes 5, No but can purchase 3, Not at all: -50
2.13	Availability of Space (Observation by interviewer)	<input type="checkbox"/> Enough space <input type="checkbox"/> Not enough space	Not enough Space -50

2.14	BCS Score(Observation by interviewer)	<input type="checkbox"/> Normal <input type="checkbox"/> Weak				Normal 3, Weak 1				
2.15	Rearing Environment (Observation by interviewer)	<input type="checkbox"/> appropriate <input type="checkbox"/> Inappropriate				Inappropriate -50				
2.16	Own Animals	<input type="checkbox"/> Have adult animals (a, b, c) <input type="checkbox"/> No adult animals (a, b, c)				No adult animals -50				
ANIMAL CATEGORY		Buffalo		Cattle		AU	Score	If pregnant expected date of parturition		
		Own	Sharing In	Own	Sharing In			First	Second	Third
a)	Milking & Pregnant					1				
b)	Dry & Pregnant					1				
c)	Heifer & Pregnant					0.8				
d)	Young male					0.5		Farmer must keeping suckling calf with milking buffalo, if farmer sell/died suckling calf score -50		
e)	Young female					0.5				
f)	Weaned male					0.3				
g)	Weaned female					0.3				
h)	Suckling Male					0.1				
i)	Suckling female					0.1				
Total:		Above 5 AU		-50						
2.17	Who is in charge of works?						Family 3, In person 2, Other relative 1, Labor -5			
Type of work	In Person	Spouse	Daughter	Son	parents	Labor	Other (Relatives)			
Feeding										
Cleaning										
Grazing										
Bathing										
Cutting grass										
Health care										
Milking										
Marketing										
2.18	Have you ever participated in any training by PSLD Project ?	<input type="checkbox"/> Yes <input type="checkbox"/> No				If Yes 3, No 1				
If Yes, <input type="checkbox"/> Livestock general <input type="checkbox"/> Treatment <input type="checkbox"/> Deworming <input type="checkbox"/> Others _____										
2.19	When your animal become sick seriously, who is in charge of									

treatment?					
Farmer themselves	Veterinary Doctor	Para Vet	Friends	Relatives	Other (specify)
(Name of Vet/Para Vet & Address)					
Total Score					

Appendices 2: Questionnaire for selection of farmer for distribution of buffalo calves
QUESTIONNAIRE FOR SELECTION OF FARMER FOR DISTRIBUTION OF BUFFALO CALVES

Name of Interviewer: _____

Date of Interview: _____

QUESTION

POINT

SCORE

1. Interview information

1-1. Name of Respondent: _____

1-2. Expected name on a contract/signer (who wish to receive calves): _____

1-3. Relationship of respondent against expected signer:

In person	Spouse	Son	Daughter	Other member of family	Other

**In person: 3
 spouse, son,
 daughter &
 others: 1**

2. General Information of Farmer

2-1. Name: _____

2-2. Address: _____

2-3. Age: _____

**Above 60
 years: -1**

2-4. Sex: _____

2-5. Marital status: _____

Widow: 3

2-6. Household heads or not: Yes: No:

2-7. Occupation:

1) Occupation of the respondent: _____

2) Occupation of main earner of the household: _____

2-8-a. Do you have experience in rearing buffalo/Cattle? Yes: No:

If yes: How many years? _____

NO: -50

2-8-b. Do you have experience in sharing in buffalo/Cattle? Yes: No:

If yes: How many years? _____

Yes:3

2-9. Residence:

Keeping animals inside residential area Yes: No:

Yes:3

No:1

2-10. 1) Possessing own cultivate land?

Yes: No:

**2-3 acre: 3,
 No land: 2
 above 3
 acre: 1**

2) If yes: How many acres? _____ Acres (own)

3) If no: Are they non-farmer or a tenant farmer?

Non-farmer: Tenant farmer:

**2-3 acre: 3,
 above 3
 acre: 1**

4) If tenant farmer: How many acres? _____ Acres (tenant)

2-11. Fodder availability

1) Is a farmer cultivating fodder or not? Yes: No:
 If yes,
 what: _____.

Yes: 3, No: 1

2) Does a farmer has access to fodder? Yes: No:
 If yes, Free of cost Purchased Tenant share

No: -50

3. Own animals

AU more than
6: -50

Own+ sharing:
+1

ANIMAL CATEGORY	BUFFALO				CATTLE				
	Own	AU	Sharing-in	AU	Own	AU	Sharing-in	AU	Own+ sharing Bonus point +1
j) Milking		1		1		1		1	
k) Dry		1		1		1		1	
l) Heifer		0.8		0.8		0.8		0.8	
m) Young male		0.5		0.5		0.5		0.5	
n) Young female		0.5		0.5		0.5		0.5	
o) Weaned male		0.3		0.3		0.3		0.3	
p) Weaned female		0.3		0.3		0.3		0.3	
q) Suckling Male		0.1		0.1		0.1		0.1	
r) Suckling female		0.1		0.1		0.1		0.1	
Total:									

4. Who is in charge of works?

Family: 3

1) Work responsibility:

Labor: -5

(Gray cell:
Score is given
only in case
labor is used)

Type of work	In Person	Spouse	Daughter	Son	parents	Labor	Other (Relatives)	Total
Feeding								
Cleaning								
Grazing								
Bathing								
Cutting grass								
Health care								

Milking								
Marketing								

Yes: 3

2)Female involvement:

Female is involved in the livestock work? Yes: No:

5. Have you ever participated in any training?

Yes: No:
 If yes, Livestock general Treatment Vaccination Deworming Other

6. When your animal become sick seriously, who is in charge of treatment?

Farmer themselves	Veterinary Doctor	Para Vet	Friends	Relatives	Other (specify)

TOTAL:	
--------	--

OBSERVATION BY EVALUATOR

POINT SCORE

BCS of animals: _____.

Less than 2: -
10

Availability of space: enough space not enough

Not enough: -
50

Rearing environment: appropriate inappropriate

Inappropriate: -
50

Appendices 3: Agreement for distribution of female buffalo calves

AGREEMENT FOR DISTRIBUTION OF FEMALE BUFFALO CALVES

This agreement of Deed is made between the Sindh Livestock Department (the first party), represented by the project manager and **Mr. / Mrs.**

R/O **Village**

(The second party), on this day, the - - **2017**

The first party distributes two calves on share bases to the 2nd party name mentioned above on the following terms and conditions:

1. The 1st party shall supply two buffalo calf no: & as sharing to the selected farmer at the age of minimum 12 weeks for salvation of calves. The conditions of the sharing are:
 - a. When animals reach at the age of maturity (about three years), the first party recover one animal as share and remaining one animals shall be the share of second party.
 - b. Incase death of one calf the remaining one calf shall be given to second party.
2. The 1st party shall arrange "rearing feed" for growth for the period of three months as supplementary feed. The 2nd party shall arrange all the feeds for the calves until they reach at age of maturity.
3. The 1st party shall arrange veterinary health cover for control and prevention of diseases, technical guidance regarding farm management.
4. The 2nd party shall properly maintain the animals as advised by the project staff.
5. Local project staff shall maintain proper health record.
6. The 2nd party shall allow the project staff to carry out vaccination and de-worming according to health calendar or any tests for the benefit of the animals and follow the directions of the project staff.
7. The 2nd party shall immediately inform about any illness of the animals to project staff/ In charge of Veterinary Health Institution and shall follow their directions.
8. The 2nd party shall inform about any death of the animals immediately and allow the Project staff to carry out postpartum and follow the direction of the project staff.
9. The animals shall be considered the 1st party's property as sharing with the 2nd party on 50% basis and s/he shall not be entitled to sell it, until and unless the animals reach at the age of maturity (three years) and with consent from 1st party.
10. The 2nd party shall allow and help the staff of the project for the inspection of animals on any time at any place as desired by Project representative.

11. In case the 2nd party contravenes the agreement, the animals shall be recovered and distributed to other party.

12. In case of any conflict/dispute the decision of the project manager of the project (PSLD), Sindh, Hyderabad, shall be final.

Name, address and CNIC No:

Mr.
(Second Party)

Mr. _____
Project manager PSLD (First Party)
(DR.NAEEM SIDDIQUE ANSARI)
COUNTERPART LIVESTOCK ASSET

Witness

1. _____

2. _____

Calf No	Date of birth	Sex	Age	Weight on /when Shifted
		FEMALE	DAYS	kg
		FEMALE	DAYS	kg

Appendices 4: Medical card

Medical Card

No.

Name of Farmer:		District:		Date:	
Village		Deh		Taluka	
Tag No.		Sex	Name of animal	Specie	Age

Date		Symptoms	Treatment or recommendation
Temperature:			
Respiration :			
Pulse :		Observation	Note
BCS :			
Date		Symptoms	Treatment or recommendation
Temperature:			
Respiration :			
Pulse :		Observation	Note
BCS :			
Date		Symptoms	Treatment or recommendation
Temperature:			
Respiration :			
Pulse :		Observation	Note
BCS :			

Appendices 6: Monthly monitoring sheet

MONTHLY MONITORING AND GUIDIENCE PROGRESS REPORT FOR CALF DISTRIBUTED IN TARGET VILLAGES.

Date _____ Distance _____ Kms

Name _____

Address _____

1. GENERAL INFORMATION

No: of Calf	Date of Birth	Date of Distribution	Age	General condition

2. OBSERVATION RECORD

1. Health Condition

Description	Calf No:	Calf No:	Calf No:
a). General Observation			
i. BCS			
ii. skin			
iii. Eye			
iv. Anus			
v. Feces			
vi. Urine			
vii. Temperature			
viii. Respiration			

2. Feeding

Description	Calf No:	Calf No:	Calf No:
a). General Observation			

3. Prevention

Description	Calf No:	Calf No:	Calf No:
a). FMD			
b). HSV			
c). Drench			
d). Ivermectin			
e). Other			

4. Treatment

Description	Calf No:	Calf No:	Calf No:
Diagnosis			
Treatment			
Other			

Technician Name: _____

Signature. _____

Appendices 7: Post mortem report

POST MORTEM REPORT

CENTRAL VETERINARY DIAGNOSTIC LABORATORY TANDO JAM

Pathology section

Animal species. _____ Breed _____ Age _____ Sex _____

Owner _____ Address _____

_____ Date _____

History _____

GENERAL CONDITION

Mucus Membrane _____ External Orifices _____

Rigor Mortis _____

Subcutaneous Tissue _____ Head & Neck _____ Skin _____

Brain _____ Eyes _____ Nose _____ Ear _____ LN _____

NASOPHARYNX

Nasal Signs _____ Gum & Teeth _____ Palates _____ Larynx _____

Pharynx _____

NECK

Oesophagus _____ Trachea _____ Surrounding Tissue _____

Lymph Nodes _____ Bronchi _____ Bronchial LN _____

THORACIC CAVITY

Pleura _____ Pericardium _____ Pericardial Fluid _____ Lungs _____

Abdominal Cavity

Peritoneum _____ Diaphragm _____ Stomach _____

Small Intestine _____ Large Intestine _____

Liver & Gall Bladder _____ Spleen _____ Pancreas _____

Kidneys & Adrenals _____ Uterus _____ Urethra _____

Urinary Bladder _____ Mesentry _____ - Mesentric LN _____

Male Genital Organs _____ Female Genital Organs _____

LN _____

JOINTS

Bones _____

Disease Suspected _____

Samples Taken _____

Samples submitted to _____

- Microbiology Section _____
- Parasitology Section _____
- Serology Section _____
- Pathology Section _____

Opinion _____

P M Conducted BY _____

Date & Signature _____

Appendices 8: Bio security guideline document

BIO SECURITY GUIDELINE DOCUMENT

Management practices on farm premises that minimize and prevent the spread of disease.

1.1 WHAT TO DO AT FEMALE BUFFALO CALF SUPPLIER FARM BEFORE CALF BORN:

- 1.1.1 Stock Assistant (SA) of calf salvation center and worker will Visit the farm two hours before parturition for observation. SA /worker must wear protective cloths and rubber boots and maintain self-hygiene.
- 1.1.2 Provide clean dry and separate place for parturition.
- 1.1.3 Placement of neat & clean plastic sheet on floor near parturition place and put the calf on it immediately after birth to avoid contamination.
- 1.1.4 Wipe and clean mucus from the nostrils and natural orifices of calf.
- 1.1.5 Take the calf near to mother to lick the calf.
- 1.1.6 Clean the body of calf with disinfected piece of towel.
- 1.1.7 Check umbilical cord of new born calf and apply tincture iodine.
- 1.1.8 Cleaning of udder and teats with disinfected piece of towel.
- 1.1.9 After discarding first few streaks of colostrum, milk the colostrum in bucket and feed 1.5L (10% of body weight) as soon as possible after birth and second feeding 1.5L after arrival at calf center with the help of finger.

1.2 WHAT CAN THE FEMALE BUFFALO CALF SUPPLIER FARMER DO?

- 1.2.1 Stay informed – know what threats are out there local/national (trade papers & journals, education opportunities).
- 1.2.2 Communication with staff & visitors ((professional & others).
- 1.2.3 Draw up a biosecurity plan with input from staff & vets.
- 1.2.4 Update all farm records with openness and honesty (animal ID, history, all records).
- 1.2.5 Follow through on control measures and treatments.

1.3 PREVENTION OF DISEASE SPREAD AT CALF SALVATION CENTER

- 1.3.1 Clean footwear and clothing on arrival

- 1.3.2 Clean instruments & equipment, good hygiene & clinical waste disposal during procedures.
- 1.3.3 Good hygiene as you leaves or enters in next yard.
- 1.3.4 If you have an infectious disease problem at center admit it and be a part of the solution, not part of the problem!
- 1.3.5 Let management know what's going on and what you are doing to control it

1.4 PREVENTION OF DISEASE SPREAD – WHAT CAN THE VET DOES?

- 1.4.1 Vet must possess ethical behavior, care & empathy, honesty and trust, communication skills, cleanliness and hygiene.
- 1.4.2 Often first on scene to examine a clinical case.
- 1.4.3 Technical knowledge and experience -Self CVE (relevant, up-to-date, evidence-based).
- 1.4.4 Others (practice staff, farm owners/managers, yard staff, and producer groups).
- 1.4.5 Full explanation of (tentative) diagnosis & differentials.
- 1.4.6 Outline of further testing/treatment plan.
- 1.4.7 Further consultations – 2nd opinion from a colleague and discussion.
- 1.4.8 Client confidentiality VS Vet's legal and ethical responsibilities.
- 1.4.9 Partnership with livestock owner/manager.
- 1.4.10 Biosecurity plan (tailored to holding/enterprise).
- 1.4.11 Prevent spread between animals (quarantine), by people and by things.
- 1.4.12 Play preemptive role in advising on optimum biosecurity and sharing information with professional colleagues, industry bodies and diagnostic labs.

References:

Text Book of Appropriate Technology of Dairy Farming for Livestock Technician

LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

SALVATION OF FEW DAYS FEMALE
BUFFALO CALVES AT CALF SALVATION
EXPERIMENTAL CENTER AND
DISTRIBUTION TO FARMERS

REVISED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 13.10.2017

REVIEWED BY: COUNTERPARTS AND LIVESTOCK DEPARTMENT OFFICERS

DATED: 17.10.2017

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1. Introduction

1.1.Purpose

The purpose of this Standard Operating Procedure (SOPs) is to ensure efficient procedures for few days female buffalo calves salvation activities of the department both for rearing at calf salvation center and for distribution to the small-scale farmer/beneficiary

1.2.Scope

Salvation of female buffalo calves given birth by genetically potential mothers from slaughtering and distribution to eligible small scale rural farmers of Sindh Province to increase their assets.

1.3.Pre-Requisite

Functional status of Calf Salvation Center and availability of funds to carry out necessary activities in time.

2. Procedure

2.1.Constitution of Calf Salvation and Distribution Committee (CSDC)

Calf Salvation and Distribution Committee (CSDC) constituted by Executive Director of Animal Husbandry, the committee members include Focal Person¹ and Deputy Director (LS/AH) of District of the target area.

Main roles of the CSDC are:

- Final selection of calf supplier and beneficiary farmers
- Agreement with calf supplier and beneficiary farmers
- Resolve conflicts arise at any stage
- Develop distribution system of calves to beneficiary farmers
- Develop mechanism to collect Payment from beneficiary farmers and paid to supplier farmers
- Conduct monitoring of the field activities every 6 months and report to the Director General.
- Collect monthly progress report from VO of calf salvation center and VO and SA of the districts.
- Give approval of field activities developed by the focal person designed for the area and send direction to the field staff for implementation.
- Collect expenditure statement submitted by VO of calf salvation center and field staff (T.A/D.A), get approval for necessary payment.

¹ Focal Person is livestock department officer BPS18 who is nominated by the Executive Director Animal Husbandry and assigned by the Secretary, Livestock and Fisheries. Focal person is assigned as detailement basis and work as a supervisor of calf salvation scheme and report to the Executive Director AH.

2.2. Selection of day old Female Buffalo Calf supplier farmer:

- 2.2.1 Follow developed questionnaire for selection of day old Female Buffalo Calf supplier farmer (VO/SA of the cattle colony).
- 2.2.2 Conduct survey for selection of day old Female Buffalo Calf supplier farmers (VO/SA of the cattle colony).
- 2.2.3 Check that supplier farmers are maintaining quarantine and implementing health calendar at his farm (VO/SA of the cattle colony).
- 2.2.4 Enlisting day old Female Buffalo Calf supplier farmers (Staff of Focal Person).
- 2.2.5 Final selection and approval of day old Female Buffalo Calf supplier on scoring basis (CSDC).

2.3. Agreement between the Calf Salvation Committee and Selected Calf supplier Farmer:

- 2.3.1. Get approval from CSDC and sign by focal person and a supplier farmer following developed agreement document (on stamp paper) for purchase of day old Female Buffalo Calf. The agreement has to have 2 witness on both sides and attested by oath commissioner.
- 2.3.2. Make payment to calf supplier by focal person through cross cheque with acknowledgment.

2.4. Selection of beneficiary farmer for receiving of day old Female Buffalo Calf

- 2.4.1. Follow developed questionnaire for selection of beneficiary farmer. Document attached (VO/SA in concerned districts).
- 2.4.2. Focal person request Deputy Director of the district to assign VO/SA for survey according to annual plan.
- 2.4.3. Conduct survey for selection of beneficiary farmers to receive few days Female Buffalo Calf and enlisting of beneficiaries (VO/SA in concerned district).
- 2.4.4. Send lists to focal person for enlisting and submit to CSDC for final selection by focal person.
- 2.4.5. Final selection by CSDC based on score and observation of concerned VO/SA.

2.5. Mechanism for receiving day old Female Buffalo Calf from supplier Farmer:

- 2.5.1. Information from calf supplier farmer to VO in-charge calf salvation center about buffalo near to parturition.
- 2.5.2. VO/SA calf salvation center and worker will visit the farm a few hours before parturition for observation. VO/SA must wear protective cloths and rubber boots and maintain self-hygiene.
- 2.5.3. Placement of neat & clean plastic sheet on floor near delivery place and put the calf on it immediately after birth to avoid contamination (VO/SA).
- 2.5.4. Wipe and clean mucus from the nostrils and natural orifices of calf (VO/SA).

- 2.5.5. Take the calf near to mother to lick the calf (VO/SA).
 - 2.5.6. Clean the body of calf with disinfected piece of towel (VO/SA).
 - 2.5.7. Check umbilical cord of new born calf and apply tincture iodine (VO/SA).
 - 2.5.8. Cleaning of udder and teats with disinfected piece of towel (worker of supplier farm).²
 - 2.5.9. After discarding first few streaks of colostrum, feed the colostrum as early as possible (worker of supplier farm).
 - 2.5.10. Purchase 3L colostrum and feed the colostrum (10% of body weight) 1.5L two times in a day to female calf with the help of finger as early as possible (VO/SA).
 - 2.5.11. Maintain temperature of colostrum as per prescribed method (38-40 °C) at center (VO/SA).
 - 2.5.12. Check body temperature of new born calf (VO/SA).
 - 2.5.13. Inject injection OTC LA according to body weight as per specification (VO/SA).
 - 2.5.14. Record all the observation in the record book (VO/SA).
- 2.6. Transportation of day old female buffalo calf from supplier farm to the calf salvation center:
- 2.6.1. Arrange/Hire vehicle (Suzuki pick up) for transportation of a calf by SA/Worker.
 - 2.6.2. Female buffalo calf must be shifted to calf salvation center as early as possible after parturition (2-3hrs) (SA /worker).
 - 2.6.3. During transportation the calf must be protected from direct wind and extreme sun light and ensure proper bedding (SA /worker).
- 2.7. Receiving and care of day old female buffalo calf at calf salvation center:
- 2.7.1. Make necessary biosecurity measures before arrival of calf at calf salvation center (VO).
 - 2.7.2. After arrival of female buffalo calf make availability of fresh and clean water in-front of calf (SA /worker).
 - 2.7.3. After one-hour rest take rectal temperature, measure body weight, heart girth and apply ear tag. If any health issue treats accordingly and keep medical health record (VO /SA).
 - 2.7.4. In case of death at the center, post mortem is carried out by VO and samples should be submitted to the CVDL (VO). Report from CVDL should be filed and submitted to CSDC.

² In case if calf is male, leave a calf with mother and leave the farm.

- 2.7.5. Transfer the calf in already disinfected calf hatch and feed second feeding of colostrum 1.5L Maximum 2L (maintain temperature of colostrum at 38 to 40°C) (SA /worker).
 - 2.7.6. Inform arrival of calf at center to focal person (VO).
 - 2.7.7. Ensure maintenance of quarantine, biosecurity and disinfection at calf salvation center. Information must be displayed at the entrance. Biosecurity guideline document attached (VO).
 - 2.7.8. Make sure that necessary medicine, first aid kit and Postmortem Kit must be available at calf salvation center (VO).
- 2.8. Distribution of few days old female buffalo calf from calf salvation center to the beneficiary farmer:
- 2.8.1. Female buffalo calf must be shifted to beneficiary farmer after assurance that calf is physically fit and trained on bucket milk feeding (SA /worker).
 - 2.8.2. Inform to focal person when a calf is ready to distribute (VO).
 - 2.8.3. Check and confirm availability of required quantity of fresh milk (minimum 4L) at beneficiary farm (focal person).
 - 2.8.4. Receive instruction from focal person about beneficiary for supply of few days female buffalo calf (VO).
 - 2.8.5. Arrange transportation (Focal Person).
 - 2.8.6. During transportation the calf must be protected from direct wind, extreme sun light and properly tied with soft rope to avoid injury (SA /worker).
 - 2.8.7. Transport a calf in early morning in summer season (SA/worker).
 - 2.8.8. Provide proper bedding during transportation (SA /worker).
 - 2.8.9. After arrival at beneficiary farmer's place unload calf from vehicle and shift the calf to clean dry and shady place separate from other animals and provide clean fresh water (SA /worker/beneficiary farmer).
 - 2.8.10. Provide plastic bucket (having 5L capacity), feed and water trough along with wooden stand to beneficiary (SA /worker).
 - 2.8.11. Collect money from beneficiary by cash (VO/SA). Deposit amount to Government scheme account (Focal person).
 - 2.8.12. Orientation must be in local language and provide hard copy of manual to farmer (VO /SA).
 - 2.8.13. Provide guide line to beneficiary regarding bucket milk feeding, Calf must be weaned at the age of 60 days (SA /worker).
- 2.9. Provision of Formula Feed
- 2.9.1. Develop distribution plan of formula feed by focal person.
 - 2.9.2. Follow distribution plan (VO).

- 2.9.3. Provide calf starter feed for first two months; feed calf rearing feed from four months to six months age (SA /worker).
- 2.10. Health coverage for few days old female buffalo calf at beneficiary farmer place
 - 2.10.1. Developed Health calendar (according to the recommendation of the concerned district deputy director: Attached health calendar is an example for the guideline only) must be followed by In-charge Veterinary center/Dispensary near beneficiary farmer's village which included timely vaccination, scheduled De-Worming and emergency treatment. Attached health calendar (VO /SA in concerned district).
- 2.11. Monitoring of ongoing activity to verify that procedure is according to set standard (CSDC)
 - 2.11.1. Follow developed monitoring proforma and conduct monitoring according to schedule (Deputy Director of concerned district).
 - 2.11.2. Send report to focal person every month (after 15th day of every month).
 - 2.11.3. Keep record and input data onto database (Focal Person).
 - 2.11.4. Compile report and submit to CSDC (Focal Person).

4. Glossary:

Glossary	
CSDC	Calf Salvation and distribution Committee
CP	Counter Part
PSLD	Project on Sustainable Livestock Development for Rural Sindh
VO	Veterinary Officer
SA	Stock Assistant
FDCD	Few Days Calf Distribution,
CP	Crude Protein
TDN	Total Digestible Nutrient,
DM	Dry Matter.

5. Appendices:

Appendices 1: Questionnaire for selection of day old female buffalo calf supplier farmer

QUESTIONNAIRE FOR SELECTION OF SUPPLIER OF BUFFALO CALF AT CATTLE COLONY

Name of Interviewer: _____

Date of Interview: _____

QUESTION

1. Interview information

1-1. Name of Respondent: _____

1-3. Relationship of respondent against expected signer:

In person	Son	Labor	Other member of family	Other

2. General Information of Farmer

2-1. Name: _____

2-2. Address: _____

2-3. Age: _____

2-4. Sex: _____

2-5. Marital status: _____

3. Own animals

ANIMAL CATEGORY	BUFFALO				CATTLE			
	Own	AU	Sharin g-Out	AU	Own	AU	Sharing- Out	AU
a) Milking		1		1		1		1
b) Dry		1		1		1		1
c) Heifer		0.8		0.8		0.8		0.8
d) Young male		0.5		0.5		0.5		0.5
e) Young female		0.5		0.5		0.5		0.5
f) Weaned male		0.3		0.3		0.3		0.3
g) Weaned female		0.3		0.3		0.3		0.3
h) Suckling Male		0.1		0.1		0.1		0.1
i) Suckling female		0.1		0.1		0.1		0.1
Total:								

4. Who is in charge of monitoring works?

4.1 Work responsibility:

Type of work	In Person	Son	parents	Head Worker	Other (Relatives)
Feeding					

Parturition					
Health care					
Marketing					

4.2 How many workers involve in the farm? _____

4.2 How many workers involve in the farm? _____

4.3 How many worker in-charges for parturition? _____

5. Health record:

5.1 Have animal died during last year? Yes: No:

If yes, How many: _____

In which disease: _____

Sypmtum: _____

5.2 Last year how many buffalo aborted? Yes: No:

If aborted: conducted scrotning through Laboratory _____

If yes, what is the finding? _____

6. What is average milk production? _____

7. Have you any bull for service? Yes: No:

If yes, How many _____

7.1 Bull purchased from market or rear at farm. _____

If purchased from market What is the criteria. _____

8. Purchasing of formula feed Yes: No:

8.1 If Yes, Name of Company _____

8.2 You make your own feed

8.3 If yes, List the ingredient _____

9. Have you ever participated in any training?
 Yes: No:
 If yes, Livestock general Treatment Vaccination Deworming Other

10. When your animal become sick seriously, who is in charge of treatment?

Farmer themselves	Government Veterinary Officer	Government Para Vet	Private Vet	Private Para Vet	Other (specify)

OBSERVATION BY EVALUATOR

11. BCS of animals: _____.

12. Availability of space: enough space not enough

13. Rearing environment: appropriate inappropriate

14. Separate Shed for parturition Yes No

Appendices 2: Agreement format between calf salvation committee and selected day old female buffalo calf supplier farmer

AGREEMENT FOR SALVATION OF BUFFALO CALVES

This agreement of Deed is made between the representative of Livestock Department (the first party), and **Mr. / Mrs.** _____
(The second party) R/O _____ **Cattle colony** _____

on this day, the - - 20____.

The first party purchase newly born female calf on purchase bases at the rate of Rs on the following terms and conditions/criteria of calf:

I- CRITERIA:

1. The calf is born normally and healthy.
2. The newly born calf live weight must be above 28 Kg.
3. The calf accepts colostrum feeding through bucket.
4. There is no contagious disease prevailing in the farm.
5. The calf mother is free from brucella.

II- TERM AND CONDITION:

1. The farm attendant shall inform two hour before the parturition.
2. The farm shall supply calf along with colostrum and fresh milk as per the second party's requirement.
3. The Department shall pay the cost of calves on monthly bases through cross cheque.
4. The farm will not supply female calf to other organization/person without prior permission from the second party.
5. The second party reserves the right to reject any calf with advance notice.
6. The second party reserves the right to stop purchasing with advance notice.
7. In case of any conflict/dispute with staff of Livestock department, the decision of the Executive Director Animal Husbandry, Sindh, Hyderabad, shall be final.

Name, address and CNIC No:

Mr. _____
Supply calf farmer (Second Party)

Dr. _____
Focal Person (First Party) Stamp

Witness :

1. _____

2. _____

Appendices 3: Questionnaire for selection of small scale beneficiary farmer

**QUESTIONNAIRE FOR SELECTION OF SMALL SCALE FARMER FOR DISTRIBUTION OF FEW DAYS
BUFFALO CALVES**

1	Interview Details					Score
1.1	Name of Interviewer:					
1.2	Date of Interview:					
1.3	Name of Respondent:					
1.4	Relationship of respondent against expected signer:					
	In person	Spouse	Son	Daughter	Other member of family	Other
						(In person, spouse, son, daughter 3, others 1)
2	General Information of Farmer					
2.1	Name:					
2.2	Address:			Village	District:	
2.3	Age:					(40y-50y) 3, (below 40y-25y) 2, (above 55y-below 25y)-50
2.4	Sex:					Female 3, Male 1
2.5	Marital status:					(Widow 3, Married 2, Single 1
2.6	Occupation of the respondent:					Tenant/Land lord(2-3 acre) 3, Agri: Labour 2, Tenant/Land lord(4-5 acre) 1
2.7	Do you have experience in rearing buffalo/Cattle?					(if yes 3, No: 1)
2.8	Do you have experience in sharing in buffalo?					If yes 3, No: 1
2.9	Keeping animals inside residential area					If yes 3, No: 1
2.10	Female involved in Livestock work?					If Yes 3, No 1
2.11	Is a farmer cultivating fodder or not?					If yes 3, No 1
2.12	Does a farmer has access to Natural Grasses (Chabbhar)?					If yes 5
2.13	Availability of Space (Observation by interviewer)					Not enough Space -50
2.14	BCS Score(Observation by interviewer)					Normal 3, Weak 1
2.15	Rearing Environment (Observation by interviewer)					Inappropriate -50

2.16	Own Animals	<input type="checkbox"/> Own+ Sharing , <input type="checkbox"/> Sharing , <input type="checkbox"/> Own			Own+ Sharing 5, Sharing 3, Own 2						
ANIMAL CATEGORY		Buffalo		Cattle		AU	Score	If pregnant expected date of parturition			
		Own	Sharing In	Own	Sharing In			First	Second	Third	
a)	Milking & Pregnant					1					
b)	Dry & Pregnant					1					
c)	Heifer & Pregnant					0.8					
d)	Young male					0.5		Farmer must keeping suckling calf with milking buffalo, if farmer sell/died suckling calf score -50			
e)	Young female					0.5					
f)	Weaned male					0.3					
g)	Weaned female					0.3					
h)	Suckling Male					0.1					
i)	Suckling female					0.1					
Total:		Above 5 AU		-50							
2.17	Who is in charge of works?						Family 3, In person 2, Other relative 1, Labor -5				
Type of work	In Person	Spouse	Daughter	Son	parents	Labor	Other (Relatives)				
Feeding											
Cleaning											
Grazing											
Bathing											
Cutting grass											
Health care											
Milking											
Marketing											
2.18	Have you ever participated in any training by PSLD Project ?	<input type="checkbox"/> Yes <input type="checkbox"/> No				If Yes 3, No 1					
If Yes, <input type="checkbox"/> Livestock general <input type="checkbox"/> Treatment <input type="checkbox"/> Deworming <input type="checkbox"/> Others _____											
2.19	When your animal become sick seriously, who is in charge of treatment?										
Farmer themselves	Veterinary Doctor	Para Vet	Friends	Relatives	Other (specify)						

(Name of Vet/Para Vet & Address & contact number)

Appendices 4: Agreement for female buffalo calves between CSDC and farmer

**AGREEMENT FOR FEMALE BUFFALO CALVES BETWEEN CALF SALVATION COMMITTEE AND
SELECTED SMALL SCALE BENEFICIARY FARMER.**

This agreement of Deed is made between the Sindh Livestock Department (the first party), represented by the project manager and **Mr. / Mrs.**

R/O **Village**

(The second party), on this day, the **day-month-year.**

The first party distributes Female calf on cost bases to the 2nd party name mentioned above on the following terms and conditions:

6. The 1st party shall supply one female buffalo calf no: & as sale on farm value to the selected farmer at the age of minimum one weeks for salvation of calves. The conditions of the sale are:
 - a. When female buffalo calf reached at the village, the second party receive and pay Farm received cost of the female buffalo calf in cash to second party.
 - b. Incase accidental death of calf the second party shall not pay the amount.
7. The 1st party shall arrange "calf starter" for growth only for the period of three months as supplementary feed free of cost.
8. The 1st party shall arrange veterinary health cover for control and prevention of diseases, technical guidance regarding farm management.
9. The 2nd party shall properly maintain the animals as advised by the project staff.
10. Local project staff shall maintain proper health record.
11. The 2nd party shall allow the project staff to carry out vaccination and de-worming according to health calendar or any tests for the benefit of the animals and follow the directions of the project staff.
12. The 2nd party shall immediately inform about any illness of the animals to project staff/ In charge of Veterinary Health Institution and shall follow their directions.
13. The 2nd party shall inform about any death of the animals immediately and allow the Project staff to carry out postpartum and follow the direction of the project staff.
14. The animal shall be considered the 2nd party's property.
15. The 2nd party shall allow and help the staff of the project for the inspection of animals on any time at any place as desired by Project representative.
16. In case the 2nd party contravenes the agreement, the animals shall be recovered and distributed to other party.
17. In case of any conflict/dispute the decision of the project manager of the project (PSLD), Sindh, Hyderabad, shall be final.

Name, address and CNIC No:

Mr.
(Second Party)

Mr. _____
Project manager PSLD (First Party)

Witness

1. _____

2. _____

Calf No	Date of birth	Sex	Age	Weight on /when Shifted
		FEMALE	DAYS	kg
		FEMALE	DAYS	kg

Appendices 5: Format for Medical Card

FORMAT FOR MEDICAL CARD


NO.

Name of Farmer:		District:		Date:	
Village		Deh		Taluka	
Tag No.		Sex	Name of animal	Specie	Age

Date		Symptoms	Treatment or recommendation
Temperature: Respiration : Pulse : BCS :			
		Observation	Note
Date		Symptoms	Treatment or recommendation
Temperature: Respiration : Pulse : BCS :			
		Observation	Note

Appendices 6: Health Calendar
PROJECT ON SUSTAINABLE LIVESTOCK DEVELOPMENT FOR RURAL SINDH @ HYDERABAD
HEALTH CALENDAR TO PREVENT THE CALVES AGAINST CONTAGIOUS AND PARASITIC DISEASES

Vaccination

Category and Species	Jan.		Feb.		March		Apr.		May		Jun		Jul		Aug		Sep		Oct		Nov.		Dec.									
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Adult & Young of Cattle and Buffalo									B.Q. Prevention once in a year					Rainy Seasons																		
Birth 																																
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Calves of Cattle and Buffalo									H.S.Vaccine 1st Dose after 15 days of birth					H.S.Vaccine 2nd Dose at the age of 6th months, than follow the calendar																		
									F.M.D.Vaccine 1st Dose after 15 days of H.S.Vaccine Booster Dose at the age of 45 days , than follow the calendar																							

Deworming

Category and Species	Jan.		Feb.		March		Apr.		May		Jun		Jul		Aug		Sep		Oct		Nov.		Dec.							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Adult & Young of Cattle and Buffalo					1) Drench								2) Drench					3) Drench												
Month																														
Week	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Calves of Cattle and Buffalo					1) Ivermectine (2 weeks after drench)				2) Ivermectine (2 weeks after drench)				3) Ivermectine (2 weeks after drench)																	

BQ: Black Quarter

FMD : Food and Mouth Disease

HS: Hemorrhagic Septicemia

Appendices 7: Bio security guideline document

BIO SECURITY GUIDELINE DOCUMENT

Management practices on farm premises that minimize and prevent the spread of disease.

1.1 WHAT TO DO AT FEMALE BUFFALO CALF SUPPLIER FARM BEFORE CALF BORN:

- 1.1.1 Stock Assistant (SA) of calf salvation center and worker will Visit the farm two hours before parturition for observation. SA /worker must wear protective cloths and rubber boots and maintain self-hygiene.
- 1.1.2 Provide clean dry and separate place for parturition.
- 1.1.3 Placement of neat & clean plastic sheet on floor near parturition place and put the calf on it immediately after birth to avoid contamination.
- 1.1.4 Wipe and clean mucus from the nostrils and natural orifices of calf.
- 1.1.5 Take the calf near to mother to lick the calf.
- 1.1.6 Clean the body of calf with disinfected piece of towel.
- 1.1.7 Check umbilical cord of new born calf and apply tincture iodine.
- 1.1.8 Cleaning of udder and teats with disinfected piece of towel.
- 1.1.9 After discarding first few streaks of colostrum, milk the colostrum in bucket and feed 1.5L (10% of body weight) as soon as possible after birth and second feeding 1.5L after arrival at calf center with the help of finger.

1.2 WHAT CAN THE FEMALE BUFFALO CALF SUPPLIER FARMER DO?

- 1.2.1 Stay informed – know what threats are out there local/national (trade papers & journals, education opportunities).
- 1.2.2 Communication with staff & visitors ((professional & others).
- 1.2.3 Draw up a biosecurity plan with input from staff & vets.
- 1.2.4 Update all farm records with openness and honesty (animal ID, history, all records).
- 1.2.5 Follow through on control measures and treatments.

1.3 PREVENTION OF DISEASE SPREAD AT CALF SALVATION CENTER

- 1.3.1 Clean footwear and clothing on arrival
- 1.3.2 Clean instruments & equipment, good hygiene & clinical waste disposal during procedures.

- 1.3.3 Good hygiene as you leaves or enters in next yard.
- 1.3.4 If you have an infectious disease problem at center admit it and be a part of the solution, not part of the problem!
- 1.3.5 Let management know what's going on and what you are doing to control it

1.4 PREVENTION OF DISEASE SPREAD – WHAT CAN THE VET DOES?

- 1.4.1 Vet must possess ethical behavior, care & empathy, honesty and trust, communication skills, cleanliness and hygiene.
- 1.4.2 Often first on scene to examine a clinical case.
- 1.4.3 Technical knowledge and experience -Self CVE (relevant, up-to-date, evidence-based).
- 1.4.4 Others (practice staff, farm owners/managers, yard staff, and producer groups).
- 1.4.5 Full explanation of (tentative) diagnosis & differentials.
- 1.4.6 Outline of further testing/treatment plan.
- 1.4.7 Further consultations – 2nd opinion from a colleague and discussion.
- 1.4.8 Client confidentiality VS Vet's legal and ethical responsibilities.
- 1.4.9 Partnership with livestock owner/manager.
- 1.4.10 Biosecurity plan (tailored to holding/enterprise).
- 1.4.11 Prevent spread between animals (quarantine), by people and by things.
- 1.4.12 Play preemptive role in advising on optimum biosecurity and sharing information with professional colleagues, industry bodies and diagnostic labs.

Appendices 8: Format for Post Mortem Examination

FORMAT FOR POST MORTEM EXAMINATION

Animal Species: _____ Breed: _____ Age: _____ Sex: _____ Owner: _____

Address: _____ Date: _____

History: _____

GENERAL CONDITION:

Mucous Membrane: _____ External Orifices: _____

Rigor Mortis _____

Subcutaneous Tissue: _____ Head & Neck: _____ Skin: _____

Brain: _____ Eyes: _____ Nose: _____ Ear: _____ Lymph node: _____

NASOPHARYNX:

Nasal Sings: _____ Gum & Teeth: _____ Palates: _____ Larynx: _____ Pharynx: _____

NECK:

Oesophagus: _____ Trachea: _____ Surrounding Tissue: _____

Lymph Nodes: _____ Bronchi: _____ Bronchial LN: _____

THORACIC CAVITY

Pleura: _____ Pericardium: _____ Pericardial Fluid: _____ Lungs: _____

ABDOMINAL CAVITY:

Peritoneum: _____ Diaphragm: _____ Stomach: _____

Small Intestine: _____ Large Intestine: _____

Liver and gall bladder: _____ Spleen: _____

Pancreas: _____ Kidneys and Adrenals: _____

Uterus: _____ Urathra: _____

Urinary Bladder: _____ Mesentry: _____

Mesenteric LN: _____ Male genetic Organs: _____

Female genetic Organs: _____ Lymph Nodes: _____

JOINTS:

Bones: _____

Disease Suspected: _____

Samples Taken: _____

Samples Submitted To:

➤ Microbiology Section: _____

➤ Parasitology Section: _____

➤ Serology Section: _____

➤ Pathology Section: _____

Post Mortem Conducted By: _____

Date & Signature: _____

ننڍڙن ڦرن کي پالڻ جي لاءِ هدايتون

1. گهٽ ۾ گهٽ 7 ڏينهن تائين تازي ڄاول ڦر کي ڏن ۾ پايوڊين لڳايو ته جيئن ڏن ۾ زخمر نه ٿئي.
 2. تازي ڄاول ڦر جي لاءِ هڪ الڳ جڳهه مخصوص ڪئي وڃي ته جيئن ٻين جانورن جي بيمارين کان بچي سگهي.
 3. جڳهه چانو واري، هوادار ۽ صاف هجڻ کپي.
 4. ڪوشش ڪجي ته جڳهه آلي نه ٿئي. چيٽو ۽ پيشاب کي جلد صاف ڪري مٽي وجهي وٽان صاف ۽ سڪايو وڃي جيئن جراثيم وغيره نه ڦهلجي سگهن.
 5. جڏهن به تازي ڄاول ڦر جي ويجهو وڃي ته پهرين پنهنجا هٿ صابن سان ڌوئجن ته جيئن هٿ جراثيم کان صاف ٿي وڃن.
 6. پاڻي، خوراڪ ۽ سڪل ڇبر پهرين ڏينهن کان تازي ڦر جي اڳيان رکيا وڃن ۽ جيڪڏهن نه به کائين ته به رکيا وڃن.
 7. تازي ويامل گئون يا مينهن جيڪا گهٽ ۾ گهٽ 15 کان 30 ڏينهن جي ويامل هجي انهن جو ڪير 1.5 ڪلو صبح ۽ 1.5 ڪلو شام پياريو وڃي ۽ جيڪڏهن وڌيڪ هجي ته هڪ هفتي کان پوءِ 2 ڪلو ڪيو وڃي.
 8. تازي ڄاول ڦر کي پالڻ واري جا هٿ صاف هجن ۽ نهن پڻ ڪٽيل هجن.
 9. ڪير پيارڻ وارو ٿانو چڱي طرح صاف هجي.
 10. ڪير ان طرح پياريو وڃي ته جيئن منهن ۾ وڌل انگر ايتري ٻاهر هجي جيئن ڪير ناسن ۾ نه وڃي سگهي.
 11. جيڪڏهن ڪنهن وقت تازو ڄاول ڦر ڪير نه پئي ته هن جو بخار چيڪ ڪري چڪاس ڪئي وڃي جيڪڏهن بخار نارمل (101-102 فارنهائيٽ) اچي ته پوءِ ڪجهه وقت ڇڏي ڏجي زبردستي نه ڪئي وڃي ڇو جو هڪ وقت ڪير نه پيئڻ سان نه بلڪه زور زبردستي ڪرڻ سان ڦر جي مرڻ جو انديشو ٿئي ٿو.
 12. دست ٿيڻ جي صورت ۾ جلدي ڊاڪٽر سان رابطو ڪري علاج ڪرايو وڃي جيڪڏهن ڊاڪٽر جي سهولت نه هجي ته ڪير جي مقدار گهٽ ڪئي وڃي.
 13. جيڪڏهن گرمي گهڻي هجي ته پاڻي سان ڦوهارو ڪرڻ کپي.
 14. خوراڪ ٿوري ناسن ۾ لڳايو جيئن ڏانڦو ملي.
 15. وزن وڌائڻ لاءِ گهٽ ۾ گهٽ هلرايو وڃي.
 17. ڦرن کي ڇبر سڪائي ڪرايو تازي ڇبر ڏين سان دست ٿي سگهن ٿا.
 18. جنهن فصل تي اسپري ٿيل هجي ان جي ڇبر استعمال نه ڪيو.
- ڇبر سڪائڻ جو طريقو

چپر کي 2 کان 3 کلاڪ تيز اُس ۾ سُکايو ان کان پوءِ پاسو اٿلايو ، 3 دفعا ايئن ڪرو پر هلڪي سائي رهڻ ڏيو.

19. 2 مهينن کان پوءِ (ڪاف ريٽرنگ فيڊ) 250 گرام صبح ۽ 250 گرام شام 3 ڏينهن تائين ڏيو ان کانپوءِ 500 گرام صبح ۽ 500 گرام شام 3 ڏينهن تائين ڏيو ۽ ان کان پوءِ 750 گرام صبح ۽ 750 گرام شام جو فيڊ ڏيو. ٻن مهينن کان پوءِ جڏهن ڦر جي عمر 4 مهينا ٿي وڃي ته

20. ڪاف ريٽرنگ فيڊ 2 ڪلو روزانه 1 ڪلو صبح ۽ 1 ڪلو شام جو ڏيو ۽ جڏهن ڦر 6 مهينن جو ٿي وڃي ته فيڊ ڏيڻ بند ڪري ساون گاهن ڏيڻ جي مقدار وڌائي ڇڏيو.

ننڍڙن ڦرڙن لاءِ صحت جو پروگرام

پيٽ جي ڪيڙن لاءِ دوا پياربي	14 ڏينهن
ساماهڙو جي ويڪسين	21 ڏينهن
خارش لاءِ ڪل جي سئي	28 ڏينهن
گل گهوتو ويڪسين	35 ڏينهن

Appendices 10: Monitoring format

MONITORING FORMAT

Name of the Farmer: _____

Village: _____ District: _____

Ear Tag		Sex	Date of Birth			Body Weight		Distribution Date			Weight at distribution	
Tag No:	Date											
	Age											
	Heart Girth											
	Body Weight											
	BCS											
Tag No:	Age											
	Heart Girth											
	Body Weight											
	BCS											
Vaccination												
De-Worming												
Name of fodder & quantity given												
Provision of Concentrate												
Checked by												

OBSERVATION NOTE:

Date	Special Remarks

TECHNICAL GUIDANCE GIVEN TO A FARMER

Date	Topics	By	Action Taken by Farmer

6. References:

Text Book of Appropriate Technology of Dairy Farming for Livestock Technician

Version -01

Standard Operating Procedures

SOP-PSLD-No.05

LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

TRAINING PLANNING **AND MANAGEMENT**

PREPARED BY: MEMBERS, CAPACITY BUILDING UNIT

DATED: 21.01.2019

REVIEWED BY: CHAIRPERSON, CAPACITY BUILDING UNIT

DATED: 21.01.2019

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1- Background

The Livestock Department Sindh has the mandate to provide veterinary services to the farmers that include animal health, disease diagnosis and prevention, breeding, and poultry production. A well-established network of veterinary hospitals, dispensaries, centers, and laboratories exists in the province. The Department is dominated by veterinary professionals; veterinarians and para-veterinarians.

At different career level the officers have the different roles and responsibilities; for example, the early-career officers are mainly responsible for provision of veterinary services to the farmers and actively work as field veterinarians for which they are qualified and have been through professional training. When these officers are raised to the next level, they have the role of supervision and management for which they have rarely gone through the required training. Similar is the case of senior level officers, where these professionals have to act as planners, supervisors, monitors, decision makers for responding to the changing needs of the livestock sector in general and farmers in particular.

To cater the responsibilities at each level properly-directed capacity building of these professionals is important so that they may be equipped with adequate skills and knowledge for expected service delivery, management, and decision making. Although capacity building has been conducted from time to time by provision of training opportunities by the Department, but it has not been well planned for purpose, resulting in scattered effects. (Ref:1)

Therefore, the Department needs a SOP on Training Planning and Management for improving & systematizing training process for capacity building of Vets and Para-Vets and better outputs.

1.1- Purpose

To establish standard procedures of training planning and management for efficient and effective training outputs and outcomes.

1.2- Scope

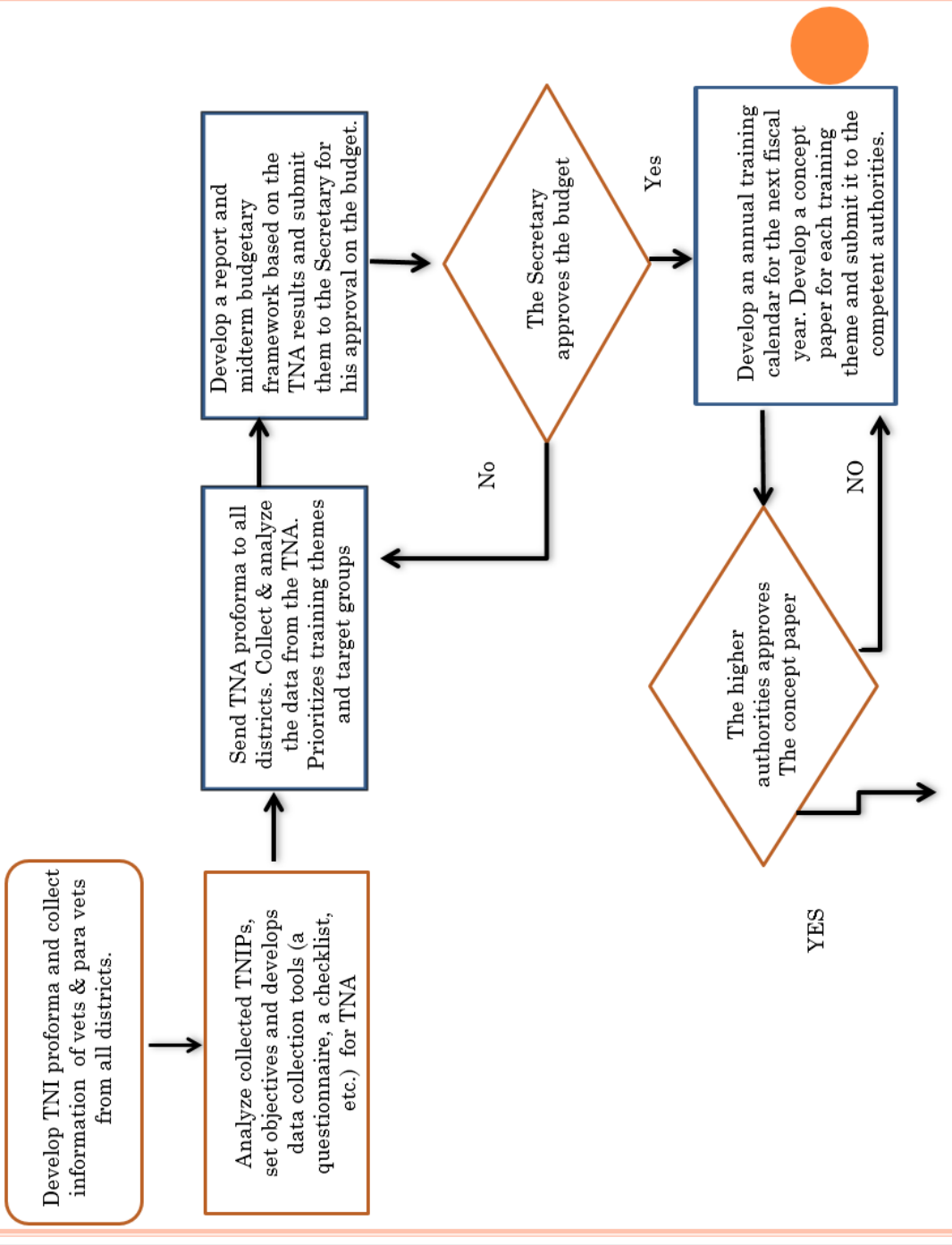
This SOP covers Technical & Non-Technical Trainings for Vets and Para Vets, as well as other types of Department officers e.g. Accounting Officers or Monitoring Officers, of Livestock Department Government of Sindh. The procedures include all steps of training management cycle i.e. need assessment, training design, training delivery, training evaluation, Impact assessment and follow-ups

1.3- SOP in Flow Chart

See Figure 1

1.4 Responsibility

Capacity Building Unit (CBU), Livestock Department, Government of Sindh



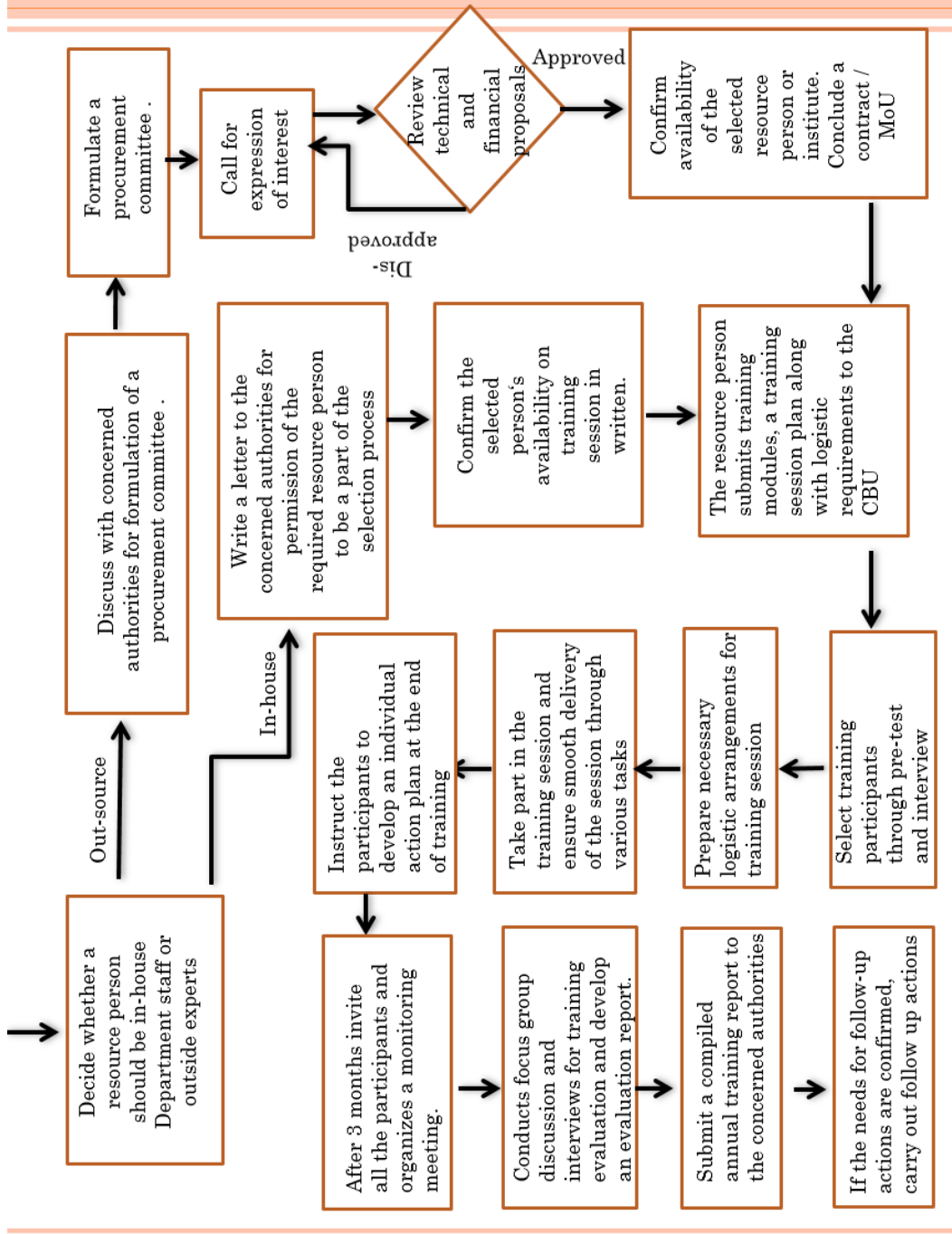


Figure 1- SOP in Flow Chart

2- Procedures

2.1- Training Planning

Summary: The CBU does training needs identification and training needs assessment among Department officers and officials to identify training themes for the next fiscal year. Then the CBU develops Midterm Budgetary Framework and Training Calendar for the next fiscal year.

2.1.1- Training Needs Identification

1. The CBU initiates training needs identification process for vets and para-vets annually in the first quarter of the fiscal year.
2. The CBU sends a prescribed Training Needs Identification Proforma (TNIP) to all the Directors, Additional Directors and Deputy Directors for further circulation to vets and para-vets and for submission of their training needs.
3. The CBU scrutinizes the filled TNIP proforma and reviews the already available bio-data forms (Personal Proforma) submitted by staff members to prioritize training themes and to select the target group.

2.1.2- Training Needs Assessment

1. Based on the results of the TNI, the CBU sets objectives of the Training Needs Assessment (TNA) and develops data collection methods and tools such as a questionnaire sheet (file attached) and a checklist for the TNA.
2. The CBU sends the questionnaire to all interested groups for identification of their professional and personal development needs.
3. Additional Directors / Deputy Directors collect the filled proforma from their staff, review the proforma, provide their comments and submit the proforma within 15 days to the CBU for its assessment.
4. The CBU analyzes the data, prioritize the needs and develop a report for further process and approval from higher authorities
5. The CBU develops a Midterm Budgetary Framework (MTBF) based on the TNA results and submits it to the Secretary Livestock by the end of December every year for budgetary allocation and inclusion in the ADP scheme.

2.1.3- Annual Training Calendar

1. After approval of the annual budget of the Department under the ADP scheme, the CBU develops an annual training calendar for the next fiscal year and circulate it among all the relevant Department staff before 30th of June.

2.2- Training Implementation

Summary: For each training themes a Training Coordinator will be assigned. The TC selects a resource person and participants for training, make logistic arrangements for training delivery and does monitoring of action plans of training participants for their utilization of learnt skills.

2.2.1- Assignment of Training Coordinator

1. In July the CBU Chairperson assigns among CBU members a Training Coordinator (TC) for each training themes planned in the same fiscal year.
2. The responsibility of the TC is to be in charge of the whole process of designing, planning, implementing, monitoring and evaluation of the training.

2.2.2- Development of Concept Paper

1. The TC develops a Concept Paper for their responsible training theme that includes training theme, scope, objectives, contents and the TORs of the training based on the TNA results.
2. The TC submits the developed Concept Paper to competent authorities (the Secretary or the D/G Livestock) for their approval along with the approved / allocated budget.

2.2.3- Selection of Resource Person

1. The CBU members decide whether a resource person should be in-house Department staff or outside experts considering the training theme.
2. Responsibilities of the Resource Person are:

- ✓ Develop training modules, training session plans, training material and training evaluation formats.
- ✓ Develop pre and post training evaluation format.
- ✓ Submit session plans along with required materials and logistic supports no later than 14 days before the training day.
- ✓ Deliver sessions as per agreed schedule and training methodology.
- ✓ Adopt participatory training methodology to make full engagement of the participants.
- ✓ Mark and evaluate pre and post assessment sheets of the participants.
- ✓ Submit a training completion report (if agreed in the ToR)

2.2.3.1- Selection of In-House Resource Persons

The below are criteria for selection of in-house resource person.

- ✓ Qualification: Minimum graduation and DVM for Technical training
- ✓ Relevant Experience: 3years

- | |
|---|
| <ul style="list-style-type: none"> ✓ Area of Interest / Thematic Knowledge ✓ Expertise / Skills ✓ Certified Master Trainer (TOT) |
|---|

1. The CBU develops and updates the list of in-house trainers to acquire their services for organizing and conducting training sessions as per needs.
2. The CBU writes a letter to the concerned authorities for permission of the required resource person to be a part of the selection process.
3. The CBU invites resource person candidates for their presentation before the selection panel (if required).
4. The TC confirms the selected person's availability on training session in written.
5. The resource person submits training modules, a training session plan along with logistic requirements to the CBU no later than 14 days before the training day.

2.2.3.2- Selection of Outsourced Resource Person

The below are criteria for selection of outsourced resource persons.

- | |
|---|
| <ul style="list-style-type: none"> ✓ Qualification: Minimum master degree ✓ Relevant Experience: 5 years ✓ Area of Interest / Thematic Knowledge ✓ Expertise / Skills ✓ Certified Master Trainer (TOT) |
|---|

1. The CBU manages the whole tender process of procurement of external trainers or training institutes.
2. The CBU discusses with concerned authorities for formulation of a procurement committee.
3. The Committee, supported by the CBU, calls Expression of Interest from the available list of external trainers and training institutes.
4. The Committee, supported by the CBU, reviews technical and financial proposals submitted by the external trainers or institutes.
5. The Committee invites resource persons and training institutes for their presentation before the selection panel (if required).
6. The Committee confirms availability of the selected resource person or institute and to conclude a contract / MoU with the Department for their services.
7. The Committee is dissolved once the tender process is completed.
8. The resource person submits training modules, a training session plan along with logistic requirements to the CBU no later than 14 days before the training day.

2.2.4- Selection of Participants

1. The CBU sends a letter to all Directors and Deputy Directors to ask them for submission of the list of nominations of suitable training participants
2. The TC develops formats for pre-test and interview (example format attached) for selection of appropriate participants. The TC can seek for advice from resource person.
3. The TC prints out photocopies of the formats of pre-test and interview and other required materials (list attached)
4. The TC finalizes the date, time and venue to conduct pre-test and interview.
5. The TC sends an invitation letter to nominees to ask them to appear in pre-test and interview.
6. The TC organizes and conducts a pre-test and interview session.
7. The TC scrutinizes the results of the pre-test and interview and send them to the CBU chairperson for final selection of participants.
8. After selection of participants, the TC sends a training invitation letter to the selected participants.

2.2.5- Logistic Arrangements

1. The TC is responsible for the following logistic arrangements. Each arrangement should be completed by the set date:

Arrangement of Venue	15 days before training
Arrangement transportation for field exposure visits	15 days before training
Quality Food Arrangement including refreshment	15 days before training
Preparation of attendance sheet, registration sheet	15 days before training
Invitation to Chief Guest	15 days before training
Boarding & lodging facilities	10 days before training
Accommodation with all required room accessories	10 days before training
Design and printing of Certificate	07 days before training
Preparation for documentation of TA/DA for participants	07 days before training
Preparation of other required training materials	03 days before training
Re-confirmation of participants, resource person, chief guests and all other reservations	02 days before training

2.2.6- Training Delivery

<1st Day >

1. The TC ensures registration of the participants on a prescribed format.
2. The TC organizes opening ceremony at the beginning of the training session. An invited senior official inaugurates the training session.
3. The TC conduct pre-assessment (an exam) of training participants to evaluate their knowledge base.

<During Training>

4. The TC ensures daily and punctual attendance of participants and the resource person.
5. The TC manages time, food and emergency health cover (first aid) during the whole training session
6. The TC monitors the process throughout the session to maintain healthy training environments.
7. The TC arranges field visits and transportation (if required).
8. The TC facilitates coordination with the resource person.

<Final Day>

9. The TC conducts post-assessment exam at the end of the session to observe effectiveness of training
10. The TC distributes a feedback format (format attached) to the participants to collect their feedbacks and comments
11. The TC prepares comprehensive daily training reports (format attached).
12. The TC facilitates discussions between the participants and the resource person for development of action plan at the end of each session/ training event (See the next section).

<After Training>

13. The TC shares developed daily training reports with the participants and concerned departments within two weeks.
14. The TC organizes closing ceremony and distributes certificates to the participants (either certificate of attendance or certificate of completion depending on their final marks).

2.2.7- Monitoring of Action Plans

1. At the end of each training the TC instructs the participants to develop an individual action plan that describes how they are going to apply and utilize the learnt skills within their ordinary work scopes.
2. The TC distributes a format of the action plan (attached) to the participants and let them submit it before they leave training hall. The action plan describes how they will utilize training skills, when and where they utilize such learned skills.
3. The TC collects and keeps record of actions plans submitted by the participants (VO's & SA's) after each training to make follow-ups and ensure implementations of the action plans.
4. After 3 months the TC invites all the participants and organizes a monitoring meeting. In the meeting the participants do self-assessment of the

achievement levels of their action plans using the same format. The TC checks and certifies their achievement levels.

5. After the meeting the TC keeps the record of achievement levels of the participants' action plans.

2.3- Training Evaluation

Summary: At the end of the year the TC does post training impact assessment of each training theme and develops an evaluation report. The CBU Chairperson reviews each report and develops an annual training report. If the needs for follow-up is confirmed for some training, the CBU takes necessary actions.

2.3.1- Post Training Impact Assessment

1. The TC develops a questionnaire and conducts focus group discussion and interviews for training evaluation (TE).
2. The TC tabularizes the data for analysis.
3. On the basis of the analyzed results the TC develops a training evaluation report and submit it to the CBU Chairperson by the end of April each year.
4. The CBU Chairperson reviews the report and develops an annual training report. The report contains an action plan of follow-ups or recommendation of new or refresher courses for the next year's training. The
5. The CBU Chairperson submits it to the Secretary Livestock / the D/G by the end of May each year for further approval or further action.

2.3.2- Follow-Up of Training

1. If the needs for follow-up actions are confirmed in the post-training impact assessment, the TC carries out follow up actions on the basis of collected data through interviews, group discussions, and filled questionnaires.
2. The TC furnishes a follow-up report and submits it to the CBU Chairperson by the decided date.
3. The CBU Chairperson and members review the report and recommend further actions such as implementation of new or refresher courses if needed.

3- References

Capacity Building Strategy, Department of Livestock and Fisheries

4- Attachments:

Starts from the next page.

- TNI Form



CAPACITY BUILDING UNIT
THE DEPARTMENT OF LIVESTOCK AND FISHERIES



Training Needs Identification

NameDesignation

Place of Posting.....District.....Date.....

Training You Need

Q: What type of technical or non-technical (managerial) trainings do you need and why?

-

S. No	Name of Training	Why You Need
1.		
2.		
3.		
4.		
5.		

- TNA Form



CAPACITY BUILDING UNIT
DEPARTMENT OF LIVESTOCK AND FISHERIES



Training Needs Assessment

Name Designation

Place of Posting..... District..... Date.....

Q: What type of technical or non-technical trainings among listed below do you need and why?

N.	Name of Training	Yes / No	If Yes, Why You Need
1		Yes / No	
2		Yes / No	
3		Yes / No	
4		Yes / No	
5		Yes / No	
6		Yes / No	
7		Yes / No	
8		Yes / No	
9		Yes / No	
10		Yes / No	
11		Yes / No	
12		Yes / No	
13		Yes / No	
14	Other ()	Yes / No	
15	Other ()	Yes / No	

- Pre-Test Written Exam (Example)

Question Paper

Name: _____

Date:

Department: _____
Minutes

Time: 30

District: _____
20

Total Marks:

Note: Please don't write on Question Paper. Answer sheet will be provided by Assessment Coordinator.

Please mark the training in which you are nominated by the department:

- Training on
- Training on
- Training on
- Training on
- Training on

Answer the Following Questions

Q 1: Why do you want to attend this course? Describe your motivation and expectation for the nominated course. If you are nominated for 2 courses, please mention and include your motivation and expectation for both of these courses. (Not more than 200 words)

Q 2: How will this training benefit you in your current role in the Department? (Not more than 200 words)

- Pre-Test Evaluation Format (Example)

Project on Sustainable Livestock Development

Interview Scoring Sheet

Interviews for the training on _____

Date: _____

Interviewed by: _____ Designation: _____

#	Name	Age	Qualification	Experience Having Relevant Work Experience (10)	Motivation Willing / Motivated to Attend Training (10)	Communication Good in Communication / Speech (05)	Language and IT Proficiency		Total (65)
							English Proficiency Level (10)	Able to use Office Software (10) (word 0-5, Power Point 0-3, Excel 0-2)	

Remarks: _____

Signature: _____

- **Training Material Check List**

Training Material

1. Drawing sheet
2. Flip Chart
3. Marker (8 black, 4 red, 4green and 4 blue)
4. White board
5. White board markers (4 black, 2red, 2green and 2 blue)
6. Scissor
7. Glue
8. Tap
9. Stapler
10. File cover for participants (12)
11. Ball Pen 12
12. Tissue Paper
13. Name card 12
14. Pencil 1 packet
15. Eraser 1 packet
16. Sharpener 1 packet
17. Board eraser
18. Banner
19. Attendance sheet
20. Registration form
21. Note Pad
22. Hand outs
23. Evaluation sheets
24. Per & Post Test Paper

- **Post-Training Feedback Form**

Evaluation sheet for the training

Please feel free to write your opinion on the training that you have participated. The results of the evaluation will be used for the improvement of the training for the next years.

Training theme:

Date

(1) Please circle applicable score for each.

	Disagree ----- Agree Answer
1: Training contents	
The training contents covered what you had expected.	1 2 3 4 5
Training materials were well-prepared.	1 2 3 4 5
Duration (hours) of the training was appropriate to understand the contents.	1 2 3 4 5
2: Trainers	
Explanation of the trainer was clear.	1 2 3 4 5
Facilitation of participants' activities by the trainer was good.	1 2 3 4 5
The trainer conducted the training enthusiastically.	1 2 3 4 5
The trainer welcomed question and answered well.	1 2 3 4 5
3: Facility/Equipment	
Training facility was appropriate for lecture and activities.	1 2 3 4 5
Equipment used for the training was appropriate.	1 2 3 4 5
4: Overall satisfaction of the training	
The training increased your knowledge/skills.	1 2 3 4 5
The training, including logistic arrangement, was well organized.	1 2 3 4 5
Overall satisfaction	1 2 3 4 5

2) Any additional comments regarding your score of the above?

(3) Will you like to participate into the training with the same theme if we conduct it in the next year? (Please circle one)

1. Yes, I want to participate into the training with the same theme with the same contents again.
2. Yes, I want to participate into the training with the same theme if it is advanced course.
3. No, I will not participate into the training if it is with this theme.

(4) If you choose "3", please choose the reason (circle one).

1. I have learnt enough regarding this theme.
2. I am interested in this theme, but the training contents need to be improved.
3. I am interested in this theme, but the trainer needs to be improved.
4. This theme does not meet my interest.
5. Others (specify)

(5) Please describe if there is any other theme that you are interested to learn.

Thank you for your cooperation.

- **Training Monitory Sheet (Post Training Evaluation)**

Daily Training Monitoring Report

(Please submit this report to Chairperson within the next day. A volume of A4 1 sheet is enough.)

Training Theme	
Date and Venue	
No. of Participants	
Reported by	
Confirmed by	

1. Training contents

Briefly describe what have been done and taught during the training. E.g. lecture themes, lecturer's messages, participants' opinions, explanation of individual/group activities conducted, etc.

. Findings, concerns and suggestions

Briefly describe what you observed during the training. E.g. participants' level of understanding, Training management level, how to improve the training, etc. Any tiny thing is appreciated.

3. Photos

Attach photos that best express lecture scenes or group activity/presentation scenes in the table below.

Photo attached on next page.

(Description here)	(Description here)

• Action Plan Format



Action Plan for Utilization of Learnt Skills through Training



Capacity Building Unit (CBU) Livestock Department Sindh, Hyderabad-71000, phone: **0223402715**

Name _____ Designation _____ Training Theme _____

Place of Posting _____ District _____ Date FROM _____ To _____ Venue _____

Action Plan		Self Assessment of Action Plan	
No.	What will you do within 3 months?	When?	Level of Achievement
01			1, 2, 3, 4, 5
02			1, 2, 3, 4, 5
03			1, 2, 3, 4, 5
04			1, 2, 3, 4, 5
05			1, 2, 3, 4, 5

Note: For level of achievement, 1: Very Poor, 2: Poor, 3: Average, 4: Good, 5: Very Good.

Appendix T4-7 SOP for Carrying out the PSLD Project Activities from 1st July, 2021

Version -01

Standard Operating Procedures

SOP-PSLD-No.06

LIVESTOCK DEPARTMENT GOVERNMENT OF SINDH

Carry out the PSLD Project activities
from 1st July, 2021

PREPARED BY: Participants of the Training on Project Management
Counterparts & Livestock Department officers

DATED: 09.04.2021

1. Introduction

1.1. Purpose

Ensure proper implementation of the PSLD activities as per set standards and procedures in target Districts.

1.2. Scope

This SOP will be applied in the targeted areas of the PSLD pilot districts, at Government Livestock Farms, commercial Farms, NGOs and supported farms to replicate the activities

1.3. Pre-Requisite

Effective Coordination within the livestock department and specified stakeholders.

2. Procedure

This SOP covers the implementation mechanism of output 1-4 of PSLD Project.

Output wise following key steps will help in respect the implementation of the SOPs.

Director General Livestock with the consent of Director General Extension & Research will constitute a Management Committee to implement the SOPs for the sustainability of PSLD activities. The committee will include the following members.

Management Committee Members

1. Director Animal Husbandry
2. Director Livestock Extension & Research
3. Director Animal Breeding
4. Chairman Capacity Building Unit (CBU)
5. Director Planning & Monitoring
6. Counterparts of all areas
7. Additional Director/Deputy Director/Farm Superintendent of concerned districts

Role and responsibilities of PSLD Management committee.

- To develop coordination with all stake holders.
- To design the plan to carry out the PSLD activities.
- To develop TOR's and sign agreement/MOU with all stake holders to run PSLD activities properly.
- To review quarterly planned activities and make it result-oriented.
- To mobilize specified resources utilization to carry out planned PSLD activities in targeted districts.
- To develop effective mechanism for the implementation of PSLD activities in the targeted districts.
- To take measures to resolve if any sort of conflict is created during implementation phase among stakeholders.
- To carry out monitoring and evaluation of set/planned activities in the targeted districts.
- To manage regular quarterly meetings of all stake holder to review the progress of activities.
- To examine and review the role and responsibilities of CBU during the implementation phase.

Output – 1 Development of Appropriate Technologies in Target Districts

1. Training on Appropriate Technologies for VO's and SA's (First year 2 trainings, second year 2 training and Third year Two training and 10 participants in each training i.e. Five VO's and Five SA's).
2. Two workshops per year on hoof cutting (5 participants in each workshop).
3. One training per year on "Diagnosis and Treatment of Reproductive Disorders" (15 participants per training).
4. Two Breeder's workshops per year (20 breeders per work shop).

Responsibilities: Livestock Department Government of Sindh

Procedures: Plan and approved by PSLD activities Management Committee and carry out by Deputy Director/Farm Superintendent of Government Livestock Farms in Target District.

Step – 1 Pre-Training

Development of training plan / schedule

To identify the areas for the specified training on the base of need assessment by Deputy Director/Superintendent of Government Livestock Farms at district level and approval from Management Committee.

Selection of trainees

Nomination of trainees by the Deputy Director/Superintendent of Government Livestock Farms of target district.

Issue invitation letters by Additional Director to each participant and same information also shared with CBU.

Selection of resource persons

Management Committee allocate the Resource Person for specified training

Budget and Financial requirement

Deputy Director/Superintendent of Government Livestock Farms of target district manage the requirement for the training from the available resources.

Selection of Venue

Meeting halls and rooms of Target District at District headquarters and Government Livestock Farms utilized for trainings.

Preparation of necessary training materials

Resource Person prepares the training materials as per the requirements.

Logistic arrangement

Deputy Director/Superintendent of Government Livestock Farms manage the necessary training arrangements at District headquarters with existing arrangements.

Step – 2 During Training

Implementation of training

Deputy Director/Superintendent of Government Livestock Farms ensure the following:

The registration of trainees at training center.
The availability of Training material according the training requirement before start of training.
The availability of participants and resource person.
The inauguration of Training on set date by all stakeholders.
Training activities must be followed according to the schedule.

Evaluation of the training at the final day

Develop technical evaluation Format and conduct pre- and post-test as per standards for Participants by CBU.
A well-defined questionnaire on training sessions must be developed by CBU.
Verbal Feedback from participants.

Closure of training

Closing ceremony includes feedback/views from participants and Resource person, comments from guests, remarks from higher authority and distribution of certificate will be organized by Additional Director/Deputy Director/Superintendent of Government Livestock Farms with the cooperation of concerned Directorates and Director General.

Step – 3 Post Training

Final reporting

Final report will be prepared by Additional Director/Deputy Director/Superintendent Government Livestock Farms and submit to CBU.

Follow up of training

Conduct follow up of application of technical guidance of appropriate technologies in the field by all concerned C/Ps and report submitted to CBU.

Attend Regular meeting

Additional Director/Deputy Director/Superintendent of Government Livestock Farms attend regular quarterly meeting of PSLD Management Committee to present their progress and know the future planning and follow the directions.

Output – 2 Rearing of Female Buffalo/Cow Calves For 90 Days at Government Farms, Commercial Farms and NGO's Farms

Procedure

- Mapping or enlist the commercial farmers, progressive farmers and NGOs
- Selection of eligible farmers for signing MoU
- Assigning of nearby Veterinary Officer and Stock assistant for providing technical guidance to the selected farmers.
- Agreement between the Department and Commercial, NGOs Farms to impart technical guidance regarding calf rearing techniques.
- Collect monthly progress report from VO and SA of the districts and government livestock farms.

- Place neat & clean plastic sheet on floor near delivery place and put the calf on it immediately after birth to avoid floor contamination (VO/SA).
- Wipe and clean mucus from the nostrils and natural orifices of calf (VO/SA).
- Take the calf near to mother to lick the calf (VO/SA).
- Clean the body of calf with disinfected piece of towel (VO/SA).
- Check umbilical cord of new born calf and apply tincture iodine (VO/SA).
- Cleaning of udder and teats with disinfected piece of towel.
- After discarding first few streaks of colostrum, feed the colostrum as early as possible.
- Feed 3Lit. colostrum (10% of body weight) 1.5Lit two times in a day to female calf with the help of finger as early as possible (VO/SA).
- Maintain temperature of colostrum as per prescribed method (38-40 °C) at center (VO/SA).
- Check body temperature of new born calf (VO/SA).
- Inject injection 3ml i/m OTC L.A . (VO/SA).
- Record all the observation in the record book (VO/SA).
- Shift the Female calf from birth place to calf rearing place as early as possible.
- Make necessary biosecurity measures before arrival of calf at calf rearing place (VO).
- After arrival of female calf make availability of fresh and clean water in-front of calf (SA /worker).
- After one-hour rest take rectal temperature, measure body weight, heart girth and apply ear tag. If any health issue treats accordingly and keep medical health record (VO /SA).
- In case of death at the center, post mortem is carried out by VO and submit samples to the CVDL (VO). Report from CVDL submitted to higher authorities and keep the record
- Transfer the calf in already disinfected calf hatch and feed second feeding of colostrum 1.5L Maximum 2L (maintain temperature of colostrum at 38 to 40°C) (SA /worker).
- Ensure maintenance of quarantine, biosecurity and disinfection at calf rearing center. Display the information at the entrance. Biosecurity guideline document attached (VO).
- Make sure the availability of necessary medicine, first aid kit and Postmortem Kit at calf rearing center (VO).

Care of female calves from 2nd day to 60 days at calf rearing center:

- Record the Body temperature of calf every day in the morning
- Feeding the warm milk at 38°C to 40°C to calf, milk 1.5 L in morning and 1.5 L in evening
- Increase milk up to 4 L per day after one week.
- Reduce milk up to 1 L from 7th week
- Milk provides up to 60 days and the intake of calf starter feed reach up to 700g to 1 kg per day, then stop milk (Wean the calf)
- Ensure availability of clean drinking water for 24 hours
- Increase the amount of the calf starter and hay to develop the rumen of calf
- Ensure daily cleaning of utensils and calf center
- Move the calf hatch from one place to another place on daily basis. In case of fixed calf hatch, clean hatch every day.
- Weekly measure the body weight and heart Girth of calf and keep the record
- Daily measurement of feed intake by calf
- Follow the health calendar for vaccination and drenching (Attached)
- Sprinkle anti-septic spray on the floor of the calf center and the shed on alternate day

Care of female calves from 61 to 90days at calf rearing center

- Shift the calf from calf hatch box to paddock for group feeding.
- Ensure availability of fresh water, hay and calf rearing feed.

Health coverage for female calf during rearing at farms.

- Developed Health calendar (according to the recommendation of the concerned district deputy director: Attached health calendar is an example for the guideline only) must be followed by In-charge Calf rearing center which included timely vaccination, scheduled De-Worming and emergency treatment. Attached health calendar (VO /SA in concerned district and government farm).

Monitoring of ongoing activity to verify that procedure is according to set standard

- Follow developed monitoring pro-forma and conduct monitoring according to schedule (Additional/Deputy Director of concerned district and Additional Director/Farm superintendent).
- Send report to Director Extension and Research/focal person every month (after 15th day of every month).
- Keep record and input data onto database (Focal Person).
- Compile report and submit to concerned authority. (Focal Person)

Output. 3 Dissemination of Appropriate Technologies to the Farmers

1. VO/SA Orientation Training

Orientation training on Appropriate Technologies for VO's and SA's (First year 2 trainings, second year 2 training and Third year 2 training and 10 participants in each training i.e. Five VO's and Five SA's participate in training).

2. Sensitization Meeting

Sensitization meeting carry out in 105 villages for male and female farmers by trained Veterinary Officers and Stock Assistant.

3. Farmer Awareness Workshop on Health & Management

Farmers Awareness Workshop on Health and Management carry out by trained Veterinary Officers and Stock Assistant. Total 3000 male and female farmers will be trained in three years (1500 male farmers and 1500 female farmers).

SOP for Sensitization meeting

Purpose

To introduce extension activity to farmers to prepare training register.

Scope

This SOP will be applied for sensitization meeting in pilot districts

Implementation Structure

This SOP will be implemented by Trained VO's and SA's

Responsibilities

VO & SA is responsible for conducting sensitization meeting and collect necessary data and submits to Deputy Director.

Prerequisites

List of sensitization material, meeting program, stationery and registration forms and panaflex.

Procedures

Points to be consider before planning meeting

1. Facilitator follows cultural norms, customs, religious behavior of villagers and assure their dress and attitude with the villagers.
2. Extension team ensure the routine/Seasonal activities of the farmers.

Conducting meeting

1. Extension team to make appointment for sensitization meeting at the village.
2. Extension team contact with the key person in the village (if the key person has conflict with other villagers, Extension team communicate with other villagers directly.
3. Extension team decided time about venue and training
4. Female Extension team conduct sensitization meeting in the village for female farmers
5. During the meeting Extension team shows the panaflex to give information about PSLD activities and motivate farmers to attend the training.
6. At the end of session Extension team collect the name of farmers who have livestock and take interest in attending session as training register.

After meeting

After completion of sensitization meeting Extension team make the report and submit to the Deputy Director.

Expected results

Training register

SOP for Farmers Training

Purpose

To disseminate appropriate technologies to small scale livestock farmers for an increase in milk production and assets for their livelihood.

Scope

This SOP will be applied for Farmer Training on Livestock Management, Animal Health, Mastitis, Body measurement and Body Condition Score (BCS), Reproduction and Genetics, Calf rearing and Marketing.

Implementation Structure

This SOP will be implemented by VOs & SAs

Responsibilities

VO & SA is responsible for conducting Farmer Training and submits training implementation report to Deputy Director.

Deputy Director is responsible to send training report to Director ER after compilation and comments.

Director Extension and concerned District Additional Director is responsible for monitoring the farmers Training activities

Prerequisites

- Training pictorial material (for panaflex)
- Training Text Material

- Mastitis Demonstration Kit
- Chabbar Demonstration for Hay Making
- Reporting Proforma
- Attendance sheet
- Notebook/Papers/Pen

Procedure

- Selection of the farmers/village for training.
- An appointment with farmer and set the day, time and venue.
- Conducted the farmers training at village level.
- Training conducted through pictorial panafelex and description material

Expected Results

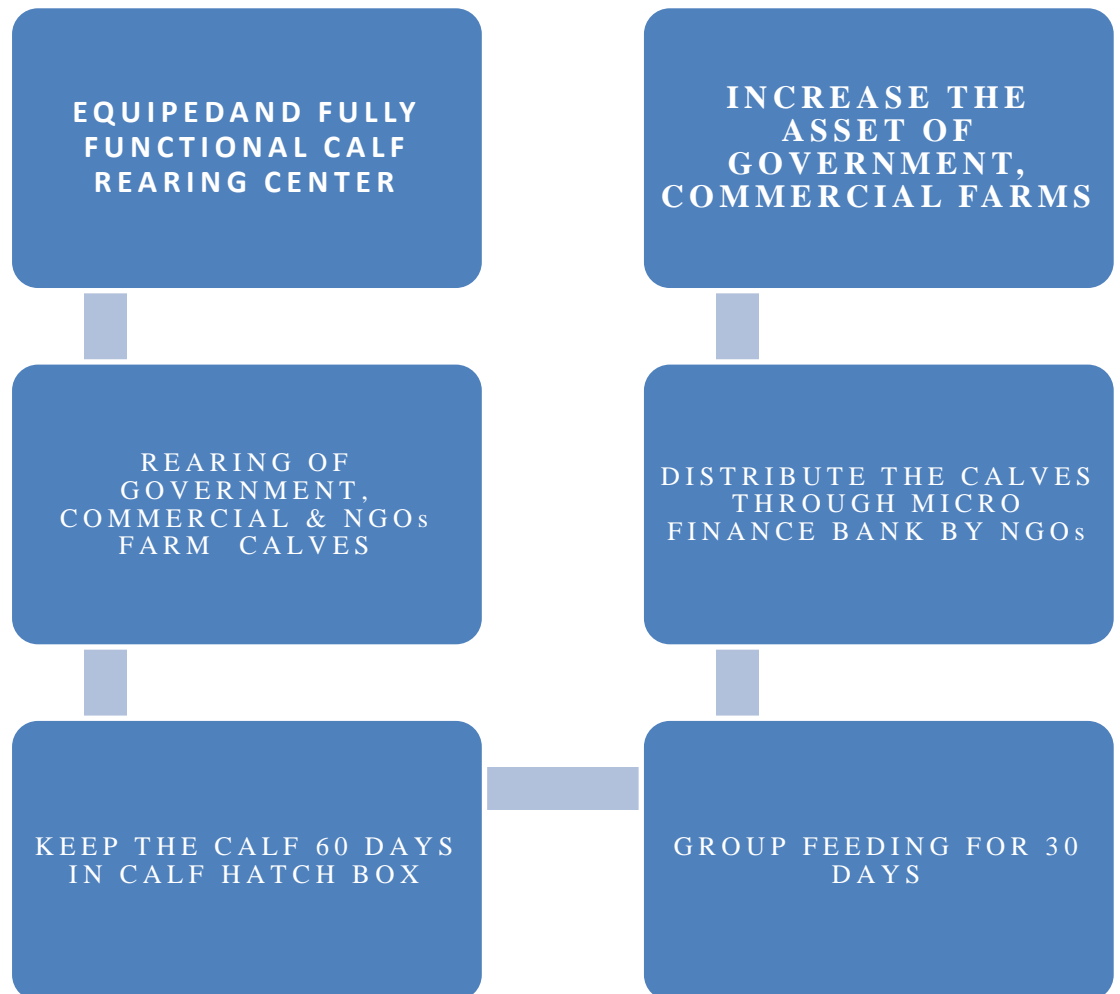
- Farmers very much awared about livestock Management, Health, Feeding, fodder, Animal Reproduction and calf rearing.

Output - 4 Capacity development of the Livestock Department for project management

Role and responsibilities of CBU

1. To conduct meeting with Additional Directors/ Deputy Directors/ Superintendent Government Livestock Farms of target districts for organizing training need assessment, identification of trainees, plan and post training follow up.
2. To plan and organize trainings as per TNA of district/ Government Livestock Farms.
3. To recommend specified field area Officers of the Department in consultation with the PSLD management committee to conduct the trainings in the targeted districts as per schedule.
4. To maintain/update MIS data base of technical officers/officials of the Department.
5. To develop close coordination with training sponsoring agencies/donors.
6. To explore training and funding opportunities for departmental staff and abroad funded from different sources/donors.
7. To monitor and supervise logistical arrangements and process of training carried out by concerned district and Government Livestock Farms of the Directorates.
8. CBU member from each directorate will be responsible to implement the Capacity Building Strategy (CBS) actions as per approved action plan.
9. Any other matter in consultation with the Directors/policy makers of the Department.

3. Flow Chart of Output - 2



4. Glossary

Directorate Extension & Research (DER), Directorate Animal Husbandry (DAH), Directorate Animal Breeder (DAB), Additional Directors (AD), Resource person (RP), Capacity building Unit (CBU), Counter parts (CPs), Deputy Director (DD), Farm Superintendent (FS), Project on Sustainable Livestock Development for Rural Sindh (PSLD), Veterinary Officer (VO), Stock Assistant (SA),

5. Way forward

1. Finalize SOPs and way forward with the consultation of JICA
2. Consultation workshops with concerned Directorates to develop consensus in the third week of May coordinated by Dr Sarwar Sheikh
3. To conduct meeting of PSLD steering committee in the third week of May 2021 Coordinated by Dr. Ghulam Sarwar Sheikh. to develop understanding/consensus to the way forward.
4. Official notification/authentication by secretary for the continuation of PSLD activities



**The Project on Sustainable Livestock Development
for Rural SINDH “PSLD”
(JICA Technical Cooperation)**

Capacity Building Strategy
for
Veterinarians and Para-Veterinarians
of
Livestock Department,
Government of Sindh



July 2018

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Annex

Workshops conducted for the development of the Human Resource Development Strategy

1. Introduction

1.1 Background

The Livestock Department Sindh has the mandate to provide veterinary services to the farmers that include animal health, disease diagnosis and prevention, breeding, and poultry production. A well-established network of veterinary hospitals, dispensaries, centers, and laboratories exists in the province. The Department is dominated by veterinary professionals; veterinarians and para-veterinarians. There are following three tiers among the departmental human resources:

- 1) Early-career Officers (Vets within 7 year of service)
- 2) Mid-career Officers (Vets within 17 year of service)
- 3) Senior-career Officers (Vets above 17 year of service)

At each career level the officers have the different roles and responsibilities; for example, the early-career officers are mainly responsible for provision of veterinary services to the farmers and actively work as field veterinarians for which they are qualified and have been through professional training.

When these officers are raised to the next level mostly they have the role of supervision and management for which they have rarely gone through the required training. Similar is the case of senior level officers, where these professionals have to act as planners, supervisors, monitors, decision makers for responding to the changing needs of the livestock sector in general and farmers in particular.

To cater the responsibilities at each level properly-directed capacity building of these professionals is important so that they may be equipped with adequate skills and knowledge for expected service delivery, management, and decision making.

Although capacity building has been conducted from time to time by the Department, but it has not been well planned for purpose, resulting in scattered effects.

The Project on “Sustainable Livestock Development for Rural Sindh” (PSLD)

The Department and the Japan International Cooperation Agency (JICA) have jointly been implementing the Project on “Sustainable Livestock Development for Rural Sindh” (PSLD) under the scheme of JICA Technical Cooperation since 2014. The long-term goal of the PSLD is to increase incomes and assets of the livestock farmers in Sindh through the increase of milk and meat and the improvement of marketing. In this regard, the PSLD has developed a number of appropriate technologies particularly for small-scale farmers, and has been disseminating them wider to those farmers. Towards the long-term goal, the Department officers are expected to continue such activities even after the PSLD.

It is still a big challenge for the Department since the Department is required to shift its role from veterinary service providers to holistic dairy service providers. The Department officers have to be equipped with particular knowledge and experience on livestock management such as fodder, reproduction, genetic improvement, marketing, etc. as well as particular skills such as social mobilization.

One of the outputs of the PSLD is “Capacity Development of the Livestock Department”, and under this output various non-technical or management-related training has been arranged for the Department officers during the project period. The tables below show the training conducted by PSLD.

Table 1 Project Management Training for 1st Year

Training Themes		days	No. of participants
Contents	Subjects		
Project Management	Strategic Project Planning	3	20
	Project Monitoring & Evaluation	2	21
Organizational Management	Leadership	2	17
	Decision-making	1	17
	Reporting	2	16
	Conflict resolution	1	20
	Communication	2	20
Specific subjects	Farmers organization	3	21
	Social Mobilization	3	19
	Gender	1	22
	Entrepreneurship Development	3	19
Total		23	212

Table 2 Project Management Training for 2nd Year

Training Themes	days	No. of participants
Participatory planning, monitoring, and evaluation of the projects	7	15
Report writing skills	5	12
Project proposal (PC-1) writing	7	13
Human resource management and development	5	9
Developing SOPs for the Department	5	9
Total	29	58

Table 3 Project Management Training for 3rd Year

Training Themes	days	No. of participants
Monitoring and Reporting	6	22
Sop Development (technology dissemination)	5	15
Project Cycle Management	5	20
PC-1 Writing	5	20
TOT for Social Mobilization	6	19
TOT for Project Management	6	17
Total	33	123

Table 4 Project Management Training for 4th Year

Training Themes	days	No. of participants
(Basic skills)		
• Report writing skills	5	23
• PC-1 writing	5	16
• Communication and leadership	5	18
• SOP development	5	22
(Sustainability)		
• Establishment of extension structure in future	6	19
• Human resource development strategy	6	25
Total	33	123

As a result of the above training, the following has been achieved:

- ✓ Conducted basic-skill training on project management with 26 themes to 472 officers in 4 years, and 71% of the participants (the Department Officers) have completed the subjects.

Table 5 Results of the Training for 4 years

No. of themes	No. of participants	No. of participants completed	No. of participants attended
26	472	334 (71%)	138 (29%)

- ✓ Fifteen master trainers on 2 themes (Project Management and Social Mobilization) have been developed in the Department.
- ✓ SOPs for Output 1 to 3 have been developed.
- ✓ Capacity Building Unit (CBU) has been established in the Department.

To make sure such training is sustainably continued with a long-term vision of how the Department officers are to be developed after the PSLD, the Project has formulated this “Capacity Building Strategy (CBS)”.

It is important that capacity development efforts have to be well designed and executed to produce sustainable effects. An integrated approach combining individual development with institutional changes is required so that acquired knowledge and skills may be effectively used for fulfilling the role of the Department. This CBS will guide the Department for proper designing and implementation of capacity development efforts for the Department veterinarians (Veterinary Officers) and para-veterinarians (Stock Assistants).

1.2 Objective

The main objective of this strategy is to ensure that capacity building interventions address current and future needs of the Department, particularly at non-technical side. It will ensure training opportunities be planned and implemented as desired for the Department. The strategy will support the Departmental

mandate; alleviate performance deficiencies and assist in establishing a pool of skilled and competent employees.

By implementing this strategy the following outcomes are expected:

- 1) To ensure that the departmental capacity building efforts are appropriately and coherently implemented towards both current and future capacity building needs, the Department has the caliber of employees with requisite skills and competencies to carry out its mandate.
- 2) The Department creates culture and provides equal opportunities to all employees in matters of career planning and training.
- 3) The Department introduces good governance, work ethics, and accountability amongst senior managers and employees.
- 4) With the improved skills and knowledge the Veterinary Officers (VOs) and the Stock Assistants (SAs) at every tier of the career are motivated to work with effectiveness.
- 5) The VOs and the SAs adapt themselves for changing career levels in the Department that takes place on a continuous basis.
- 6) The livestock farmers enjoy the improved service deliveries by the trained VOs and SAs.

1.3 Process of Developing the Strategy

The mid-term review of the PSLD was carried out in September 2016 by the Mission comprising of experts from JICA Headquarters and the Department. One of the recommendations of the Mission was “effective strategy of human resource development plan should be prepared and training opportunity should be allocated to the appropriate number and positions of the staff accordingly”. The JICA Project Team accordingly initiated the process of developing a Human Resource Development Strategy (HRDS) for the VOs and SAs of the Department. A one-day brainstorming workshop was conducted in May 2017 and following that two and three-day workshops were conducted during September and October 2017. The key officers from the Department participated into the workshops¹.

The results of these workshops were later referred by the Department, the JICA Project Team, and IRM (training institute). There were three key components in the HRDS, such as (i) capacity building, (ii) recruitment, induction, and retention, and (iii) resource allocation. It was then decided to first focus on the part of “capacity building”, considering the priorities and time required for completion, and therefore develop a draft Capacity Building Strategy (CBS). The discussion on the draft CBS was then conducted among those experts on February 1, 2018. Then, the key officers of the Department were again invited to one day workshop in May 2018 to finalize the draft CBS.

¹ The details of these workshops are shown in the ANNEX.

1.4 Scope of the Strategy for the Department

It is generally observed that public organizations suffer from inadequate capacity at the operational level to execute public policies, programs, and projects. Making public organizations work better is one of the most persistent and difficult challenges.

The Department should basically be a provider of veterinary services to the livestock farmers, hence the capacity building of service providers, i.e. the VOs and the SAs is essential with the following viewpoints:

- 1) Change the orientation of the VOs and the SAs from bureaucratic attitude to service delivery agents
- 2) Acquire knowledge and skills required by the VOs and SAs for delivering the services effectively to the livestock farmers so that they may increase production of milk and meat, and eventually incomes and assets.

Moreover, the quality of the services depends on a range of factors, which include fundamental principles of an ethical, organizational, and technical nature, and the services of the VOs and SAs should conform to these fundamental principles. Thus, the capacity building efforts should be made to not only improve the individuals' knowledge and skills, but also properly direct or reform the institution as expected.

As earlier discussed the needs in terms of capacity building of all three tiers of the employees of the Department are different, hence the increased capacity of the Department will mean that a well-trained group of veterinarians (VOs) and para-veterinarians (SAs) is available within the Department to deliver the veterinary services to the farmers effectively.

2. Definition of Terms

Within the context of this document, the CBS will encompass the following terms and concepts:

- **Capacity** is defined as the ability of individuals and organizations or organizational units to perform functions effectively, efficiently, and sustainably.
- **Capacity building** is an evidence-driven process of strengthening the abilities of individuals, organizations, and systems to perform core functions sustainably, and continue to improve and develop them over time
- **Training** refers to a situation where employees acquire job-related competencies that will enhance their performance on the job.
- **Development** refers to the continuous professional learning of employees, to ensure that they keep abreast with the latest improvement in their areas of specialization. It also refers to the grooming of employees to enable them to occupy more senior positions in future.
- **Competence** is a concept that integrates knowledge, skills and attitudes, the application of which enables the professionals to perform effectively, and to respond to contingencies, change, and the unexpected incidents/outbreaks.
- **Employee** refers to both current and prospective employees.
- **Executing Authority** refers to the Secretary, Livestock and Fisheries Department, Govt of Sindh
- **Head of Department** refers to the Director General, Livestock Department, Govt of Sindh.

- **Strategy** refers to the approach the Department will adopt in implementing human resource development interventions.

3. Vision, Mission, and Goals

The following is the vision, mission, and the strategic goals of the CBS which have been discussed and decided by the VOs through the said workshops:

3.1 Vision

Highly capable and productive cadre of VOs and SAs contribute towards sustainable socio-economic growth of Sindh Province

3.2 Mission

A professionally and technically sound field-based cadre (VOs and SAs) is developed through strategic capacity building interventions in order to provide quality services to livestock farmers and food safety to consumers contribute for sustainable socio-economic growth of Sindh province.

3.3 Strategic Goals

- 1) To boost up the performances of VOs and SAs by enhancing their managerial and technical skills for contributing sustainable and qualified livestock services.
- 2) To develop a system of research and learning including development and adoption of appropriate modern technologies and best practices of VOs and SAs for livestock services and development.
- 3) To strengthen Capacity Building Unit for improved coordination and need-based capacity development initiatives.

4. Short and Mid-term Directions

4.1 Current Situations of the Department

Being the veterinary service providers, the VOs and SAs are the major human resources of the Department. They enter in the Department as the early career staff members and grow in their career up to the senior level. The current situation of human resources of the Department is mentioned in Table 6.

Table 6 Numbers of VOs and SAs

Directorate	VOs			SAs
	Senior career	Mid career	Early career	
Animal Husbandry	27	41	352	855
Animal Breeding	18	21	17	125
Veterinary Research & Diagnosis CVDL	03	06	19	00
Poultry Production & Research	17	46	41	116
Total	65	114	429	1096

(Figures still needs to be re-confirmed)

The above table reveals that majority of the employees is at early career tier. At this tier they start career as a veterinary service provider. Their capacity needs to be built for technical and professional sides and when they are raised to mid-career their capacity should be strengthened for management side. In senior tier they are expected to take decisions according to legal provisions, coordinate at provincial and national levels with stakeholders and develop and policies as and when needed. There is a need of a comprehensive strategy to build their capacities to meet such requirements at each tier so that in turn the performances and service deliveries of the Department may be improved.

The short-term direction of capacity building is to arrange mix and match (managerial and technical) training sessions for the early career VOs and SAs, while the mid-term direction should lead to building specific capacity required for each tier of VOs and SAs.

4.2 Needs of the Department on Capacity Development

Capacity Building particularly of VOs and SAs is aimed at furthering and supporting the strategic goals and objectives of the Department, particularly improving veterinary services and strengthening production services for livestock farmers in Sindh. Through the workshops with the Department officers, their needs on capacity development have been identified and categorized into three tiers, i.e. individual/personal, organizational/departmental, and system.

4.2.1 Individual/Personal Level

At individual/personal level capacity building efforts shall improve the performances of VOs and SAs according to specific and defined roles. This needs to be looked at in the context of the department(s) and the systems in which the individuals work. At individual level, capacity building shall include the following identified and prioritized needs:

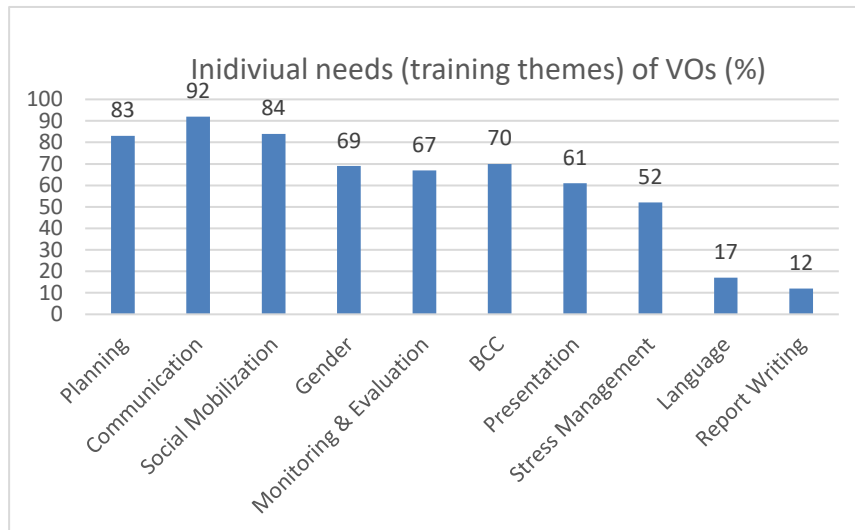
Veterinary Officers (VOs)

In the said workshops the VOs were invited and their needs on capacity development, i.e. training needs, were asked. The following table summarizes the result:

Table 7 Individual training needs of VOs

	Individual needs (training themes) of VOs	% ²	Priority
1	Effective Planning; Planning tools and Techniques	83	3
2	Effective Communication Skills	92	1
3	Effective Social Mobilization Skills	84	2
4	Conceptual Understanding on Gender	69	5
5	Monitoring and Evaluation Tools and Techniques	67	6
6	Behavior Change Communication (BCC)	70	4
7	Presentation Skills	61	7
8	Stress Management	52	8
9	Language Skills	17	9
10	Report Writing Skills	12	10

² The ratio of the number of VOs who need such training to the number of the participants.



The contents of the above training shall be as follows:

- 1) **Effective Planning; Planning Tools and Techniques:** The proposed training would help the VOs in identification of their planning gaps and understand tools and techniques for effective planning. The training will cover importance, types, pre-requisites, collaboration, coordination, budgeting, action plan, follow-ups, and feedback mechanisms.
- 2) **Effective Communication Skills:** The proposed training would support the VOs in acquiring essential skills including writing, listening, speaking, presentation, reporting, coordination, and learning. The training will cover importance of communication skills, types, means, tools, and techniques for passing/ communicating messages effectively.
- 3) **Effective Social Mobilization Skills:** Social Mobilization is a core job performed by the VOs at field level. This training will cover importance of social mobilization, understanding communities, community participation, stakeholder engagement, group dynamics, social organization, community leadership, and conflict management.
- 4) **Conceptual Understanding on Gender (roles and gender mainstreaming):** This training would develop conceptual understanding on gender, gender gap, gender roles, gender equity, gender sensitized governance, and gender mainstreaming. This training will help the VOs in working with women and marginalized groups at field level.
- 5) **Monitoring and Evaluation Tools and Techniques:** This training will develop understanding of the VOs on Monitoring and Evaluation terminologies, concept, tools, and techniques. The VOs will understand the concept of Logical Framework Analysis (LFA) and its usage in planning, monitoring and evaluation. The training will help the participants in setting indicators and measuring results at field level.
- 6) **Behavior Change Communication (BCC):** The training will develop understanding of the participants about importance of BCC; learn tools and techniques of BCC while working with the livestock farmer communities.
- 7) **Presentation Skills:** The proposed training will help the VOs in presenting their plans and progress

to colleague, line managers, counterpart departments and other stakeholders. The training will cover importance of presentation skills, planning for preparing presentation, tips, effective tools, situation handling during presentation, and feedback/ lesson learnt.

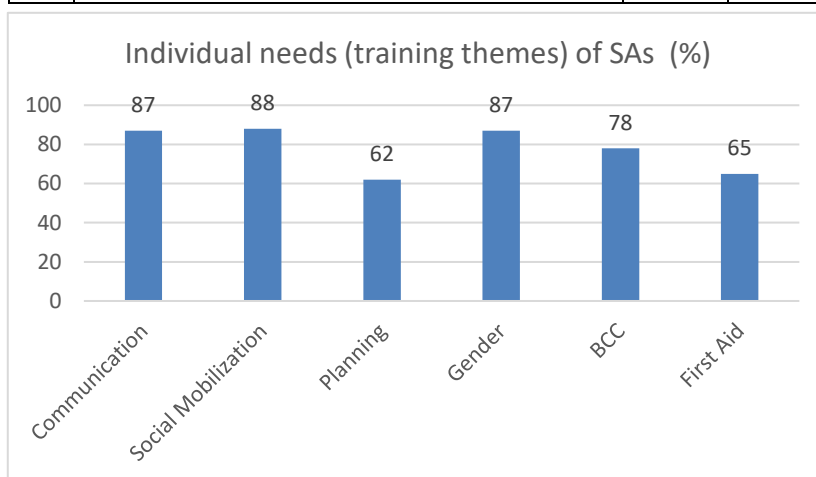
- 8) **Stress Management:** The proposed training will help the participants in learning tools and techniques for stress management. The training will cover causes and effects of stress, tips for stress management, useful exercises, and techniques.

Stock Assistants (SAs)

The needs on capacity development were collected from 32 SAs through District Offices (DOs), and its results are shown in the following tablet:

Table 8 Individual training needs of SAs

	Individual needs (training themes) of SAs	%	Priority
1	Communication Skills	87	2
2	Social Mobilization Skills	88	1
3	Planning Tools	62	6
4	Understanding Gender	87	3
5	Behavior Change Communication (BCC)	78	4
6	First Aid	65	5



- 1) **Communication Skills:** The proposed training for SAs will support in building confidence and effective communication with communities and relevant stakeholders. The training will cover both verbal and non-verbal communication, listening skills, values, and principles for effective communication, understanding group dynamics and effective message development for awareness campaigns.
- 2) **Social Mobilization Skills:** This training will help the SAs understand importance of social mobilizations, equip them with a set of skills related to social mobilization including community mobilization, motivation, collaboration, cooperation, coordination, identification of problems, prioritization, and community participation.
- 3) **Planning Tools:** The training will focus upon micro planning usually made by SAs at local level including field visit plan, vaccination plan, weekly, monthly, and quarterly plan. Effective planning

tools will be introduced for effective service delivery and result based management.

- 4) **Understanding Gender:** The training will develop understanding of SAs in clarifying the concept of gender, gender gap, roles, and importance of gender mainstreaming to fill the gap. Gender sensitized SA would contribute more in ensuring participation of all segments of the society including men, women, differently abled persons, the poor and transgender.
- 5) **Behavior Change Communication (BCC):** The training will cover importance of BCC in livestock management, understanding society and its norms, values and practices, identification of attitudinal issues, and changing practices through social mobilization tools. Developing, designing and implementing BCC campaign will also be covered.
- 6) **First Aid:** The training will help SAs understand how to prevent, manage, and respond to life's emergencies including stroke, shock, fainting, bleeding, burns, heat emergencies, snake bite, dog bite, bone and joint injuries, spinal injuries, poisons, rabbits, etc.

4.2.2 Organizational/Departmental Level

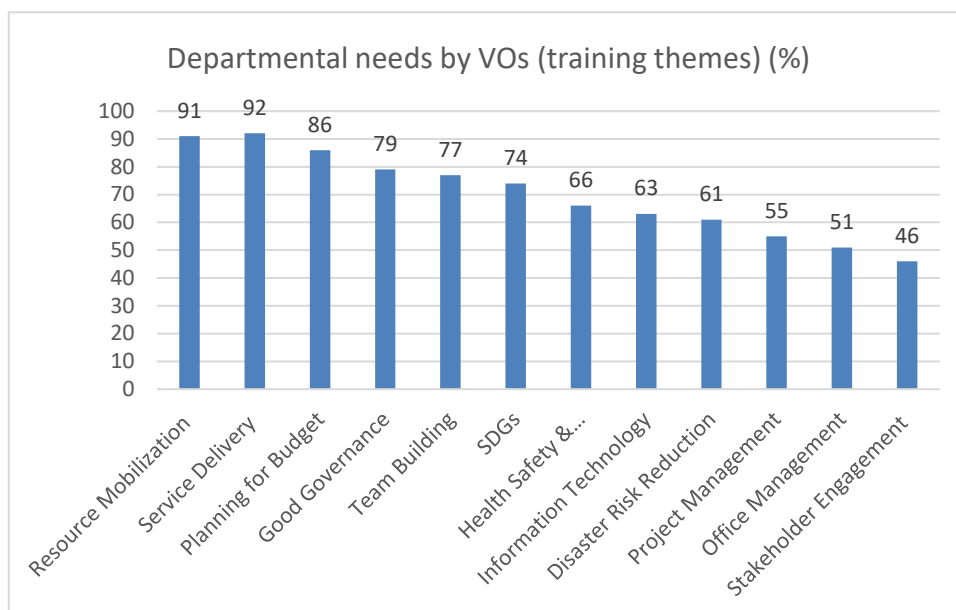
Capacity building at this level is intended to facilitate and accelerate the development of institutional capacity for responding needs of livestock farmers for veterinary as well as dairy services. By increasing milk and meat production at the provincial level they will be able to eventually increase incomes and assets. Organizational/departmental level capacity building efforts improve the ability of organizations to plan, manage, implement, monitor, and evaluate projects, both in the immediate and longer term, through the strengthening of internal organizational structures, administrative systems and processes, quality assurance systems, program/project management, leadership, governance, resource mobilization, and overall staff capacity.

Organizational/departmental level capacity building is often based on institutional assessments that systematically look at strengths and weaknesses of the organizations and develop responses to such identified weaknesses. The following needs were identified and analyzed by the VOs and SAs respectively as mentioned in 4.2.1 for improving overall performances of them and the concerned directorates:

VOs

Table 9 Departmental training needs of VOs

	Departmental needs by VOs (training themes)	%	Priority
1	Resource Mobilization	91	2
2	Service Delivery	92	1
3	Planning for Budget and Budget Tracking	86	3
4	Good Governance Concept, Principles, and Values	79	4
5	Team Building Tools and Techniques	77	5
6	Sustainable Development Goals (SDGs)	74	6
7	Health Safety and Environment (HSE)/ First Aid	66	7
8	Information Technology/ Basic Computer Skills	63	8
9	Disaster Risk Reduction (DRR)	61	9
10	Project Management (PM)	55	10
11	Office Management (OM)	51	11
12	Stakeholder Engagement	46	12



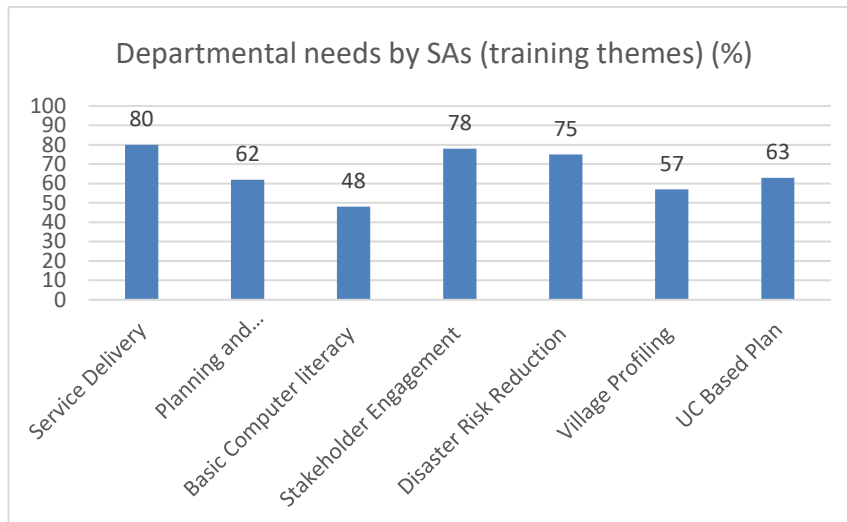
- 1) **Resource Mobilization:** The proposed training will cover definition and types of resources and providers, mechanisms and factors that motivate resource providers, mapping of resource providers, action plan of resource mobilization, and tips for writing winning proposals.
- 2) **Effective Service Delivery:** The proposed training will focus on need-based and demand-driven approaches to cater real needs of the communities. Effective service delivery includes quality services to be provided by the VOs and the SAs at the community level. The training will cover developing checklist for service delivery, quality service indicators, quality check mechanisms, effective planning, monitoring, and feedback mechanisms.
- 3) **Planning for Budget and Budget Tracking:** Budget making process is normally initiated at the management level; however, the VOs might have understanding on budget cycle and budget making process. The proposed training will cover budget cycle, budget heads, budget tracking, budget forecasting, budget analysis, and reporting.
- 4) **Good Governance Concept, Principles, and Values:** The proposed training will clarify the concept of good governance, accountability, and transparency. The training will cover definition of governance, key elements, principles and values of good governance, decision making, transparency and accountability in the system.
- 5) **Team Building Tools and Techniques:** The proposed training will improve inter-personnel communication skills, identifying and utilizing the strengths of team members, improving team productivity, and effectively collaborating with team members. The training will cover qualities/ characteristics of a good team, group dynamics, enabling and affecting factors for a team, twelve Cs of team building, managing conflicts, building and maintaining team, and monitoring team development process.
- 6) **Sustainable Development Goals:** The training will cover background and history of Sustainable Development Goals (SDGs), orientation of SDGs, SDG indicators, SDG monitoring mechanism, relevant SDGs to the Department's goals.

- 7) **Health Safety and Environment/First Aid:** The training will help how to prevent, manage, and respond to life's emergencies including stroke, shock, fainting, bleeding, burns, heat emergencies, snake bite, dog bite, bone and joint injuries, spinal injuries, poisons, rabbits, etc.
- 8) **Basic Computer Skills:** The proposed training will focus on the orientation of the VOs regarding functions of hardware that includes the parts of computer system that can actually be touched (such as keyboard, mouse, monitor, CPU, etc.). The VOs will also be oriented about usage of software particularly MS office (word, excel, and power point), web browsing, and email communication will also be part of the training.
- 9) **Disaster Risk Reduction (DRR):** The proposed training will cover definition of disaster risk reduction (DRR), types of disasters, vulnerability assessment, hazardous mapping, measures for DRR, early warning system, contingency planning, and tools for DRR
- 10) **Project Management:** The proposed training will cover all phases of Project Cycle Management (PCM) including situation analysis, stakeholder analysis, project design and monitoring.
- 11) **Office Management:** The proposed training will cover basic administrative and financial management aspects of an office including inventory management, vehicle management, maintenance and repairs, record keeping or file management, petty cash handling, and office security.
- 12) **Stakeholder Engagement:** The proposed training will help in understanding of the participants about identification of stakeholders, defining engagement strategies considering their role for addressing the community's specific needs. The training will cover definition of stakeholders, stakeholder identification, assessment tools and techniques, prioritization, and developing engagement plan.

SAs

Table 10 Departmental training needs of SAs

	Departmental needs by SAs (training themes)	%	Priority
1	Service Delivery	80	1
2	Planning and Implementing Tools and Techniques	62	5
3	Basic Computer Literacy	48	7
4	Stakeholder Engagement	78	2
5	Disaster Risk Reduction	75	3
6	Village Profiling	57	6
7	UC Based Plan	63	4



- 1) **Service Delivery:** The proposed training will focus on quality service delivery at the community level. Quality check parameters will be set, and the SAs will be trained in maintaining minimum standard to achieve the desired goals. Gap analysis exercise will be conducted during the training and coordination and communications mechanism will be introduced to make sure the effective service delivery. At the end of the workshop, work plan to replicate the learnt skills will be developed by the participants.
- 2) **Planning and Implementation Tools and Techniques:** The proposed training will support the SAs in learning of basic tools for planning day to day activities and implement accordingly. Planning tools including 4Ws and 1H will be introduced to cover all aspects of the planning process. Work Breakdown Structure (WBS) will also be introduced to make effective planning. Finally work plan matrix, prioritization of work techniques and maintaining things to do approach will be introduced to complete the planned task in time.
- 3) **Basic Computer Literacy:** The proposed training will cover essential information/ knowledge about computer hardware and usage of MS office (word, excel and power point) for routine work. The SAs would be able to maintain their records and prepare reports for the Department.
- 4) **Stakeholder Engagement:** The proposed training/intervention will cover identification of stakeholders, stakeholder assessment, and prioritization and developing action plan for effective engagement of the prioritized stakeholders.
- 5) **Disaster Risk Reduction (DRR):** The training will cover meaning of disaster, types of disaster, and causes and effects of disaster. Risk analysis and hazardous mapping will be done and local solutions/ precautionary measures will be discussed to minimize the risks. Risks related to livestock will be focused, and the SAs will be sensitized about contingency planning and incorporation of DRR messages in their social/community mobilization process.
- 6) **Village Profiling:** The proposed training will cover overall concept and importance of village profiling, formats, tools and techniques for data collection and resource mapping at the village level. The village profiles will be developed and updated on regular basis which will help effective planning and implementation process.

- 7) **UC Based Plan:** The Union Council (UC) based plan will help the SAs to allocate time for the activities in advance and make necessary arrangements accordingly. The training will cover key areas of interventions at the UC level and incorporate community/livestock farmers needs in the UC based plan. Tools and techniques for developing the UC based plan will be introduced in order to have the same exercise with villagers to develop the plan.

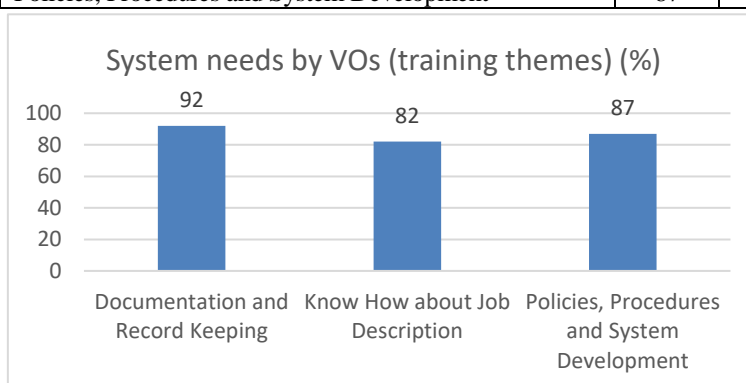
4.2.3 Systems level

The system level refers to the environment that would have certain influences on the projects and activities of organizations. System level capacity building efforts, such as policy making, would improve external environment of where organizations and individuals function, including culture supporting the way organizations interact and norms to which organizations have to adhere. This includes guidelines, regulations, etc. at the provincial and national levels, including supportive policy and legal environments. Systems below the provincial level also require capacity building efforts, such as systems of coordination and support, reporting, referrals, and linkages at regional or local levels of service delivery. Other local systems are also important, such as networks and coordination with providers of community-based support programs. The following interventions are identified for smooth functions of VOs and SAs.

VOs

Table 11 System training needs of VOs

	System needs by VOs (training themes)	%	Priority
1	Documentation and Record Keeping	92	1
2	Know How about Job Description	82	3
3	Policies, Procedures and System Development	87	2



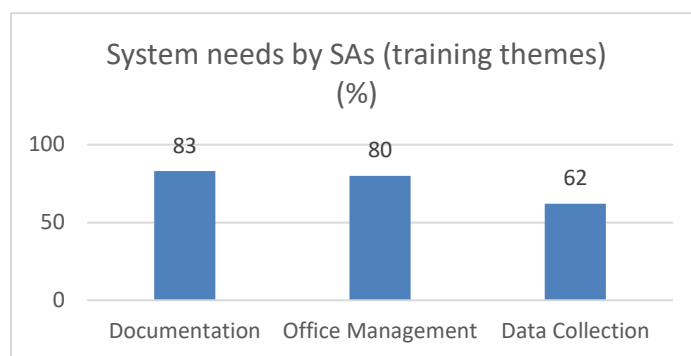
- 1) **Documentation and Record Keeping:** The proposed training will focus on basic record keeping skills at office level including field visit reports, office filing, minutes of meeting, inward and outward record, inventory, log book, vehicle maintenance and fuel record, utility and office maintenance expenses file, and office visitors record.
- 2) **Know How about Job Description:** The training will provide opportunity to the VOs in understanding their roles and responsibilities (job description). The training will cover all aspects of the job description and expectations of the Department in order to achieve its goals.
- 3) **Policies, Procedures and System Development:** The proposed training will orient the VOs about office disciplines, rules, regulation, policies, and procedures. The training will cover leave,

departmental promotion, communication, line management and Annual Confidential Report (ACR),

SAs

Table 12 System training needs of SAs

	System needs by SAs (training themes)	%	Priority
1	Documentation	83	1
2	Office Management	80	2
3	Data Collection	62	3



- 1) **Documentation:** The proposed training for the SAs will focus on documentation of field visits, record keeping of official correspondence with the concerned VOs and other stakeholders, maintaining register of vaccine and other animal medicines, record keeping of veterinary services rendered in the community, field visit diaries, etc.
- 2) **Office Management:** The training will cover administrative aspect of veterinary centers including cleanness, security, assets management, center building maintenance, update information/notice board, opening of the center as per fixed times, provision of quality services, response to community/public dealing, etc.
- 3) **Data Collection:** The proposed training will cover data collection methods, tools and techniques including questionnaire, interviews, Focus Group Discussion (FGD), data tabulation, analysis, and report. The data collection methods will be linked with job description of the SAs.

4.3 Proposed Approaches for the Prioritized Training/Interventions

A wide range of approaches are available to build capacities, including training workshop/courses, on job training (OJT), exposure visits, exchange visits, etc. as mentioned below. Effectiveness of each approach strongly depends on the specific objective to be achieved.

- ☑ **Training workshops** usually contribute in enhancing skills, increasing knowledge, and changing attitudes towards particular aspects of training topic/theme. The objectives of training workshop would be the improvement of skills, knowledge, and attitude of the target group. Before each workshop pre-assessment is conducted to gauge the level of understanding regarding the particular subjects, and post-assessment exercise is also conducted to evaluate the impact of training.
- ☑ **On Job Training (OJT)** is a tool to provide on-site lessons to obtain required knowledge and skills to particular staff in their new or routine activities/tasks. The supervisors would be trained to pass on

knowledge and skills to their supervisee through informal way or OJT. To train them for special/new assignment, the trainees would be associated with the concerned senior professionals to help in understanding the particular job, or would undergo in-service training, on the job training, mentoring, advance degree or certificate programs, exchange visits, and exposure visits. In-service training includes short term workshops or trainings of a limited duration that provide an individual or a group on a specific skill or set of skills. This might be reflected in coaching, mentoring, and/or relevant workshops. Such training may be targeted at field-based VOs/ SAs or management staff (VOs).

- ☑ **Peer exchanges** (with other successful models). Mapping of good practices and success stories/ projects where other VOs could learn, the interested staff on the particular area/theme would be facilitated to be shared with details through meetings, studies on the site, or projects.
- ☑ **Exposure visits:** “Believing is seeing” is a universal truth, adult learns when he/she verifies all learning by him/herself. The exposure visit provides them with an opportunity to learn from others’ experiences.
- ☑ **Exchange/exposure visits:** As per recommendations of the supervisors in individual’s professional development plan, opportunities of exposure/exchange visits within and outside the country will be addressed. The opportunities should be well coordinated and objective-oriented. Relevant staff will submit a detail report on the prescribed format along with the action plan to replicate the learnt skills.

5. Action Plans

The following is the list of the action plans classified into short, mid, and long-terms for meeting the strategic goals mentioned in 3.3.

5.1 Action Plan 1

Strategic Goal 1: To boost up the performances of VOs and SAs by enhancing their managerial and technical skills for contributing sustainable and qualified livestock services.

Code	Schedule	Action	Indicators	Responsible units/persons
5.1.1	Short-term	Develop action plans on the basis of the prioritized needs and get approval for appropriate resources to organize the training events	Approved action plans and funds allocated	CBU
5.1.2		Develop training calendar biannually based on recommendations of supervisors/training needs of VOs/SAs.	Training calendar approved and shared with VOs & SAs	CBU
5.1.3		Organize training according to the developed action plans	# of training implemented	CBU (Directors have budgetary allocation for development & non- development sides)
5.1.4		Develop information pack/ Information Education and Communication (IEC) materials for guidelines and resources for VOs and SAs to work effectively and efficiently	# of modules / brochures / leaflet / booklet, etc. of information pack/IEC material got printed and disseminated	CBU
5.1.5		Develop social media groups/ WhatsApp to share latest information with VOs/ SAs to keep them updated	# of posts shared on the social media groups # of persons liked/ shared the posts	CBU
5.1.6	Mid-term	Map out national & international institutes / projects / sites for capacity building / advance study / exposure visits of VOs and SAs.	# of areas/ sites identified	CBU (The Secretary being Administrative Head of Department must be custodian of MoU between two organizations, i.e. CBU and an agency)
5.1.7		Conduct quarterly review meetings with concerned VOs/SAs to record impact of the CB strategy/Interventions	# of meetings conducted	Additional Directors concerned /
5.1.8		Record feedback/learning through self-assessment exercise on quarterly and share the same with CBU	# of staff did self-assessment exercise	CBU to support VOs & SAs
5.1.9		Develop database of all VOs and SAs and categorize staff skills, expertise and experience wise along with investment/training opportunities, exposure and special assignment detail	Database developed and information of all the VOs & SAs updated	CBU
5.1.10		Keep record of all the action plans developed by individuals/VOs and SAs after each training/other interventions to make follow-ups and ensure implementation/utilization of the learnt skills	# of action plans submitted # of follow-up events conducted	Concerned Executive Directors (ED) & CBU
5.1.11	Long-term	Develop professional development plans (individual) in consultation with	# of plans developed	CBU

Code	Schedule	Action	Indicators	Responsible units/persons
		the concerned supervisors to achieve the desired results		
5.1.12		Organize exchange visits within and outside the province for interested VOs and SAs to share and exchange learning/information.	# VOs and SAs visited the sites # of VOs & SAs submitted their study visit reports	CBU

5.2 Action Plan 2

Strategic Goal 2: To develop a system of research and learning including development and adoption of appropriate modern technologies and best practices of VOs and SAs for livestock services and development.

Code	Schedule	Action	Indicators	Responsible units/persons
5.2.1	Mid-term	Develop directory of resource organizations conducting research at national and global level	# of resource organizations identified and data input in the directory	CBU
5.2.2		Share research articles/ literature with VOs through emails/social media and encourage them to write blogs/articles	# of research articles shared with VOs & SAs # of articles/ blogs written by VOs & SAs	CBU
5.2.3		Design and organize short courses on research methods and writing research articles	# of events/ courses conducted # of VOs & SAs participated	CBU
5.2.4	Long-term	Map out research organizations thematically and sign MOU with potential institutes/organizations for strategic capacity building interventions	# of research organizations identified # of MOUs signed	CBU
5.2.5		Conduct awareness raising sessions/ seminars/ workshops and on job training to develop interest of VOs in action research	# of events conducted # of VOs and SAs participated in the event	CBU
5.2.6		Identified research journals, publishers, and sign MOU with potential thematic journal for sharing of information either ways	# of research journals identified # of MOU signed # of articles published / shared	CBU
5.2.7		Assign different tasks/special assignments to conduct research on livestock related topics in collaboration with academia	# of VOs engaged in different assignments/research themes	CBU to support ED
5.2.8		Arrange webinars/video conference with interested/potential scholars on relevant themes/topics to learn new technologies	# of events/video conferences organized # of persons attended the events	CBU
5.2.9		Recommend awards certificates/medals to the best researchers/bloggers annually and announce incentives to the individuals	# of awards distributed among the individuals	CBU

Code	Schedule	Action	Indicators	Responsible units/persons
5.2.10		Organize national and international conferences/symposiums to provide learning opportunities to VOs and SAs	# of national/international conferences/symposiums arranged # of VOs & SAs participated in the national/international events	CBU & DGs
5.2.11		Organize international exposure visits for the interested researchers to learn from global research institutes/ scholars	# of participants attended exposure visits # of institutes/scholars visited by the participants	CBU & DGs

5.3 Action Plan 3

Strategic Goal 3: To strengthen Capacity Building Unit (CBU) for improved coordination and need-based capacity development initiatives.

Code	Schedule	Action	Indicators	Responsible units/persons
5.3.1	Short-term	Equip CBU with technical staff and adequate human, financial, and technical resources to improve coordination for capacity building initiatives	Funds allocated for CBU # persons/technical staff deployed for CBU	DG Livestock
5.3.2		Conduct regular meetings fortnightly among CBU members to review the progress and identify gaps in implementation of the Capacity Building Strategy	# of meetings conducted	CBU
5.3.3		Ensure merit-based nominations of VOs and SAs for training and other capacity building interventions	Less number or no complaint received regarding nomination process.	CBU
5.3.4		Conduct coordination meeting with different directorates and senior officials, and the CBS implementation committee for improving coordination and effective communication	# of meetings conducted # of participants attended the meeting	CBU
5.3.5		Develop Standard Operating Procedures (SOPs) for quality training/capacity building interventions	SOP developed, approved, and applied	CBU
5.3.6	Mid-term	Establish relational database system for effective and efficient implementation of the Capacity Building Strategy	Database developed and used for decision making	CBU, concerned Directors
5.3.7		Organize training events for CBU members	# of training events conducted # of staff attended	CBU
5.3.8		Develop training policy/ guidelines to ensure transparency and accountability in the training nomination process	Training policy/ guidelines developed and applied/ compliance made.	CBU
5.3.9		Organize TOT and topic-wise training to develop master trainers.	# of master trainers developed	CBU
5.3.10		Develop database of internal and external trainers to engage them in different training events	Database developed and trainer's information updated.	CBU

Code	Schedule	Action	Indicators	Responsible units/persons
5.3.11	Long-term	Develop CBU website/webpage and share training opportunities through web and other social media channels	# of opportunities shared through web and other SMS groups	CBU
5.3.12		Develop & circulate RFP (Request for Proposal) to engage third party for impact assessment of the capacity building interventions	Assessment conducted, findings shared with the concerned units	CBU

The CBS implementing committee shall be organized with the following candidate members:

1. Director General
2. Sindh Agriculture University
3. Executive Directors (4)
4. Capacity Building Unit
5. IRM
6. RTI Tando Muhammad Khan

5.4 Challenges/Constraints and Mitigation Measures

- 1) **Lack of financial resources:** Allocation of financial resources could be a major constraint in implementation of the strategy.

Mitigation: The CBS is developed in consultation with the relevant authorities; the approved document would have buy-in of the Department, therefore funds are expected to be allocated if the CBU takes necessary actions.

- 2) **Lack of departmental will/commitment:** There may be lack of interest/will to implement the strategy with the same spirit and continuity/commitment.

Mitigation: The idea of having the CBS emerged from the PSLD particularly during training events organized by JICA for VOs. The Department is fully aware of importance of capacity building interventions and agreed to have the strategic document, therefore full commitment of the Department is expected if the CBU takes necessary actions.

- 3) **Lack of conducive environment:** The CBU members and relevant authorities involved in implementation of the CBS may face problem of not having conducive environment to work efficiently and effectively.

Mitigation: Monitoring, evaluation and coordination mechanism is suggested/incorporated to ensure that the CBU is smoothly operated and handles issues properly during the implementation of the CBS.

- 4) **Lack of motivation of Staff/ VOs, SAs:** Willingness and self-motivation of VOs and SAs may change negatively and affect the learning process.

Mitigation: Need-based training/Capacity Building interventions are suggested in the document, relevancy and quality of interventions, and merit-based nomination process would support in keeping the employees self-motivated.

- 5) **Lack of visibility of the interventions:** CBU/Department may take less interest in visibility of the interventions.
Mitigation: Website and social media tools are suggested to increase visibility of the interventions.
- 6) **Frequent transfers and postings:** Frequent transfers and posting may affect capacity building intervention/replication of all learning.
Mitigation: The issue may be resolved at quarterly review meetings suggested in the document.
- 7) **Skill based recruitment:** The CBU is expected to have the staff with IT and research related skills, but there is a big challenge of having the staff with the required skills.
Mitigation: The staff will be trained and new skilled staff would be hired to meet the needs.
- 8) **Discontinuation of the policy/strategy:** The CBS is planned initially for five years; discontinuation of the efforts/interventions would affect the desired results/ goals.
Mitigation: Sustainability/continuation of the interventions/strategies lies on the mechanisms established for implementation of the CBS including formation of the CBU, and regular coordination mechanism would ensure proper implementation and continuity of all the initiatives.

6. Capacity Building Unit

6.1 Objectives

Training presents a prime opportunity to expand the knowledge base of all employees. A training program allows them to strengthen their skills for bringing them to a higher level. In the Department training opportunities under development projects/schemes are available although they are very limited, but these opportunities are neither well-coordinated nor utilized. In absence of a well-defined nucleus office it has always been impossible to recommend right persons for available training opportunity, monitor progress, assess impact, and utilize the trained human resources for meeting the mandates of the Department. Similarly, foreign training opportunities are offered by donors, organizations, and countries, but because of slow information flow it has been always difficult to avail these opportunities to the Department employees.

The above fact was well understood by the JICA Project Team of the PSLD. The main objective of the PSLD is to establish development foundations based on which the livestock sector can be further developed. One of such foundations is human resource, whose capacities are to be strengthened by means of training. Thus, the PSLD has been implementing various trainings including project management. Based on the experience from these trainings it was conceived and suggested by the JICA Team to the Department to establish a separate unit/office under the domain of Director General Livestock Sindh, assigning the mandate of capacity building to it for streamlining training process in the Department. The Capacity Building Unit (CBU) was therefore established under the office order of the Director General Livestock Sindh in May 2016.

6.2 Members, Roles, and Activities Covered by CBU

The current staffing and roles of the CBU are as follows:

Current Staffing

- 1) One Chairperson (full-time) in charge of the CBU
- 2) One member (full-time) to support the Chairperson
- 3) Seven members (part-time) from all Directorates

Major roles

- 1) To conduct training needs assessment
- 2) To plan, coordinate, and implement technical and non-technical training
- 3) To follow up the participants after training
- 4) To conduct training impact assessment for designing future training
- 5) To explore opportunities of local/foreign training or foreign-funded training and introduce them to the Department officers
- 6) To recommend or select suitable officers/officials of the Department for available training
- 7) To collect bio-data and maintain database of all the officers/officials of the Department for arranging training as per job description
- 8) To develop close relations with training sponsoring agencies/donors
- 9) To develop master trainers and nominate them for various training
- 10) Any others in consultation with the directors or the key officers of the Department

Since its establishment the CBU has covered various activities as follows:

- 1) The CBU has done training needs assessment of Department officers to know their needs about non-technical trainings. CBU has then proposed training themes to JICA Project Team to be considered in the training plan of the year.
- 2) The CBU conducted pre-test to select suitable training participants from the Department for non-technical trainings under the PSLD.
- 3) The CBU coordinated with all the directorates, implemented, monitored, and evaluated the project management training with JICA Project Team.
- 4) The CBU is collecting bio-data of officers/officials on prescribed personal proforma for development of “Human Resource Database”, which will be utilized for designing future training plans and selection of participants for training.
- 5) The CBU has initiated collecting information regarding foreign training opportunities and started supporting application process of the Department officers.

7. Way Forward to Develop a Human Resource Development Strategy

7.1 Key Components of a HRDS

The next step for the Department after this CBS is to develop the Human Resource Development Strategy (HRDS) to lay a holistic and firm human resource foundation to the organization. According to the results of the workshops conducted for the purpose, the proposed HRDS would have the following 3 key components:

(1) Capacity Building

As discussed, capacity building implies activities which strengthen individual knowledge, abilities, skills, and behavior of the current staff, and improve institutional structures and processes such that an organization can efficiently meet its mission and goals in a sustainable way. The HRDS would also focus on VOs and SAs through training needs assessment (TNA). Designing of the prioritized training and engaging relevant training institutes for conducting training would follow. To ensure the quality of such training, the HRDS would also include a monitoring and evaluation system for the capacity building initiatives.

(2) Recruitment, Induction and Retention

Together with capacity building, ways of recruitment, induction, and retention of the staff are the core challenges for any organization to render quality services to its customers. The HRDS is expected to help the Department develop high-performance service teams, a rigorous, transparent, and merit-based recruitment system, and proper policy and procedures. For that purpose, it was suggested by the participants in the workshops to develop recruitment, induction, and retention strategy for the Department. The revision and approval of job descriptions of VOs and SAs would also be included.

(3) Resource Allocation

Resource allocation is the process of assigning and managing assets/resources in a manner that supports an organization achieve its strategic goals. The proposed HRDS would include resource allocation strategy, particularly for VOs and SAs to fulfil their duties. The resource allocation strategy would help in meeting the challenges the government has been facing due to increase of human and animal population in the country/province. The resource allocation strategy would focus on allocation and timely release of appropriate amounts of funds. The Department would have to conduct pre-budget sessions to review the status of fund availability and grasp the needs/demands from the districts. As a result, the strategy would help in allocation of funds as per demand/need and release of funds in time.

7.2 Process of Developing a HRDS

The HRDS is a very time taking process. It needs lot of consultations and proper data collection from all tiers of the staff and the Department. The CBU will be responsible for this task internally or may be assisted by experts in developing tools and conducting consultation and data collection, such as interviews, focus group discussions, review of documents (existing policies, procedures, and practices), etc. A doable strategy would be developed through such process, and finalized after the consultation with the Department's higher authorities. In order to accomplish the HRDS an effective implementation structure and plan is strongly required which could be part of the HRDS. The table of contents for the proposed HRDS is shown in the next page.

Table of Contents of the HRDS (proposed)

- 1. Background**
 - 1.1 Introduction
 - 1.2 Purpose
 - 1.3 Context and Principles
 - 1.4 Policy provisions and legislative framework
- 2. Definition of Terms**
- 3. Vision, Mission, Values, and Goals**
 - 3.1 Vision
 - 3.2 Mission
 - 3.3 HRDS Values and Principles
 - 3.4 Strategic Goals
 - 3.5 Objectives of the Human Resource Development Strategy
- 4. Key Priority Areas and Strategies**
 - 4.1 Resource Allocation
 - 4.2 Recruitment, Induction and Retention
 - 4.3 Capacity Building
- 5 Stakeholder Analysis**
- 6 Risk Analysis and Mitigation**
- 7 Institutional Framework**
- 8 Monitoring and Evaluation**
- 9 Conclusion**
- 10 Glossary**

Annex

Annex

Workshops conducted for the development of the Human Resource Development Strategy

The following is the program and participant lists of 3 workshops held in 2017 for the development of the Human Resource Development Strategy:

Program of One Day Workshop on “Human Resource Development Strategy”

May 23, 2017

Hotel Indus Hyderabad

Sr. #	Topic	Method	Time	Responsibility
1	Registration of Participants		10:15 AM	IRM
2	Recitation from Holy Quran		10:30 AM	Dr. S Noman Ali
3	Participants Intro		10:35 AM	All
4	Background of the workshop	Oral talk	10:45 AM	Mr. Hiroshi OKABE
5	Workshop Objectives		10:55 AM	IRM
6	What is Strategy? Human Resource Development Strategy	Presentation on overview of Strategic Plan; what why and how? Plenary session: Expectations of the groups; why to train the staff on HRD strategy?	11:10 AM	Facilitator
7	Tea Break		11:40 AM	All
8	Important Factors affecting Human Resource	Group work; Divide participants into 4 groups 1). Internal factors (Strengths and Weaknesses) 2). External Factors (Opportunities and Challenges) Group presentation	12:00 NN	Facilitator
9	Open Discussion on development of HRDS	Based on the previous exercise, summarize the key issues and way forwards for HRDS	01:00 PM	Facilitator
10	Contents of the HRDS	Detail discussion to set contents for the HRDS	02:00 PM	Facilitator
11	Conclusion	Oral Talk	02:50 PM	Project Manager/JICA
12	Lunch	-	03:00 PM	All

Program of Two Day Workshop on “Human Resource Development Strategy”

September 20 and 21, 2017

Hotel Indus Hyderabad

Time	Sessions / Topic	Responsibility
DAY-01		
10.00	Session-01 Inauguration, Introduction, welcome speech, objective sharing, setting norms, expectation and fears, sharing of training methodology,	Kashif Siddiqui
10:15 - 11:30	Session-02 Current Staffing Analysis - Presentation by CBU - Discussion and categorization - Further required data/ action points	Noor Bajeer
11:30 -11:45	Tea Break	
11:45 -1:15	Session-03 SDGs and policy analysis - Linking with SDGs - What, Why and How - Link with other policies - Further required data/ Action points	Noor Bajeer
1:15 - 2:15	Lunch Break	
2:15 – 3:15	Session-04 Gap Analysis - Review of JD - Current role v/s Desired role - New/ desired skills - Further required data/ action points	Noor Bajeer
3:15 – 3:30	Tea Break	
3: 30 - 4:30	Continue	Noor Bajeer
4:30 - 5:30	Evaluation of the day	Kashif Siddiqui
DAY-02		
9:00 – 9:30	Session-05 Re-Cap of Previous Day	Kashif Siddiqui
9:30 – 10:30	Session-06 Stakeholder Analysis - Stakeholder Identification (in and outside dept) - Stakeholder's role in HRD - Interest and influence of SHs - Further required data/ Action points	Noor Bajeer
10:30 – 11:30	Session-07 Risk Analysis - Identification of risks - Categorization of risks - Further required data/ action points	Noor Bajeer
11:30 – 11:45	Tea Break	
11:45 – 1:00	Session-8 Gender analysis - Gender analysis exercise - Further required data/ action points	Noor Bajeer
1:00 – 2:00	Lunch Break	
2:00 – 3:15	Session-9 Orientation on Tools / Questionnaire (already developed by IRM / RP)	Noor Bajeer
3:15 – 4:00	Session 10 Homework/ Assignments	Noor Bajeer
4:00 – 4:15	Tea Break	
4:15 – 5:00	Session-11 Evaluation of the workshop	Kashif Siddiqui

Program of Three Day Workshop on “Human Resource Development Strategy”

October 16 - 18, 2017

Hotel Indus Hyderabad

Time	Sessions / Topic	Methodology	Responsibility
DAY-01			
10:00-10.30	Inauguration, Introduction, welcome speech, objective sharing, setting norms, sharing of training methodology	Plenary, round discussion	
10:30 - 11:30	Vision, Mission, Goal setting of the HRD strategy	Brainstorming, buz group, plenary session	Noor Bajeer
11:30 -11:45	Tea Break		
11:45 -1:15	Group work/ practical exercise	Group work and presentation	Noor Bajeer
1:15 - 2:15	Lunch Break		
2:15 - 3:30	Setting Target/Outcome, Output	Plenary, discussion, Individual exercise	Noor Bajeer
3:30 - 3:45	Tea Break		
2:15 – 3:15	Group Exercise / Practical	Group work and presentation	Noor Bajeer
4:45 - 5:00	Assignment and Evaluation of the Day	individual work	Noor Bajeer
Day 2			
9:00 - 9:45	Group Presentations	Presentations	
9:45 - 10:30	Key Principles of Human Resource Development Strategy	Plenary, group work	Noor Bajeer
10:30 - 10:45	Tea Break		
10:45 - 11:45	Guidelines for Human Resource Allocation	Plenary, group work	Noor Bajeer
11:45 - 1:15	Group work/ practical exercise	Group work and presentations	Noor Bajeer
1:15 - 2:15	Lunch Break		
2:15 - 3:30	Implementation Mechanism; Role and Functions of CBU/ HR Unit	Brainstorming, plenary, Group work	Noor Bajeer
3:30 - 3:45	Tea Break		
3:45 - 4:45	Conflict Resolution / Grievance Redressal and Complaint Mechanisms	Group work and presentations	Noor Bajeer
4:45 - 5:00	Evaluation of the day and Assignment		
Day 3			
9:00 - 9:30	Group Presentations	Presentations	
9:30 - 10:30	Developing 4 years work plan	Group work	Noor Bajeer
10:30 -10:45	Tea Break		
10:45 - 12:00	Risk Analysis and Mitigation measures	Group work and presentations	Noor Bajeer
1:15 - 2:15	Tea Break		
2:15- 3:30	Communication & Coordination Mechanism	Group work and presentations	Noor Bajeer
3:30 - 3:45	Tea Break		
3:45 - 4:30	Monitoring / Supervision, Evaluation and Appraisals Mechanism	Group work and presentations	Noor Bajeer
4:30 - 5:00	Workshop evaluation, action plan		Noor Bajeer

List of the Participants

One day Workshop (May 23, 2017)

S.No	Name	S/O	Education	District
1	Dr Kirshan	Pooro Mal	DVM	Badin
2	Dr M.Mubarak Jatoi	Rehmatullah	MSC (Hons)	Hyderabad
3	Dr Arshad Hussain	Muhammad Siddique	DVM	Hyderabad
4	Dr Ali Akhtar Shahani	Habibullah	MSC(Hons) DVM	Hyderabad
5	Dr Jamil Sheikh	Muhammad Saleh	MS	Karachi
6	Dr Ghulam Rasool Jatoi	Sono Khan	DVM, MSC	Hyderabad
7	Dr Hizbullah Bhutto	Arz Muhammad	MSC(Hons) DVM	Larkana
8	Dr Lal Bux	Bilawal	DVM	Tando Jam
9	Dr Hidayatullah Memon	Khuda Dino Memon	DVM	Hyderabad
10	Dr Om Prakash	Uttam Chand	DVM (Hons)	Tando Jam
11	Dr Iqtadar Ali	Muhammad Ismail	MSC	Hyderabad
12	Dr Zuhair Sarwar	Ghulam Sarwar	DVM, Msc	Hyderabad
13	Dr Ruksana Vighio	Umar Din Vighio	MSC	Hyderabad
14	Dr Syed Noman Ali	Syed Sibtey Ali	MSC	Karachi
15	Dr Abdul Manan KhoKhar	Abdullah	M.Phil	Hyderabad
16	Dr Salah ud Din	Abdullah Shah	DVM, Msc	Karachi
17	Dr Aslam Parvez	Allah Bachayo	Ph.D	Hyderabad
18	Dr Nobat Khan Khoso	Yar Muhammad	MSC(Hons) DVM	Hyderabad
19	Dr Ali Gohar	M. Ramzan Mangi	DVM	Dadu
20	Dr Kewal Ram	Assar Mal	DVM	Karachi
21	Dr Zakir Hussain	Ghulam Ali	DVM	Hyderabad
22	Dr Asadullah Shah Syed	Syed Ali Shah Bukhari		Karachi
23	Dr Habibullah Bhutto	Muhammad Bux	DVM	Dadu
24	Dr Munir Ahmed	Qalandar Bux	MSC(Hons) DVM	Khairpur
25	Dr Muzaffar Ali	Noor Muhammad	DVM	Sukkur
26	Dr Ahtesham-ul-Haq	Rana Siraj-ul-Haq	DVM	Khairpur Mirs

Two day workshop (September 20 and 21, 2017)

S.No	Name	S/O	Education	District
1	Dr Zakir Hussain	Ghulam Ali	DVM	Hyderabad
2	Dr Kirshan	Pooro Mal	DVM	Badin
3	Dr Iqtadar Ali	Muhammad Ismail	MSC	Hyderabad
4	Dr Muzaffar Ali	Ghulam Hussain	DVM	Hyderabad
5	Dr Om Prakash	Uttam Chand	DVM (Hons)	Tando Jam
6	Dr Abdul Manan	Abdullah	M.Phil	Tando Jam
7	Dr Salah ud Din	Abdullah Shah	DVM, Msc	Karachi
8	Dr Syed Noman Ali	Syed Sibtey Ali	MSC	Karachi
9	Dr Hizbullah Bhutto	Arz Muhammad	MSC(Hons) DVM	Larkana
10	Dr Ali Gohar	M. Ramzan Mangi	DVM	Dadu
11	Dr Hidayatullah Memon	Khuda Dino Memon	DVM	Hyderabad
12	Dr Noor-un-Nisa Mari	Ali Sher	DVM, MSC	Hyderabad
13	Dr Ghulam Rasool Jatoi	Sono Khan	DVM, MSC	Hyderabad
14	Dr Ahtesham-ul-Haq	Siraj-ul-Haq Rana	DVM	Khairpur Mirs
15	Dr Lal Bux	Bilawal	DVM	Tando Jam
16	Dr Munir Ahmed	Qalandar Bux	MSC(Hons) DVM	Khairpur Mir's
17	Dr Ruksana Vighio	Umar Din Vighio	MSC	Hyderabad

S.No	Name	S/O	Education	District
18	Dr Ali Akhtar Shahani	Habibullah	MSC(Hons) DVM	Hyderabad
19	Dr Kewal Ram	Assar Mal	DVM	Karachi

Three day Workshop (October 16 – 18, 2017)

S.No	Name	S/O	Education	District
1	Dr Ali Akhtar Shahani	Habibullah	MSC(Hons) DVM	Tando jam
2	Dr Iqtadar Ali	Muhammad Ismail	MSC	Hyderabad
3	Dr M.Mubarak Jatoi	Rehmattullah	MSC (Hons)	Hyderabad
4	Dr Arshad Hussain	Muhammad Siddique	DVM	Hyderabad
5	Dr Syed Noman Ali	Syed Sibtey Ali	MSC	Karachi
6	Dr Toqeer-ur-Rehman	Abdul Rehman	Msc	Karachi
7	Dr Abdul Sattar Junejo	Haji Khan Muhammad	DVM	Khairpur
8	Dr Ahtesham-ul-Haq	Rana Siraj-ul-Haq	DVM	Khairpur Mirs
9	Dr Munir Ahmed	Qalandar Bux	Msc(Hons) DVM	Khairpur
10	Dr Nobat Khan Khoso	Yar Muhammad	Msc(Hons) DVM	Hyderabad
11	Dr Ghulam Rasool Jatoi	Sono Khan	DVM, Msc	Hyderabad
12	Dr Zakir Hussain	Ghulam Ali	DVM	Hyderabad
13	Dr Zulifqar Ali Mughul	Sarfraz Khan	N/A	Sukkur
14	Dr Hizbullah Bhutto	Arz Muhammad	Msc(Hons) DVM	Larkana
15	Dr Ali Gohar	M. Ramzan Mangi	DVM	Dadu
16	Dr Lal Bux	Bilawal	DVM	Tando Jam
17	Dr Hidayatullah Memon	Khuda Dino Memon	DVM	Hyderabad
18	Dr Ruksana Vighio	Umar Din Vighio	MSC	Hyderabad
19	Dr Noor-un-Nisa Mari	Ali Sher	DVM, Msc	Hyderabad
20	Dr Salah ud Din	Abdullah Shah	DVM, Msc	Karachi
21	Dr Kirshan	Pooro Mal	DVM	Badin
22	Dr Kewal Ram	Assar Mal	DVM	Karachi

The following is the program and participant lists of one day workshop held in May 2018 for the finalization of the draft CBS:

S. N	Time	Description	Responsibility
1	09:30 AM	Registration	All
2	10:00 AM	Participants Intro	All
3	10:10 AM	Welcome Words & Norms	IRM
4	10:20 AM	Workshop Background & Objectives	JICA
5	10:30 AM	Presentation on CBS Draft	JICA/RP
6	11:00 AM	Tea Break	All
8	11:20 PM	Open Discussion (Feedback & Suggestion)	RP
9	01:30 PM	Lunch & Prayer Break	All
10	02:30 PM	Summary of the Results of the Discussions	RP
11	03:00 PM	Concluding Remarks	JICA
12	03:15 PM	Vote of Thanks	IRM
13	03:30 PM	Close of the Event with Tea	All

List of the Participants

Sr. #	Name	Designation
01	Dr. Ahtesham-ul-Haq Rana	Director, Animal Husbandry Sindh Hyderabad
02	Dr. Parkash Dewani	Director, Veterinary Research & Diagnosis CVDL Sindh T. jam
03	Dr. Muzafer Ali Vighio	Director Livestock Research/Extension Hyderabad
04	Dr. Shah Murad Brohi	Disease Investigation Officer AH Hyd
05	Dr. Ghulam Sarwar Dero	Deputy Director, LS/AH Hyderabad
06	Dr. Jai Kumar	Deputy Director, LS/AH Matiari
07	Dr. Mazhar Ali Rind	Deputy Director, LS/AH Tando Allahyar
08	Dr. Ali Akhtar Shahani	CP JICA Project Hyderabad
09	Dr. Iqtidar Ali Memon	CP, JICA Project Hyderabad
10	Dr. Arshad Hussain Khanzada	SVO AH Hyderabad
11	Dr. Kewal Ram	Deputy Director LS/AH Badin
12	Dr. Rukhsana Vighio	Chair Person CBU Hyderabad
13	Dr. Noor-un-Nisa Mari	Technical Officer DG LS Hyderabad
14	Dr. Abdul Mannan Khokhar	VO AH Hyderabad
15	Dr. Hidayatullah	Deputy Director Poultry Matiari
16	Dr. Liaquat Ali Abro	Senior Veterinary Officer, SBBYDP, Hyderabad
17	Dr. Zahid Hussain Memon	I/C Research & Training Institute, Tando Muhammad

Appendix Z4-1 Action Plan for 3 Years from July 2020

Japan International Cooperation Agency

Livestock and Fisheries Department, Government of Sindh

The Project on Sustainable Livestock Development for
Rural Sindh

**The Action Plan for 3 Years
From July 2020**

January 2020

By the Team of PSLD

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1. Background of why this Action Plan has been prepared

1.1 Implementation of the PSLD

(1) Master Plan Study

Livestock is the largest sub-sector of agriculture in Pakistan, contributing 11.4 percent to overall GDP of the country. Due to climatic change and water shortage livestock plays vital role particularly in rural economy and livelihood of rural poor farmers in Sindh Province. It is a source of cash income, food security and sometimes as an asset for rural and marginalized people.

There are 6.92 million cattle, 7.34 million buffaloes, 3.96 million sheep, 1.26 million goats, and 278 thousand camels in Sindh according to the Livestock Census 2006. These huge numbers of livestock are one of the significant potentials for livestock development, in terms of high production capability, various genetic resources, large amount of food resources, huge value of liquid asset, etc. These potentials should be fully exploited for the development of the livestock sector in Sindh.

Hence in response to the request from the Government of the Pakistan, the Government of Japan decided to conduct the "The Project for the Master Plan Study on Livestock, Meat and Dairy Development in Sindh Province". The Project was entrusted to Kaihatsu Management Consulting, Inc. in Japan through the Japan International Cooperation Agency (JICA) in 2010.

(2) The Project on Sustainable Livestock Development for Rural Sindh (PSLD)

Based on the findings of the Master Plan Study, the Project on Sustainable Livestock Development for Rural Sindh (PSLD) was formulated and implemented in collaboration with the Livestock and Fisheries Department, Government of Sindh and Japan International Cooperation Agency (JICA), Government of Japan, with the project objective of establishing the foundations; namely livestock technologies, human resources, and institutions for sustainable livestock sector development in Sindh province. The Project was initiated in February 2014 and implemented in 5 pilot districts, namely Matiari, Hyderabad, Tando Muhammad Khan, Tando Allahyar and Badin. The long-term objectives of the Project are improvement of productivity of milk and increase of income of small and medium scale dairy farmers in whole Sindh.

However, the number of cattle/buffaloes reared by small scale dairy farms is approximately only 2-5 animals per farm, which includes both adult cattle/buffalo, heifers and calves. Most of small-scale dairy farmers do not possess their own land. Under these conditions to run cost effective dairy farming is difficult. Based on these situations, the Project intended to produce the following four major outputs for achieving the project objective:

1. The appropriate technologies and management for livestock development are established through on-farm application at the pilot farms with gender consideration:
2. The methods for utilizing livestock resources are verified (e.g. salvation of buffalo calves, recycling of dry buffaloes, livestock sharing and livestock revolving).
3. The verified appropriate technologies and the methods for utilizing livestock resources are disseminated in the pilot districts.
4. The capacity of the Livestock Department for project planning, management, and coordination is strengthened.

1.2 Sustainability of the PSLD

The Project has been successfully implemented and was able to achieve most of the targets as explained below. To expand the project outcomes further in the pilot districts and in the other districts of the Province, it is now expected that the project activities be continued. Hence this Action Plan for 3 years after the completion of the project period; namely June 2020, has been prepared to ensure the project sustainability by focusing on the 5 pilot districts.

The proposal on the restructuring of the Livestock Department is now under the review by the Sindh government. We expect that the restructuring proposal be approved and implemented in the fiscal year of 2020/21, and therefore this Action Plan including cost estimation has been prepared with the assumption that the project activities would be continued with the current implementation structure of the Project in the first year, and with the proposed restructured structure of the Livestock Department as non-development activities in the second and third years.

1.3 Major Achievements and the Activities to be Continued

The following is the summary of what the Project has mainly achieved so far, and what activities are expected to be continued for 3 years from July 2020:

1.3.1 Output 1 (development of appropriate technologies)

The Project focused on the development of appropriate technologies for dairy farming. The technologies developed by the Project are compiled as textbooks, guidelines and booklets for wider application and dissemination to professional technicians, and ultimately to the farmers.

To achieve the long-term objectives, 50 appropriate technologies have been verified by the Project. The technologies are ranked A (highly effective and easy to apply at farms), B (highly effective but not easy to apply at farms), and C (middle level effective and not easy to give guidance and apply at farms). The number of each technology is 20, 22 and 8, respectively.

Besides, 32 useful technologies that are effective for increasing milk production in the long term have been identified by the Project. In 2nd, 3rd and 4th year of the Project the training on appropriate technology for VOs and SAs working in the pilot districts was organized to increase their capacity.

During the Action Plan the training on appropriate technologies are planned for 25 VOs and 75 SAs to enhance their capacity and educate them as the successor technicians of the project counterparts.

It is a fact that livestock genetic improvement is not an easy task, it is a time to take actions/programs; hence the Project had taken the creative efforts to establish the livestock genetic improvement system by breeders for breeders in Sindh based on the model of the Livestock Improvement Association Japan. The development of the foundation of genetic improvement of Kundhi buffalo was initiated in January 2019, then the Kundhi Buffalo Breeder Association was established with the agreement of 8 breeders, registered about 500 heads of pedigrees, and demonstrated milk testing technology, but its operation is still preliminary stage.

During the Action Plan Kundhi Buffalo Breeders Association (KBBA) will be strengthened for livestock genetic improvement. The member of the Association will be increased, and the capacity of milk test technicians and breeders will be enhanced for sustainable activities.

To produce tangible results on the improvement of conception rate of animals, both technical guidance to dairy farmers and veterinary doctors are required in parallel. For dairy farmers, technical guidance on improvement

of nutritious condition of animals, heat detection and reduction of stress are needed. For the veterinary doctors, they are expected to obtain most essential basic knowledge and techniques in training on diagnosis and treatment of reproductive disorder and continue making efforts to accumulate their experiences at farms to improve their skills by themselves after training. The main objective of providing training to field veterinarian is to increase their capacity by improving their knowledge and diagnosis skills. Those qualified can be used as the skilled veterinarian trainers, who further train new technicians and provide quality veterinary services so that reproductive disorder issues can be reduced at livestock farms.

During the Action Plan the capacity of 45 veterinarians will be enhanced in diagnosis and treatment of reproductive disorders in cattle and buffalo in the 5 pilot districts.

By the Project, the project instructed local hoof cutting techniques to technicians from private sector Mr. Premo (TA district) and Khanoon (TMK district) and demonstrated regular hoof cutting model at the pilot farms (P/F). A total of 3 hoof cutting workshops were held in TA and TMK district.

During the Action Plan with the cooperation of 2 local technicians, 6 hoof-cutting workshops will be organized in 4 pilot districts in three years.

1.3.2 Output 2 (development of methods for utilizing livestock resources)

The Project established the Calf Salvation Center in the courtyard of the livestock Department in Hyderabad, aiming to salvage buffalo calves through application of appropriate technology to increase the livestock assets of small scale farmers. The Project brought female buffalo calves born in the cattle colony in Hyderabad to the Calf Salvation Center to rear for 3 months. The Project verified that the calf rearing technologies without mother, could achieve less than 10% mortality rate and 0.5 kg average daily gain. The Project then distributed 2 heads of 3 months old calves to small and medium scale farmers. Technical guidance/support such as regular vaccination, deworming and formula feed for growing the calves was provided for 6 months. At the age of 3 years, 1 buffalo out of 2 heads was returned to the Project. The project successfully verified the calf salvation model technically.

During the Action Plan 80 calves per year (240 calves in 3 years) will be reared at the Calf Salvation Center and distributed to beneficiaries for demonstrating and expanding this model to those interested to replicate as business.

1.3.3 Output 3 (dissemination of technologies and methods to farmers)

The developed appropriate technologies, particularly A-ranked technologies, have been disseminated to the farmers through the training by the project extension team. The project extension team consists of 1 master trainer (veterinarian), 2 male extension workers (para-veterinarians), and 2 female extension workers (veterinarians) in each district. All of them have been recruited and trained by the Project prior to the training to the farmers. The target number of the farmers was set at 3,000 (2,000 male and 1,000 female) while the targets achieved were 3,556 (2,346 male and 1,210 female).

The knowledge base of farmers was accordingly increased and contributed to the adaptation of the appropriate technologies. The project extension activities shall therefore be carried out after completion of the Project as per the same procedures and methodologies. During the Action plan appropriate technologies will be disseminated to another 3,000 small and medium scale livestock farmers (1,500 male and 1,500 female) in the 5 pilot districts.

1.3.4 Output 4 (capacity development of the Livestock Department for project management)

In the past the Department conducted training for capacity building of its officers from time to time, but it was not well planned for the purpose, resulting in scattered effects. To improve this situation, the Project established the Capacity building unit (CBU) for sustainably strengthening the capacity of the department officers in management and coordination of the projects and routine activities. For implementing training and other human resource development interventions strategically, the Capacity Building Strategy (CBS) was developed. The main responsibility of CBU is to plan, coordinate and monitor all training.

During the project period the CBU has trained 360 officers of the Department in 17 training themes including the development of 64 Master Trainers on the subjects of Project Management and Social Mobilization, and prepared the Standard Operating procedures (SOPs) for each project Output.

During the Action Plan 251 Department officers and officials will be trained for improving their management skills in 3 years.

2. Targets of the Action Plan (2020 – 2023)

The following is the summary of the targets to be achieved in 3 years by the implementation of the Action Plan:

- To increase the capacity of 15 VOs and 75 SAs on appropriate technologies in 5 pilot districts
- To increase the capacity of 45 veterinarian on diagnosis and treatment of reproductive disorders in cattle and buffalo.
- To strengthen Kundhi Buffalo Breeders Association (KBBA) for livestock genetic improvement
- To promote and replicate the calf salvation model by engaging stakeholders such as NGOs, commercial farmers, rural farmers, etc.
- To disseminate appropriate technologies to 3,000 farmers (1,500 male and 1,500 female).
- To build the capacity of 251 department officers and officials for improving their management skills.

3. Principles

The following is the principles adopted for the preparation of the Action Plan in each Output:

3.1 Output 1

- Disseminate appropriate technologies according to SOPs, textbooks, and manuals developed by the Project
- Adopt participatory approach and methodology for effective communication in the training
- Focus only on specific technology according to the relevant object in each training and workshop
- Ensure the use of effective extension training materials and manuals for easy understanding by technicians, extension workers and farmers
- Enhance the capacity of VOs in 8 areas of appropriate technologies and transfer the responsibilities of the project counterpart to VOs (successors) in the pilot districts
- Continue monitoring and guidance by the project counterparts in all 8 areas of appropriate technologies in the pilot districts
- Consider the demonstrations practically.
- Demonstrate the hoof cutting techniques to livestock farmers and technicians

3.2 Output 2

- Demonstrate to replicate the calf salvation model by private sectors
- Involvement only of interested stakeholders in calf salvation.
- Select the dairy farms for the purchase and management of calves according to the SOP.
- Achieve minimum mortality rate and improve daily weight gain of calves
- Salvage buffalo calves from good potential mothers in dairy cattle colony

3.3 Output 3

- Replication of the project extension activities in the pilot districts
- Follow the SOP for extension activities
- Motivate and mobilize the farmers to adopt appropriate technologies
- Accept small and medium scale farmers those are willing to learn from training
- Conduct training according to community and gender
- Be flexible in conducting training sessions for community according to seasonal availability of farmers
- Select suitable venues for training participants

3.4 Output 4

- Select participants for training by considering the SOP and level of their careers
- Plan and implement training with outcome-oriented and need-based
- Update bio-data of the VOs and SAs of the Department
- Use of the trained manpower of the Department as much as possible for onward implementation of training

4. Action Plan

4.1 Main focus of the Plan

Based on the above targets and principles, the Action Plan has been prepared to be implemented in 3 years from July 2020. The Action Plan is shown from page 7. The main focuses of each Output are summarized as follows:

Output 1

There are the following 4 major activities:

- 1) Training on appropriate technologies will be provided to VOs and SAs as the successor technicians of the project counterparts.
- 2) Kundhi Buffalo Breeders Association (KBBA) will be strengthened for further livestock genetic improvement.
- 3) Technical guidance on diagnosis and treatment of reproductive disorders will be provided to dairy farmers and veterinary doctors to improve conception rate of animals.
- 4) With the cooperation of 2 local technicians, hoof-cutting workshops will be organized.

Output 2

The Calf Salvation Center of the Project will be operated aiming to demonstrate and expand the verified model of the Project to the private sector, those interested to replicate as business. Consequently large number of calves will be salvaged.

Output 3

The same procedures and methodologies of the Project will be applied for the dissemination of appropriate technologies to small and medium scale farmers, expecting that the number of the farmers regularly adopting the technologies be increased.

Output 4

Training and other human resource development interventions will be conducted by the CBU in accordance with the CBS to strategically improve the management skills of the Department officers and officials.

4.2 Cost of the Action Plan

The estimated costs for the Action Plan are summarized below.

Heading	1 st year	2 nd Year	3 rd year	Total
Cost for implementing the activities				
Output 1	15,160,854-00	16,226,104-00	18,353,082-00	49,740,040-00
Output 2	11,933,960-00	7,557,396-00	8,648,973-00	28,140,329-00
Output 3	10,857,560-00	12,599,610-00	13,072,610-00	36,529,780-00
Output 4	6,213,000-00	3,882,000-00	4,587,000-00	14,682,000-00
(sub-total)	44,165,374-00	40,265,110-00	44,661,665-00	129,092,149-00
Other related expenses	44,301,716-00	47,429,468-00	49,893,058-00	141,624,242-00
Total	88,467,090-00	87,694,578-00	94,554,723-00	270,716,391-00

The estimated costs are divided into 2 parts; i) the cost for implementing the planned activities of each Output such as TA/DA and fuel for field works, material purchase, etc., and ii) the cost for the other related expenses, namely i) pay to the officers/officials, ii) office expenses such as stationary, telephone charges, utilities, iii) purchase of medicines, etc., iv) repair, and v) TA/DA and fuel for field supervision. The details of the Action Plan with cost estimate are attached in the next pages.

It is noted again that the assumption is that the restructuring of the Department would be completed by the end of the 1st year. All the costs for the 2nd and 3rd years would be incorporated into the regular budget of the Department accordingly.

4.2.1 Action Plan with Cost Estimate for the Activities

Output 1

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
Subject: Training on Appropriate technologies									
1	Training on Appropriate technologies in five pilot districts	10 trainings (20 participants per training) Total 200 Participants	1 st Year	Project Manager/Deputy Director / Counterpart	Livestock Department	VOs & SAs from pilot Districts	11,355,018-00	Budget Nomination of non-interested VOs/SAs Transfer of trained manpower	
			2 nd Year	Director Livestock Training	Technology Development Officer		11,354,546-00	Successor technicians, activity may be suspended	
			3 rd Year	Director Livestock Training	Technology Development Officer		13,057,728-00		

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
Subject: Feeding Management									
2	Workshop on hoof cutting	75 (15 from each pilot district)	1 st Year	Livestock Department Counterparts	Livestock Department Counterparts	local Technician livestock Attendants Farmers.	410,537-00	-do-	
			2 nd Year	Director Extension	Technology Development Officer		472,118-00	-do-	
			3 rd Year	Director Extension	Technology Development Officer		236,000-00	-do-	

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
Subject: Animal Reproduction									
3	Conducting Training on Diagnosis and Treatment of Reproductive Disorders in Female animal (one week)	15 (3 from each pilot district)	1 st Year	DAB/ Project Manager/ Counterpart & sub C/P	Livestock Department	Public & private field Vets from pilot Districts	898,803-00	Budget Political & Social influence C/P transfer/ engaged on other assignments Refusal from Farmer side	
			2 nd Year	Director Animal Breeding	Technology Development Officer		1,033,624-00		
			3 rd Year	Director Animal Breeding	Technology Development Officer		1,188,667-00		
4	Refresher course (one week).	15 (3 from each pilot district)	1 st Year	PM/C/P & Sub C/P	Livestock Department	-do-	719,963-00	-do-	
			2 nd Year	Director Animal Breeding	Technology Development Officer	-do-	827,958-00		
			3 rd Year	Director Animal Breeding	Technology Development Officer	-do-	952,152-00		
5	Final evaluation result and certification (Three days).	15 (3 from each pilot district)	1 st Year	PM/C/P & Sub C/P	Livestock Department	-do-	408,308-00	-do-	
			2 nd Year	Director Animal Breeding	Technology Development Officer	-do-	469,555-00		
			3 rd Year	Director Animal Breeding	Technology Development Officer	-do-	539,988-00		
6	Guidance and monitoring of trainees in field activities (15days i.e.	15 (3from each pilot district)	1 st Year	No data	No data	-do-	627,255-00	-do-	
			2 nd Year	Director Animal Breeding	Technology Development Officer	-do-	721,344-00		
			3 rd Year	Director Animal Breeding	Technology Development Officer	-do-	829,545-00		

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
	3 days in each pilot district)								

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
Subject: Livestock Genetic Improvement									
7	Pedigree registration of new members and carry on milk test.	15 Kundhi Breeders and 05 Red Sindhi Breeders	1 st Year	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	Kundhi and Red Sindhi Breeders	481,548-00	CP transferred and delayed budget Suspension of activities Cost shall be increased from second year due to inflation rate (15%)	Technical support/ through Email
			2 nd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer	-do-	1,048,623-00		
			3 rd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer		1,205,916-00		
8	Organize Breeder workshop on sensitization of Livestock Genetic Improvements	Two Breeder Workshop in each Pilot District	1 st Year	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	Kundhi and Red Sindhi Breeders	154,725-00	Transport Non availability of required fund Suspension of activities Cost shall be increased from second year due to	-Do-
			2 nd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer		177,934-00		

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
			3 rd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer		204,624-00	inflation rate (15%)	
9	Organize the training for inspectors who perform milk test and pedigree registration once in the year.	One time in the Year at Pilot Districts	1 st Year	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	DAB Counterpart Sub counterpart Milk Inspectors/ KBBA	Milk New technicians	104,697-00	Transport Non availability of required fund Suspension of activities	-Do-
			2 nd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer	-Do-	120,402-00	Cost shall be increased from second year due to inflation rate (15%)	
			3 rd Year	Director Animal Breeding, Association (KBBA)	Breed improvement Officer, Veterinary instructor, Deputy Director Progeny testing officer	-Do-	138,462-00	Cost shall be increased from second year due to inflation rate (15%)	

Output 2

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
1	Rearing of calves for three months in CSC	150	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	150 Small and Medium Scale farmer	1,965,333-00	Activities will suffer due to unavailability of funds.	
			2nd Year	Director Animal Husbandry	VO/Technical Officer		2,260,133-00		
			3rd Year	Director Animal Husbandry	VO/Technical Officer		2,599,153-00		
2	Rearing of calves for three months in CSC through MFB	60	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	60 Small and Medium Scale farmer they have capacity to return bank loan	1,132,741-00	Suspension of activities in case of Dis-approval from the relevant authorities	
			2nd Year	Director Animal Husbandry	VO/Technical Officer		1,302,652-00		
			3rd Year	Director Animal Husbandry	VO/Technical Officer		1,498,050-00		
3	Rearing of calves for one month	30	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	30 Small and Medium Scale farmer have fresh milking animal	413,173-00	Un-Availability of Fresh milking animal at beneficiary farms cause low weight gain and high mortality	
			2nd Year	Director Animal Husbandry	VO/Technical Officer		475,149-00		
			3rd Year	Director Animal Husbandry	VO/Technical Officer		546,421-00		
4	Replicate Calves rearing for three months on private/commercial farms	12	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	Calves rearing farmers	Cost will be born by the farmers		
			2nd Year	Director Animal Husbandry	VO/Technical Officer				
			3rd Year	Director Animal Husbandry	VO/Technical Officer				
5	Seminar/ Workshop on calf rearing	6	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	120 beneficiaries attend the seminar (Representative of NGOs, MF Bank, Commercial farmers, Rural Farmer, Progressive farmer)	197,250-00		
			2nd Year	Director Animal Husbandry	VO/Technical Officer		226,838-00		
			3rd Year	Director Animal Husbandry	VO/Technical Officer		260,863-00		

No.	Name of activity	Tangible target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
6	Field farmer days for awareness for calf salvation	72	1st Year	CP Livestock Asset	CP s, VO PC-1, VO Dept.:	1440 beneficiaries/ Villager attend the field day	480,000-00		
			2nd Year	Director Animal Husbandry	VO/Technical Officer		552,000-00		
			3rd Year	Director Animal Husbandry	VO/Technical Officer		634,800-00		
7	Daily Allowance of Output 2		1st Year				627,840-00		
			2nd Year				690,624-00		
			3rd Year				759,686-00		
8	POL (Transportation of calves, CPs visit)		1st Year				1,800,000-00		
			2nd Year				2,050,000-00		
			3rd Year				2,350,000-00		
9	Construction of calf salvation centre	Constructed in 1st year	1st year				5,317,623-00		
			2nd year				-		
			3rd year				-		

Output 3

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts				
1	Preparation of Farmers Training. i) Selection of Village	In 75 villages of 5 Districts (15villages per District)	1 st Year	10 Days each District	Extension Team Leader	Extension Team	25 Villages (5 Village per District)	T.A=387,200 P.O.L=125,000	Selection of villages may be delayed due to agriculture activities				
			2 nd Year	10 Days each District	Deputy Director Field Extension Services	Master Trainer & Extension Workers	25 Villages (5 Village per District)	T.A=487,200 P.O.L=135,000					
			3 rd year	10 Days each District	Deputy Director Field Extension Services	Master Trainer & Extension Workers	25 Villages (5 Village per District)	T.A=487,200 P.O.L=145,000					
		ii) Social Mapping	In 75 villages of 5 Districts (15villages per District)	1 st Year	5Days each District	Extension Team Leader	Extension Team	25 Villages (5 Village per District)			T.A=193600 P.O.L=62,500	Selection of villages may be delayed due to agriculture activities	
				2 nd Year	5Days each District	Deputy Director Field Extension Services	Master Trainer & Extension Workers	25 Villages (5 Village per District)			T.A=193600 P.O.L=67,500		
				3 rd year	5Days each District	Deputy Director Field Extension Services	Master Trainer & Extension Workers	25 Villages (5 Village per District)			T.A=193600 P.O.L=72,500		
		iii) Sensitization Meeting a. Male Farmers	In 75 villages to Register 1500 Male Farmers (300 Farmers in each Districts)	1 st Year	5Days each District	Extension Team Leader	Extension Team	100 Male Farmers in each District			T.A=193600 P.O.L=62,500	-do-	
				2 nd Year	5 Days Each District	D. Director Field Extension Services	Master Trainer & Extension Workers	100 Male Farmers in each District			T.A=193600 P.O.L=67,500		
				3 rd year	5Days each District	D. Director Field Extension Services	Master Trainer & Extension Workers	100 Male Farmers in each District			T.A=193600 P.O.L=72,500		
	b. Female Farmers	In 75 villages to Register 1500 Female Farmers (300 Farmers in each Districts)	1 st Year	5Days each District	Extension Team Leader	Extension Team	100 Female Farmers in each District	T.A=110,650 P.O.L=62,500	Villages may increase for Female activity where				
			2 nd Year	5Days each District	Deputy Director Field Extension Services	Master Trainer & Extension Workers	100 Female Farmers in each District	T.A=160,650 P.O.L=67,500					

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
			3 rd year	Extension Officer	Master Trainer & Extension Workers	100 Female Farmers in each District	T.A=160,650 P.O.L=72,500	male will refuse female trainings	
	iv) Baseline Survey	In all Villages from all farmers through questioner before starts training.	1 st Year	Extension Team Leader	Extension Team	200 Farmers in each Districts	T.A=580,800 P.O.L=187,500	Delay in Budget releasing may affect on extension activities	
			2 nd Year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	200 Farmers in each Districts	T.A=730,800 P.O.L=202,500		
			3 rd year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	200 Farmers in each Districts	T.A=730,800 P.O.L=217,500		
2	a. Farmer training on 8 Subjects a. Male Farmers	1500 Male Famers (300 Farmers in each Districts)	1 st Year	Extension Team Leader	Extension Team	100 Male Farmers in each District	T.A=748,800 P.O.L=500,000	Trainings sessions may be delayed due to agriculture and social activities	
			2 nd Year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	100 Male Farmers in each District	T.A=748,800 P.O.L=540,000		
			3 rd year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	100 Male Farmers in each District	T.A=748,800 P.O.L=580,000		
	b. Female Farmers	1500 Female Famers (300 Farmers in each Districts)	1 st Year	Extension Team Leader	Extension Team	100 Female Farmers in each District	T.A=899,200 P.O.L=500,000	-do-	
			2 nd Year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	100 Female Farmers in each District	T.A=1299,200 P.O.L=540,000		
			3 rd year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	100 Female Farmers in each District	T.A=1299,200 P.O.L=580,000		
3	Follow up		1 st Year		Extension Team		T.A=1548,800		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
		75 Villages (15 villages per District after one month completion of all Trainings in each Village)	40 Days each District	Extension Team Leader		200 Farmers in each Districts	P.O.L=500,000	Delay in Budget releasing may affect on extension activities	
			2 nd Year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	200 Farmers in each Districts	T.A=1628,800 P.O.L=540,000		
			3 rd year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	200 Farmers in each Districts	T.A=1628,800 P.O.L=580,000		
4	Monitoring of Farmers activities	5 to 10 samples per new village in each District After 6 Months after completion of 8 subjects trainings	10 Days each District	Extension Team Leader	Extension Team	125-250 among selected beneficiaries	T.A=324,800 P.O.L=125,000		
			2 nd Year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	125-250 among selected beneficiaries	T.A=421,300 P.O.L=135,000		
			3 rd year	Deputy Director Field Extension Services	Master Trainer & Extension Workers	125-250 among selected beneficiaries	T.A=421,300 P.O.L=145,000		
5	Monitoring of Extension Team activities	5 districts (2 times monitoring in each District per month)	135 days	Extension Team Leader	Extension Team Leader	25 Villages (5 villages per District)	T.A=606,960 P.O.L=506,200		
			2 nd Year	Deputy Director Field Extension Services	Deputy Director Field Extension Services	25 Villages (5 villages per District)	T.A=606,960 P.O.L=546,750		
			3 rd year	Deputy Director Field Extension Services	Deputy Director Field Extension Services	25 Villages (5 villages per District)	T.A=606,960 P.O.L=587,250		
6	Selection of Core Farmer	75 Farmers (25 from each District)	5 Days per District	Extension Team Leader	Extension Team Leader S. Mobilizer & MT	25 Core Farmer (5 in each District)	T.A=174,800 P.O.L=163,750		
			1 st Year	Deputy Director Field Extension Services	Deputy Director Field Extension Services & Master Trainer	25 Core Farmer (5 in each District)	T.A=174,800 P.O.L=168,750		
			2 nd Year	Deputy Director Field Extension Services					

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
7	Training Refresher course of Core Farmer	75 Farmers (25 from each District)	3 rd Year	Deputy Director Field Extension Services	Deputy Director Field Extension Services	25 Core Farmer (5 in each District)	T.A=174,800		
			1 st Year	Extension Team Leader	Extension Team Leader S. Mobilizer & MT	25 Core Farmer (5 in each District)	375,000-00		
			2 nd Year	Training Coordinator	Deputy Director Field Extension Services & Master Trainer	25 Core Farmer (5 in each District)	375,000-00		
8	Preparation of material for Core Farmer Training	3 times in all Years	1 st year	Extension Team Leader	Extension Team Leader		50,000-00		
			2 nd year	Training Coordinator	Training Coordinator		50,000-00		
			3 rd year	Training Coordinator	Training Coordinator		50,000-00		
9	Monthly Meeting of all Districts	One time Per month. 31 Extension staff	1 st Year	Extension Team Leader	Extension Team Leader	Extension staff 27	150,000-00		
			2 nd Year	Regional Director Extension Lower Sindh	Regional Director Field Extension Lower Sindh	Extension staff 32	200,000-00		
			3 rd Year	Regional Director Extension Lower Sindh	Regional Director Field Extension Lower Sindh	Extension staff 32	200,000-00		
10	Farmer Training Material Revised		Once	Regional Director Extension Lower Sindh	Regional Director Field Extension Lower Sindh & Training Coordinator		400,000-00		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
11	Extension team training (Orientation)	One time Per Year.	1 st year	Training Coordinator	Extension Team Leader	Extension staff 27	300,000-00		
			2 nd year	Regional Director Extension Lower Sindh & Training Coordinator	Regional Director Field Extension Lower Sindh & Training Coordinator	Extension staff 32	500,000-00		
			3 rd Year	Regional Director Extension Lower Sindh & Training Coordinator	Regional Director Field Extension Lower Sindh & Training Coordinator	Extension staff 32	350,000-00		
12	Extension Publicity Material	once	Director Media & Publicity	Director Media & Publicity		800,000-00			
13	Vaccination and Drenching of Animals	25 villages in 5 Districts	1 st Year	Deputy Directors of A.H	S.A and Extension Team	5000 Large Animals	Medicine=1200,000 T.A=218,400		Directorate of Animal Husbandry
			2 nd Year	Deputy Directors of A.H	S.A and Extension Team	5000 Large Animals	Medicine=1200,000 T.A=218,400		
			3 rd Year	Deputy Directors of A.H	S.A and Extension Team	5000 Large Animals	Medicine=1200,000 T.A=218,400		

Output 4

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
1.	(CBS 5.1.1 / Short-Term) Develop action plans on the basis of the prioritized needs and get approval for appropriate resources to organize the training events.	To approve developed action plans and funds allocation annually.	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	Chairperson CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	10,000-00 10,000-00 10,000-00	Delay in Release of Funds may delay this activity	
2.	(CBS 5.1.2 / Short-Term) Develop training calendar biannually based on recommendations of supervisors/training needs of VOs/SAs.	To approve Training calendar and share with VOs & SAs (bi) annually	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	Chairperson CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	10,000-00 10,000-00 10,000	Delay in TNA activity may delay this action Non interested participants recommendation	
3.	(CBS 5.1.3/ Short-Term) Organize training according to the developed action plans (Annexure "A")	08 Training courses 05 training courses 05 training courses	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU (Directors have budgetary allocation for development & non-development sides)	Chairperson CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	127 L/S Departmenta 1 officers officials 54 L/S Departmenta 1 officers officials 74 L/S Departmenta 1 officers officials	The total cost of courses in this year is Rs. 5180000 The total cost of courses in this year is Rs. 2520000 The total cost of courses in this year is Rs. 3420000	Improper Release of Budget	

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
4.	(CBS 5.1.4 / Short-Term) Develop information pack/ Information Education and Communication (IEC) materials for guidelines and resources for VOs and SAs to work effectively and efficiently.	6 (2/year) modules / brochures / leaflet / booklet, etc. of information pack/IEC material got printed and disseminated	July 2020 (1st year)	CBU	CBU Member (1 st year)	Livestock Department 1 officers and officials	200,000-00 (Printing cost)	Timely release of budget.	
			July 2021 (2nd year)		Director CBU Deputy Director CBU (2 nd and 3 rd year)		200,000-00 (Printing cost)		
			July 2022 (3rd year)				200,000-00 (Printing cost)		
5.	(CBS 5.1.5 / Short-Term) Develop social media groups/ WhatsApp to share latest information with VOs/ SAs to keep them updated.	100 posts will be shared on the social media groups i.e WhatsApp and Facebook. 100 posts will be shared 100 posts will be shared	July 2020 (1st year)	CBU	CBU Member (1 st year)	Livestock Department 1 officers and officials	36,000-00	Misuse of Social Media Groups	
			July 2021 (2nd year)		Director CBU Deputy Director CBU (2 nd and 3 rd year)		40,000-00		
			July 2022 (3rd year)				45,000-00		
6.	(CBS 5.1.6 / Mid-Term) Map out national & international institutes / projects / sites for capacity building / advance study / exposure visits of VOs and SAs and facilitate their application process.	15 national & international institutes / projects / sites / exposure visits will be identified 15 national & international institutes / projects / sites/exposure visits will be...	July 2020 (1st year)	CBU (The Secretary being Administrative Head of Department must be custodian of MoU between two organization s, i.e. CBU	CBU Member (1 st year)	Livestock Department 1 officers and officials	10,000-00 (Printing cost)	Delay in application process, Improper nomination of participants	
			July 2021 (2nd year)		Director CBU Deputy Director CBU (2 nd and 3 rd year)		15,000-00 (Printing cost)		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
		15 national & international institutes / projects / sites/exposure visits will be...	July 2022 (3rd year)	and an agency)			15,000-00 (Printing cost)		
7.	(CBS 5.1.7 / Mid-Term) Conduct follow-up meetings with concerned VOs/SAs to record impact of the CBS/Interventions.	03 meetings will be conduct 03 meetings will be conduct 03 meetings will be conduct	July 2020 (1st year) July 2021 (2 nd year) July 2022 (3rd year)	CBU (Not additional Directors concerned / Additional Directors concerned)	Chairperson CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	75,000-00 (25,000/ meeting) 90,000-00 (30,000/ meeting) 90,000-00 (30,000/ meeting)	Transport issue,	
8.	(CBS 5.1.8 / Mid-Term) Record feedback/learning through self-assessment exercise in follow-up meetings (not on quarterly) and share the same with CBU.	03 meetings will be conduct 03 meetings will be conduct 03 meetings will be conduct	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU (Not additional Directors concerned / Additional Directors concerned)	Chairperson CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	75,000-00 (25,000/ meeting) 90,000-00 (30,000/ meeting) 90,000-00 (30,000/ meeting)	Improper data may affect the results	
9.	(CBS 5.1.9 / Mid-Term) Develop database of all VOs and SAs and categorize staff skills, expertise and experience along with	Database developed and information of all the VOs & SAs updated	July 2020 (1st year) July 2021 (2nd year)	CBU	CBU Member (1 st year) Director CBU Deputy Director CBU	Livestock Departmenta 1 officers and officials	10,000-00 15,000-00	-do-	

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
	investment / training opportunities, exposure and special assignment detail.		July 2022 (3rd year)		(2 nd and 3 rd year)		15,000-00		
10.	(CBS 5.1.10 / Mid-Term) Keep record of all the action plans developed by individuals/VOs and SAs after each training / other intervention to make follow-ups and ensure implementation/utilization of the learnt skills.	Action plan will be submitted by all training participants. 09 follow-up events will be conducted (3 events /year)	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU (Not additional Directors concerned / Additional Directors concerned)	Chairperson CBU Members (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	150,000-00 200,000-00 200,000-00	-do-	
11.	(CBS 5.2.1 / Mid-Term) Develop directory of resource organizations conducting research at national and global level.	10 resource organizations will be identified and data input in the directory in each year.	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	CBU Member (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	25,000-00 30,000-00 30,000-00	The Dept. should officially utilize this document. Easy and short time for application process is necessary.	
12.	(CBS 5.2.2 / Mid-Term) Share research articles/literature with VOs through emails/social media and encourage them to write blogs/articles.	36 (12/year) research articles shared with VOs & SAs 6 (2/year) of articles/blogs written by VOs & SAs	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	CBU Member (1st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Departmenta 1 officers and officials	12,000-00 12,000-00 12,000-00	Cost of printing might increase every year. Timely availability of printing materials and timely release of budget is compulsory.	
13.	(CBS 5.2.3 / Mid-Term) Design and organize short courses on research	1 event / course will be conduct for 12 VOs	July 2020 (1st year)	CBU	Local training institute or university	Livestock Departmenta	Note: Amount already		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts	
	methods and writing research articles.	1 event / course will be conducted for 15 VOs	July 2021 (2nd year)			1 officers and officials	added in activity # 03 (In Annexure 3.6 and 3.13)			
14.	(CBS 5.3.1 / Short-Term) Equip CBU with technical staff and adequate human, financial, and technical resources to improve coordination for capacity building initiatives.	2 trainings for New staff of CBU 20 participants (10 in each training) in 2nd year	July 2021 (2nd year)	CBU	Local training institute	New CBU staff	Note: Amount already added in activity # 03 (In Annexure 3.9 and 3.10)	Restructuring of the CBU is needed before organizing this training course.		
15.	(CBS 5.3.2 / Short-Term) Conduct regular meetings fortnightly among CBU members to review the progress and identify gaps in implementation of the Capacity Building Strategy.	20 meetings will be conducted.	July 2020 (1st year)	CBU	Chairperson (1 st year)	CBU staff	100,000-00 (5,000/ Meeting)	Sometimes difficult to organize meetings biweekly because of official holidays and religious holidays or CBU members are busy in official assignments.		
		20 meetings will be conducted.	July 2021 (2nd year)		Director CBU (2nd and 3rd year)		100,000-00 (5,000/ Meeting)			
		20 meetings will be conducted.	July 2022 (3rd year)				100,000-00 (5,000/ Meeting)			
16.	(CBS 5.3.3 / Short-Term) Ensure merit-based nominations of VOs and SAs for training and other capacity building interventions.	6 times (2 times/year) pre-tests for various training topics will be organized.	July 2020 (1st year)	CBU	All CBU members (1 st year)	Livestock Departments 1 officers and officials	200,000-00			
			July 2021 (2nd year)				Director CBU Deputy Director CBU (2 nd and 3 rd year)			200,000-00
			July 2022 (3rd year)							200,000-00

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
17.	(CBS 5.3.4 / Short-Term) Conduct coordination meeting with different directorates and senior officials, and the CBS implementation committee for improving coordination and effective communication.	3 meetings (1 meeting/year) will be conduct.	July 2020 (1st year)	CBU	Chairperson CBU Members (1 st year)	Livestock Department 1 officers and officials	50,000-00	Needs unanimously decisions on CBS implementation Committee. The committee shall be composed of 10 members: (1 DG, 1 from Sindh Agri. Univ, 4 Ex Directors, 2 from CBU, 1 from IRM and 1 from RTD) as per CBS.	
			July 2021 (2nd year)		Director CBU Deputy Director CBU (2 nd and 3 rd year)		60,000-00		
			July 2022 (3rd year)				60,000-00		
18.	(CBS 5.3.5 / Short-Term) Develop Standard Operating Procedures (SOPs) for quality training/capacity building interventions.	SOP developed and conduct 02 days workshop to revise (12 Participants)	July 2021 (2nd year)	CBU	CBU Members	Livestock Department 1 officers and officials	200,000-00	SOP is not yet officially approved	
19.	(CBS 5.3.6 / Mid-Term) Establish relational database system for effective and efficient implementation of the Capacity Building Strategy.	Database developed and used for decision making	July 2020 (1st year)	CBU and Concerned Directors	CBU Members Data Key punch Operator (1 st year)	Livestock Department 1 officers and officials	20,000-00	Communication between the CBU and other Directorates is difficult. Need to consider a good system (not necessarily being a database).	
			July 2021 (2nd year)		Director CBU Deputy Director CBU (2 nd and 3 rd year)		25,000-00		
			July 2022 (3rd year)				25,000-00		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
20.	(CBS 5.3.7 / Mid-Term) Organize training events for CBU members	1 training event will be conducted for 10 participants in (1st year)	July 2020 (1st year)	CBU	Local training institute	CBU Members	Note: Amount already added in activity # 03 (In Annexure 3.8)		
21.	(CBS 5.3.8 / Mid-Term) Develop training policy/guidelines to ensure transparency and accountability in the training nomination process.	Training policy/guidelines developed and applied/compliance made.	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	All CBU members (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Department 1 officers and officials	40,000-00 50,000-00 50,000-00	SOP is not yet officially approved	
22.	(CBS 5.3.9 / Mid-Term) Organize TOT and topic-wise training to develop master trainers.	15 (Social Mobilization) and 15 (Project Management) Master Trainers will be developed in 1st year 10 (Social Mobilization) and 10 (Project Management) Master Trainers will be developed in 3rd year	July 2020 (1st year) July 2022 (3rd year) Refresher Event	CBU	Local training institute	DD / VO	Note: Amount already added in activity # 03 (In Annexure 3.4, 3.5 and 3.16)		

No.	Name of activity	Tangible Target	Schedule	Responsible Person	Implementers	Beneficiaries	Estimated Cost PKR.	Risk factors	Support needed by JICA experts
23.	(CBS 5.3.10 / Mid-Term) Develop database of internal and external trainers to engage them in different training events.	Database developed and trainer's information updated.	July 2020 (1st year) July 2021 (2nd year) July 2022 (3rd year)	CBU	CBU members (1 st year) Director CBU Deputy Director CBU (2 nd and 3 rd year)	Livestock Department 1 officers and officials	10,000-00 15,000-00 15,000-00	The database needs to be updated annually.	

4.2.2 Cost for the other related expenses

Other related expenses							
	Description	BPS	No. of Post	1st Year	2nd Year	3rd Year	Total
1	Project Manager	19	1	2,400,000	2,400,000	2,400,000	7,200,000
2	Deputy Project Manager	18	1	1,800,000	1,800,000	1,800,000	5,400,000
3	Veterinary Officer	17	5	2,255,700	2,594,055	2,983,163	7,832,918
4	Veterinary Officer CSC	17	1	439,140	505,011	580,763	1,524,914
5	Female Veterinary Officer	17	10	4,215,900	4,848,285	5,575,528	14,639,713
6	Social Mobilizer	17	1	466,740	536,751	617,264	1,620,755
7	Gender Specialist	17	1	466,740	536,751	617,264	1,620,755
8	Accounts Assistant	16	1	272,520	313,398	360,408	946,326
9	Data Key Punch Operator	11	2	391,440	450,156	517,679	1,359,275
10	Computer Operator	11	1	198,360	228,114	262,331	688,805
11	Stock Assistant	11	12	2,322,240	2,670,576	3,071,162	8,063,978
12	Junior Clerk	11	1	198,360	228,114	262,331	688,805
13	Laboratory Technicain	7	3	443,220	509,703	586,158	1,539,081
14	Driver	4	11	1,541,760	1,773,024	2,038,978	5,353,762
15	Naib Qasid	1	1	125,220	144,003	165,603	434,826
16	Chowkidar	1	1	125,220	144,003	165,603	434,826
17	Calf Attendent	1	4	467,820	537,993	618,692	1,624,505
18	Sweeper	1	3	351,300	403,995	464,594	1,219,889
19	House Rent Allowance			2,211,024	2,211,024	2,211,024	6,633,072
20	Coveyance Allowance			1,886,304	1,886,304	1,886,304	5,658,912
21	Medical Allowances			949,476	949,476	949,476	2,848,428
22	Integrated Allowance			-	-	-	-
23	Adhoc Relief Allowance 2013 @ 5%			152,244	152,244	152,244	456,732
24	Adhoc Relief Allowance 2015 @ 2.5%			213,408	213,408	213,408	640,224
25	Adhoc Relief Allowance 2016 @ 10%			867,012	867,012	867,012	2,601,036
26	Adhoc Relief Allowance 2017 @ 15%			1,695,168	1,695,168	1,695,168	5,085,504
27	Adhoc Relief Allowance 2018 @ 10%			1,130,232	1,130,232	1,130,232	3,390,696
28	Adhoc Relief Allowance 2019 @ 15%			1,695,168	1,695,168	1,695,168	5,085,504
29	Telephone Charges for Project Manager Office & District			800,000	800,000	800,000	2,400,000
30	Electronic Communication, EVO /			150,000	172,500	172,500	495,000
31	Courier & Pilot Service.			120,000	138,000	138,000	396,000
32	Utilities Bill (Electricity Charges)			1,200,000	1,200,000	1,200,000	3,600,000
33	Occupancy (Rent, Rate & Taxes)			500,000	500,000	500,000	1,500,000
36	TADA Supervision from the Project Office to the Districts including the farms.			2,000,000	2,000,000	2,000,000	6,000,000
41	P.O.L (Project Office, District Office, Generator, Project Monitoring Officer)			800,000	800,000	800,000	2,400,000
42	Stationary			200,000	230,000	230,000	660,000
43	Printing & Publication			800,000	920,000	920,000	2,640,000
44	Newspaper Periodicals & Books			100,000	115,000	115,000	330,000
45	Uniform & Aprons			150,000	150,000	150,000	450,000
46	Exhibition, Fairs & other National			600,000	690,000	690,000	1,980,000
47	Payment to other for service Rendered			200,000	230,000	230,000	660,000
49	Cost of other stores (Purchase of Antipartics & other Medicines, Veterinary Equipment, & ETC)			3,000,000	3,000,000	3,000,000	9,000,000
50	Computer Stationery			300,000	345,000	345,000	990,000
51	Other Misc: Charges.			800,000	920,000	920,000	2,640,000
61	Repair of Transport			2,200,000	2,530,000	2,530,000	7,260,000
62	Repair of Machinery & Equipments			400,000	460,000	460,000	1,320,000
63	Repair of Furniture & Fixture.			300,000	345,000	345,000	990,000
64	Repair of Computer Equipments			400,000	460,000	460,000	1,320,000
	Total			44,301,716	47,429,468	49,893,058	141,624,242

