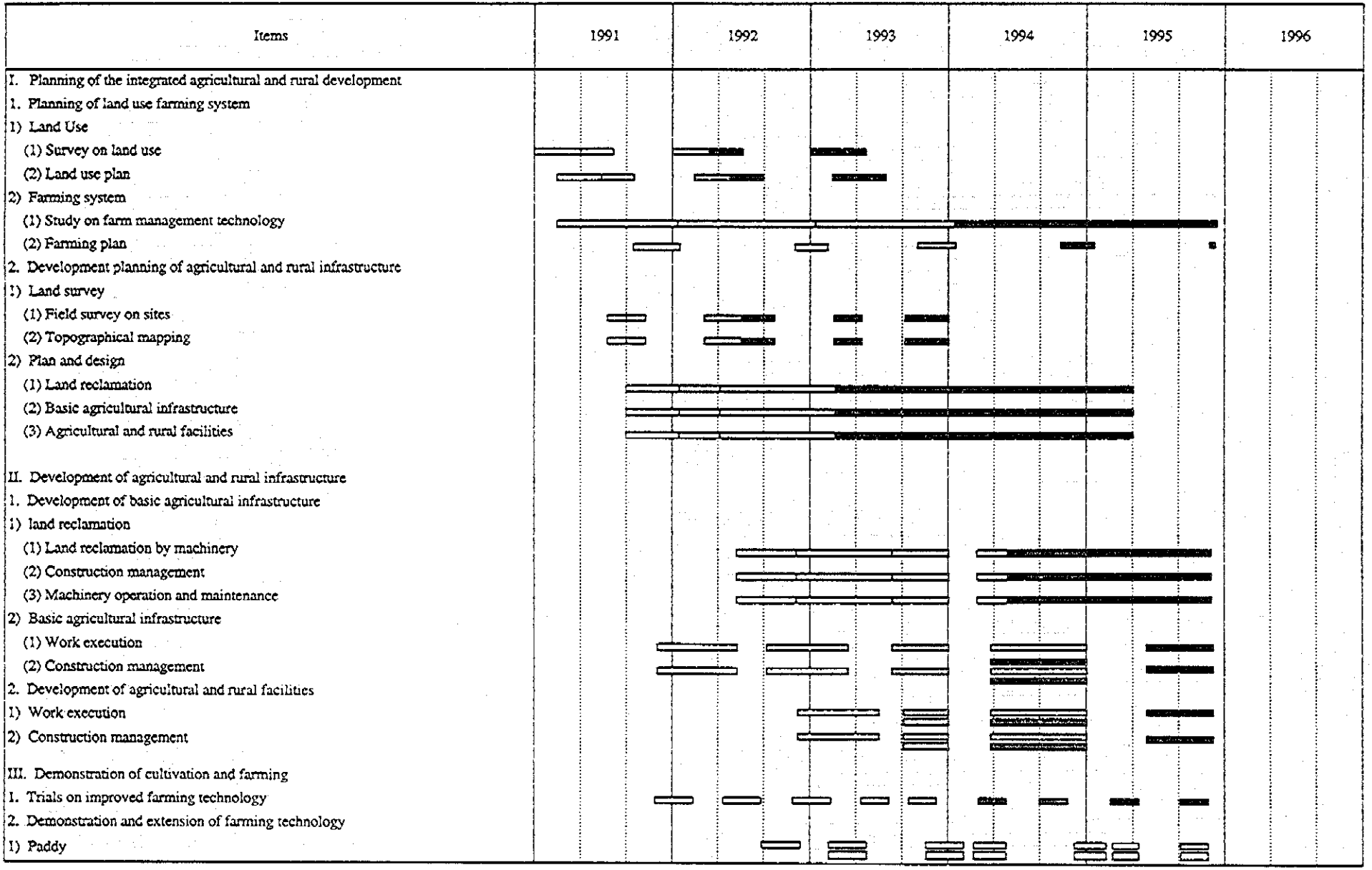
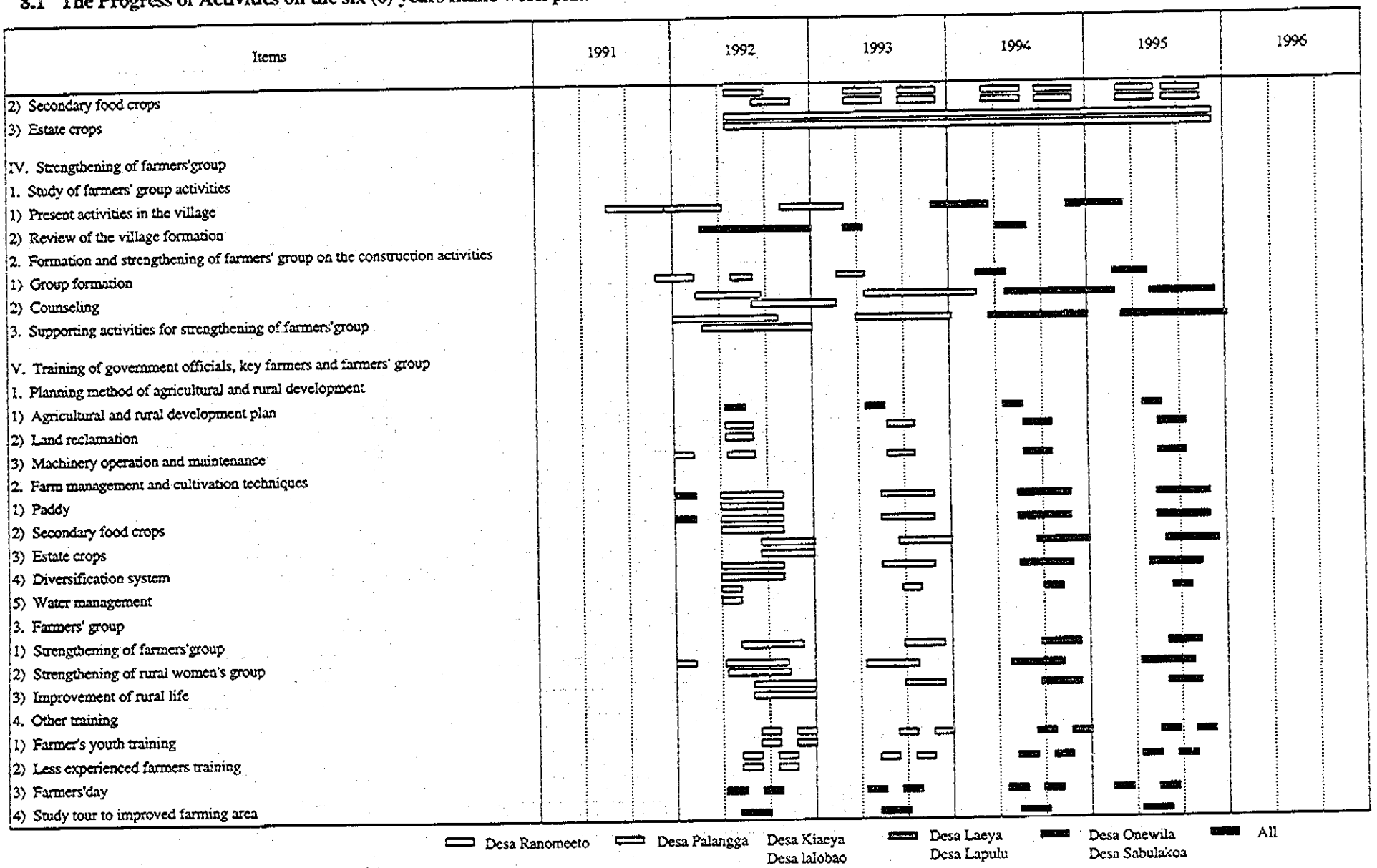
8. Tables

8.1 The Progress of Activities on the six (6) years flame work plan



8.1 The Progress of Activities on the six (6) years flame work plan



8.2 Implementation plan, target and performance of the cooperation project

Agricultural and Rural Development Planning section

ACCOMPLISHMENT OF THE TARGET ACTIVITIES (Summary)

(1/3)

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
I. Integrated agricultural and rural development plan 1. Land utilization and farming plan (1) Land utilization plan - Survey on land utilization	1. Formulation of the integrated agricultural and rural development in 8 desa (1) The survey on present condition of land utilization, water utilization and road in the project target village is conducted for formulating the integrated agricultural and rural development plan. The survey is to find the technical problem for improving. The C/P learns and understand the method of survey on land survey on land utilization, necessary data collection (2) To give guidance to C/P for understanding the methodology and procedure to formulate the land utilization. Plan for development of 8 villages	1) All necessary maps are obtained for present land utilization survey (1/50,000 and 1/250,000 topographic map), utilization from the state land bureau office and the field survey was conducted as much as possible in the 8 villages. 2). - The land utilization plan in each village was drawn according to the land utilization survey, topographic map and necessary related data. - According to the above plan, we have decided the area of topographic survey with consulting concerned people in the project site (Already completed 8 villages). - The method of development plan formulation of this project was introduced to those who were in charge of development in 27 states of MOA. The seminar was sponsored by the bureau of planning, secretariat of MOA. - The land utilization, land ownership and land utilization map of the project site were made by the state land bureau. (Scale= 1/7000-15000) - The development planning procedure was introduced to those who involved the state development planning at the time of technical training program.	1) The confirmation survey of boundary among the forest, swamp land and alang-alang land could not complete 2) Establishing the development planning by the C/P. - Planning to compile a manual on development plan formulation (Arranging materials) - Implementing revision of the land utilization map along with progress of of the project. The C/P and land Bureau are working on this matter. - The revised map of six villages will completed by the time of present R/D finished. - It is necessary to conduct the land ownership and confirmation survey for utilization of vacant land. The detail information are shown in the section of farming guidance.
(2) Planning of farming 1) The survey on level of farming technology	1) Making the survey of farming technology in project target villages, to analyze level of technology and farming system and to understand the technical problem to be improved To transfer these technology of survey procedure to C/P and let them understand.	1) Data collection and survey Collecting information and data of meteorology. Since no observation facilities are available in each project site, the data was gathered from Kendari Airport and Office of public work. These collected data were rainfall, temperature and humidity, atmospheric pressure and force of the wind. Insolation was not found because no pyrtheis meter. The information about soil was obtained from state land bureau.	

Agricultural and Rural Development Planning section

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
2) Farming plan	2) To give guidance and understanding to C/P on methodology and procedure to formulate the appropriate of farming plan extended to the project area.	- The survey needed for farming technology to establish the appropriate technology was gathered the information and data on land cultivation, potential area for development was decided by hearing from farmers in the project target villages. And farming pattern and level of farming was surveyed by observation. The location of demonstration plot and area was decided.	1) The C/P understand the procedure of the topographic map making, however a local consulting company actually makes the map
2. Agricultural and rural infrastructure development plan (1) Surveying 1) Field survey	1) Various survey such as topographic, surveying, river surveying and control surveying are conducted and to give the the technical guidance and procedure to C/P. Total area of surveying is 1,500 Ha. 2) To give the guidance to C/P about planning, design procedure and method of topographic map which is necessary for designed the development plan of the project site.	2) According to the survey of the above mentioned, to decide the training subject, methodology of technology transfer and the model of machinery supplied and advice to C/P and extension worker 1) The topographic survey has done in 7 project villages. (Since one village has no irrigation plan) - The total area surveyed is 1,090 ha - Since one parcel land survey was not conducted, the parcel land reformation was not done. 2) - The topographic survey of seven (7) project villages has completed.	2) The C/P understand the procedure of the topographic map making, however a local consulting company actually makes the map.
(2) Plan designed 1) Plan designed of land reclamation 2) Plan designed of infrastructure facilities 3) Plan designed of agricultural facility.	1) The basic necessary technology and knowledge of development planning formulation and designed procedure and technology are taught to C/P 2) To C/P, the irrigation and drainage, farm road arrangement plan and design are taught to be understood by C/P. 3) To C/P, the rural development and agricultural facilities needed for agricultural production, planning and design technology and procedure are taught and make him understand.	1) Planning in seven villages, planning and designed completed. - The land reclamation boundary is decided and the area is calculated. - The land reclamation model district is decided by consultation with the farmers concerned. C/P is able to explain the plan to farmers. 2) Planning in seven (7) villages completed of completed of planning and design. The irrigation and drainage facilities, farm road and attached structure arrangement plan has formulated then consult with formulated then consult with farmers in the village and obtain their agreement. While constructing the facilities may change if the farmers make request. Simple structure is also introduced because it is easy to maintain by the farmers. To reduce the cost of construction by using and repairing the existing facilities.	1) Agricultural land reclamation plan in remaining on village is now negotiating with various local agencies concerned. It will be settled in the near future. 2) The C/P is now able to formulate the arrangement plan and to explain to the farmers in the village. But still take a little time to have enough experience to design the simplified structure and low cost construction. Adjusting with other agencies is needed more experience too. 3) Same as 2)

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
		3) surveying existing facilities, finds appropriate scale and structure to plan and design. Arrangement plan also consults with the farmers in village and finalized. The C/P is able to make decision of structure scale and arrangement plan. 4) Main contents of cooperation (Separated paper*) 5) - All public work implemented in this region is formulating and executing by the government executing agencies according to their plan and Design. There is no explanation and consultation with the farmers. Therefore, our project approach is highly appreciated. - Construction site of building facility has been arranged by Indonesian side. - The construction of agricultural extension worker is entirely new, and visitors give high evaluation - The construction of communal well is evaluated highly from the view point of improving living environment as well as reducing women's burden.	

ITEM OF COOPERATION OUTLINE *)

(Attached paper)

			Outline / Content									Target accomplished / Results
			(Agricultural and rural infrastructure development plan)									
			Country		Palangga				Landono		Ranopeeto		
			Village	Unit	Lalobao	Lapulu	Palangga	Kiaea	Laeva	Sabulakoa	Ranopeeto	Onewila	Total
Agricultural infrastructure development	1) Farm land	1) Farm land reclamation	Paddy field	ha	25	30	20	20	-	30	25	20	170
			Dry land	ha	10	10	10	10	20	-	-	-	60
		2) Farm land facilities development	Water intake	unit	1	2	1	2	-	2	2	1	11
			Irrigation canal	M	3,500	4,000	1,300	4,000	-	5,500	2,500	4,000	24,800
			Drainage	M	-	-	-	-	-	-	1,500	4,000	5,500
			Farm road	M	2,600	3,000	1,700	2,000	6,200	5,000	3,800	2,000	26,300
	2) Agricultural and rural facilities planning and design		Livestock Auction yard	unit	-	-	-	-	1	-	1	-	2
			Fattening demonstration yard	unit	-	1	1	-	1	1	1	-	5
			Seed storage	unit	-	1	1	-	1	1	1	-	5
			Rice mill	unit	1	1	1	1	1	1	1	1	8
			Drying facilities	unit	5	5	5	5	5	5	5	5	40
			Training facility	unit	1	2	2	1	2	2	2	1	13
			Communal well	unit	5	5	5	5	5	5	5	5	40
							. Guidance of . Guidance of farm land reclamation procedure and management . Guidance . .					

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

(Agricultural and Rural Infrastructure Section)

(1/2)

Contents of Activity	Target/Expected Results	Accomplishments Upto The Date/Results	Possible Accomplishment/Reason of Delay
I. Integrated Agricultural and Rural Developoent Plan. 1. Improvement of Agricultural and Rural Development Plan. 2. Planning / Design. (1).Planning and Design of Farm Land Reclamation	(1).Farm land reclamation design. 1.Counterpart attains the necessary skills and technology and basic knowledge of farm land reclamation by heavy machinery. 2.Land reclamation by heavy machinery counterpart understand procedure of reclamation by machinery and cultivating work volume.	(1).Designing farm land reclamation. 1.The designing has completed in seven (7) villages. 2.The c/p learns and understands the designing of farm land reclamation, improving farm land facilities and agricultural facilities. When all planning design is planed we conduct the consulting meeting in village and plan is including the opinion of village people. 3.The c/p is learning designing and cultivation procedure of machinery reclamation. 4.The farmer executing project work we encourage the farmer to joint insurance coverage against accident.	(1).Designing farm land reclamation. 1.We are negotiating the plan with farmer and the Public Work regional office on remaining one village, soon complete. 2.The c/p understand necessary designing and calculation procedure by using back hoe and bulldozer. However this is first time for him to experience the farm land reclamation by heavy machinery, and he comes from MOA, his understanding is not enough. He has to learn more about calculation of operating hour and optimum coefficient on slope land, soil property, and distance to move, etc. We continuously give him guidance so that he is able to work with confidence. In our Project the machinery was supplied so that depreciation cost in assetional for usual Public Work and give him sane training on this matter. It will be take a little time to comprehend.
(2).Planning and Design of Farm Land Facility.	(2).Planning and Design of Farm Land facility. The c/p understands the designing and calculating method of irrigation facility, bridge and attached facility. He is able to check the design literatures as well as to dial with design change.	(2).Planning and Design of Farm Land facility 1.The c/p from the Public Work becomes to handle design cultivation in certain extend. 2.He also understands alternation of design when the volume increases or decreases because of request of farmer and change of topographic conditions.	(2).Planning and Design of Farm Land Facility 1.The c/p comes from MOA needs some more guidance because the assigned subject is not his specialized field. However he is able to execute the plan in the future of Public Work. He is able to utilized the experiences of various facility structure and specification as a model of development too. 2.It is not enough to learn the check point the volume of works in construction of farm land facilities and agricultural facilities.

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(3).Planning and Design of Agricultural Facilities	(3).Planning and Design of Agricultural Facilities 1.The counterpart is able to design and calculate of agricultural facilities by himself. He comprehends the design literatures calculating method.	(3).Planning and Design of Agricultural Facilities 1.The c/p is able to make design drawing operation control, testing of small scale agricultural facilities. 2.The c/p is able to making literature of specification for tender on agricultural facilities and farm land facilities. 3.The c/p is able to check submitted literatures by constructor, method of construction control and making chart of stage of works.	(3).Planning and Design of Agricultural Facilities It is necessary to give more guidance to fully understand complicated technical specification.
(4).Making Design Literature and Arrangement	(4).Making Design Literature and Arrangement 1.Survey design literature. 2.Design literature of farm land facility. 3.Design literature of agricultural facilities. 4.Literature on water management training. Comprehension and guidance of the above mentioned arrangement method and preparation of design literature.	(4).Making Design Literature and Arrangement The counterpart is able to arrange and providing design literature.	(4).Making Design Literature and Arrangement Completed.
	(5).Water Management Training The training is provided to the key farmer and staff of concerned Government agency, already completed five villages. For executing program, c/p is able to plan to himself.	(5).Water Management Training 1.The water management training has completed in five village. 2.Four villages among five above mentioned village, the Water User's Association (PIA) was established and functioning. The counterpart is able to prepare and help to establish by himself.	(5).Water Management Training The remaining three villages, the training has completed and preparing for PIA. Training of other two villages schedule to conduct in 1995.

Construction Management section

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
II. Agricultural and rural facility improvement (1) Farming land reclamation 1) Reclamation by machinery 2) Controlling the stage of construction works	(1) Reclamation by machinery 1) The C/P understands the procedure of completion survey, execution method, formulation of executing plan and present state survey for the machinery reclamation. 2) The C/P understands the controlling procedure of construction works to explain the purpose and necessity to them.	(1) The guidance of plan formulation for division of farming parcel, area and ownership of the land. (2) The guidance of the proper machinery selection, reclamation method and procedure. (3) The guidance of execution method in land reclamation by trained machinery operator from the village. (4) Compiling of technical manual (Indonesian Language) of basic survey which is a result of transferring survey technology. 1) Controlling of stage of work Introducing of the horizontal bar chart method for controlling stage of work. 2) Quality control (Complete shape control) —The complete shape control by direct measurement : : Leveling work of paddy field, target is ± 5 Cm. : Ploving of upland, by ploving and pulverizing depth is more than 15 Cm. The complete shape control by photo recording : : Photo taking before starting work. : Photo taking in each stage of work 3) Compiling the technical manual (Indonesia) of basic knowledge of controlling stage of work as a result of technology transfer.	1) and 2) in common * Supply of machineries were delayed. The period of land reclamation by heavy machinery was postponed. * The technology transferred to the C/P will be completed after all schedule land facility improvement work completes by the end of dry season in 1990.

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
		Rate of accomplishment : The farm land facility improvement has executed already in six villages, and respective technology has been transferred to the C/P.	
(2) Farm land facilities 1) Executing construction work/controlling stage of work	(1) The project direct managed work The c/p understands selecting construction site, formulation of executing plan, procedure of executing method & controlling stage of work.	(1) The following construction works are executed and give guidance to C/P farm road improvement, check dam improvement, culvert cross road, farm road bridge, digging irrigation canal etc. (2) Making concrete pipe, form for well are and the procedure in video taped. (3) The construction technology of irrigation canal, and farm pond. (4) Simple tools for the construction work are introduced for trial and use such as sheet metal for mixing concrete, wooden maul, rammer, etc. (5) To protect the slope of farm pond that constructed by the farmer, planting bush tree.	1) and 2) in common By the end of dry season in 1996, all scheduled land facilities will complete and related technologies are transferred to the counterpart. The construction work by the farmer is using local available materials such as log, fascine, rock, home made concrete pipe. The C/P and farmer leader need more experience to continue in the remaining village.
2) Contracted work Construction work of irrigation facility such as water intake, the C/P understands procedure of controlling stage of work	(1) The project direct manage work The C/P understand the method and controlling stage of work for the communal well construction which was constructed by the farmers.		* During the project cooperation period, two C/P have been changed, newly assigned C/P is from MOA and no field experience and basic knowledge because of his specialized field is different. Still technical guidance is needed.
I. Agricultural and rural facility improvement (1) Executing work (2) Controlling stage of work	(2) Contracted work The C/P comprehends the controlling stage of work through agricultural and rural facility improvement.	1) The controlling stage of work such as water intake facility, diversion work, drop structure, etc., that is given to C/P. 2) The technical manual of basic knowledge of contruction management is compiled in Indonesian language. Rate of accomplishment : The construction work has been completed in seven project villages out of eight and necessary technology transfer has been made to C/P.	
		(1) and (2) in common Controlling stage of work procedure is already transffered in all eight villages. The construction work in all eight villages has been executed. Rate of Accomplishment : Construction work has been completed in all villages.	(1) and (2) in common * Already completed.

(Machinery Operation
and Maintenance Section)

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

(1/3)

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
II. Agriculture and rural infrastructure development 1. Land development 1). Machinery Operation, maintenance and Management	1) Machinery operation and maintenance, management (1) Through the guidance of land reclamation and training of heavy earth moving machinery (2) C/P understand the various of land reclamation procedure (3) The operator and C/P attain technology of heavy machinery maintenance 2) Farm machinery operation and maintenance (1) The C/P attain skill of farm machinery operation (the machinery distributed to each village), so that he is able to transfer the technology to the farmer in the village.	(1) Since this project is identified as the farmer participating project, four (4) young farmers are chosen as the operator of heavy earth moving machinery. They become skillful operator to do the job according to the job specification and the procedure. (2) The Counterpart attains the necessary technology and knowledge of land reclamation. (The operation of the heavy machinery is not including for C/P). The procedure of land reclamation is shown in the separated sheet. (3) The Operator and C/P are able to do the machinery maintenance routine. (a) The C/P learned the operating skill and technology of all machinery and equipments, so that he is able to train the operator selected from each village. (b) Also the C/P learned the maintenance technology and skills of all machineries and equipments, so that he is able to train the mechanic selected from each village.	(1) The land reclamation work has not started yet and in one village is under construction. It is expected that the construction work is difficult to complete in 1995 because of soft ground. Through the construction work of soft (swamp) ground condition in these three (3) villages. It is expected to transfer the special technology of land reclamation in above mentioned condition. (2) Same as (1) (3) It is very difficult to transfer the highly specialized technology. (a) We provide the farm machineries and equipments for each village however, skills of operator are not satisfactory in those villages where the machineries are supplied recently - Lalobao, Sabulakoa and Onevila Village. (b) It is very difficult to repair and to get spare part where no such facilities far from Kendari. So, it is important to establish the system that would meet the the requirement of the farm machinery maintenance.

(Machinery Operation and Maintenance Section)

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
	(2) The C/P attains skill and technology of machinery and equipments maintenance, so that he is able to transfer the technology to farmer in the village. (3) To prepare the manual of operation and maintenance of farm machinery for the user farmer.	Number of Mechanic and Operator	(2) (Continue) It also takes much time to transfer the knowledge and skill on Machinery operation and maintenance for those who gets the acquainted with the use of new technology. The operator and mechanic has much different back ground because their farming and life style.

Name of Village	Mechanic		Operator	
	Beginning	Present	Beginning	Present
Ranomeeto	1	2	2	6
Kiaea	1	3	2	5
Palangga	1	3	2	5
Lalobao	1	3	2	3
Lapulu	1	2	2	4
Laeya	1	2	2	2
Sabulakoa	1	3	2	3
Onevila	1	3	2	3
Total	8	21	16	31

(1) Preparation of the manual :

a. Construction of gasoline engine
b. Disassemble and assemble (over haul) of gasoline engine.
c. Operation of gasoline engine
d. Construction of Diesel engine
e. Over haul of diesel engine
f. Operation of diesel engine
g. Acetylene welding, electric welding
h. Use of various gauge, measuring instrument

(Machinery Operation and Maintenance Section)

ACCOMPLISHMENT OF THE TARGET ACTIVITIES

Contents of Activity	Target/Expected Results	Accomplishment up to date / Results	Possible Accomplishment / Reason of Delayed
	4). Making sample tools and machineries etc. To make various tools and machineries for the activity of different section.	(1) Making sample tools and machineries etc. a. Mobile machine shop b. Mobile solar dryer c. Concrete form for Well and Drainage Pipe. d. Hand corn sheller. e. Smoking box for meat processing f. Hand grass chopper. g. Separating sieve of broken rice. h. Tool for piston insert i. Manual powered thresher.	

8.3 Japanese Contribution / Indonesian Responsibilities

Items		1990	1991	1992	1993	1994	1995	1996	Total
Japanese Contribution									
I. Dispatch of Experts									
1. Long-term Experts	(Nos.)		7	7	7	7	7	7	42
2. Short-term Experts	(Nos.)		4	4	4	5	5	4	26
II. Acceptance of Counterpart Trainees in Japan	(Nos.)		3	4	4	4	4	4	23
III. Provision of Equipments	(Yen)		97,216,000	70,401,000	27,888,000	21,599,000	26,421,000	6,580,000	250,105,000
			100	72	29	22	27	7	257
IV. Supplement of Local Cost Expenditure	(Yen)		27,716,000	40,566,000	77,707,000	51,085,000	34,796,000	13,256,000	245,126,000
			100	146	280	184	126	48	
Invoices									
1. Local Reccurent Expenditure Support			6,206,000	8,036,000	10,290,000	8,853,000	9,498,000	6,996,000	49,879,000
2. Emargency Counter Programme			1,545,000	1,951,000	-	-	-	-	3,496,000
3. Extension & Advertisement Cost			-	660,000	1,101,000	1,246,000	1,457,000	4,814,000	9,278,000
4. Training Cost for Middle-level technicians and Key farmers			1,700,000	6,415,000	5,088,000	2,821,000	1,443,000	1,446,000	18,913,000
5. Model Infrastructure Construction Programme			18,265,000	23,504,000	61,228,000	38,165,000	22,398,000	-	163,560,000
III+IV	(Yen) : A		124,932,000	110,967,000	105,595,000	72,684,000	61,217,000	19,836,000	495,231,000
			100	89	85	58	49	16	
Indonesian Responsibilities									
I. Dispatch of Counterpart									
1. Full-time	(Nos.)		7	8	10	10	10	10	55
2. Part-time	(Nos.)		9	9	9	8	11	10	56
II. Local cost (Total)	(Rp.)	119,147,000	35,220,000	159,623,000	159,485,000	156,774,000	233,057,000	211,511,670	1,074,817,670
	(Rp.)	9,531,760	2,465,400	10,375,495	9,250,130	7,681,926	9,322,280	9,729,537	58,356,528
		338	100	453	453	445	662	601	
Inbox									
1. Central Budget (APBN)	(Rp.)	0	5,800,000	58,908,000	84,485,000	66,774,000	154,400,000	111,352,000	481,719,000
2. Provincial Budget (APBN)	(Rp.)	119,147,000	29,420,000	100,715,000	75,000,000	90,000,000	78,657,000	100,159,670	473,951,670
(B/A*100)	(%)	-	2	9	9	11	16	49	12

8.4 Development of Model Infrastructure

(1) Infrastructure Development Project

Based on the awareness that developing an infrastructure including irrigation and roads is indispensable for the integrated development of farming villages, this project funded various expenses such as for construction every year for a period of five years. Furthermore, referring to the scale of irrigation installations development undertaken by the Ministry of Public Works of Indonesia, it was decided to limit the size of this project so as not to exceed the level of investments of Indonesia, with the aim of promoting self-reliant development capability on the same scale as the Indonesia government. The process of developing the project infrastructure became in itself an opportunity to transfer technology, contributing to the training of persons, mainly in the agricultural infrastructure development, construction supervision, and the operation of machinery.

(2) Implementation Policies

While establishing a development model for farming villages, this integrated agricultural and rural development project aimed to alleviated the poverty of the local inhabitants of the development area. To achieve these two aims, the project engaged in land development (creation of farm land, irrigation and drainage systems, and roads) as well as the construction of agricultural facilities (seed storage facilities, training facilities, and community well facilities).

With regard to the development of the infrastructure, it was decided that local farmers would actively engage in cooperation activities for this project. To enable this, this project was designed as a participatory-approach project wherein young farmers and farmer groups would themselves implement the creation of farm lands and the construction of irrigation and drainage systems.

Therefore, this participatory-approach project was accomplished by dividing construction tasks into several parts, with some done through conventional contract work by construction companies, others done by young farmers and framer groups under the guidance of the Project Office, and still others done under the direct management of the Project Office using supplied equipment. The works implementation divisions were as follows.

(3) Construction Implementation Divisions

a) Works by farmer groups

The participating farmers in the development area constructed the irrigation canals, diversion structures, and other simple structures they were going to use while receiving on-site technical guidance from the Project Office on surveys and measurements and construction technology on topics such as mortar mixing for stone masonry.

It was decided with regard to consist that the Project Office would fund labor costs and materials costs according to the amount of work of done on the extension of irrigation canals and division works, based on monitoring of the entire project, construction supervision, and inspections.

Furthermore, prior to beginning these works, the group leader and the Project Office would ink a simple Works Contract (memorandum) describing the works to be done, the method of payment for expenditures, the provision of required workers, as well as the materials required for the construction.

The following differences (merits) between the works done by farmer groups and the subcontract works done by builders exist.

i) Local farmers pay grater care in the operation and maintenance of facilities that they have constructed themselves, such as irrigation canals.

ii) Local farmers living in the development area easily volunteer to work.

iii) A large number of farmers gain the opportunity to work and can earn their income in cash.

iv) Through the active participation of local farmers, the farmers themselves gain a higher awareness of the development of their area (self-help efforts).

v) One part of the labor cost paid to farmer groups is pooled into an activity fund that is to be used for funding purchases of communal equipment, etc., activate farmer organizations, and so on.

b) Works done under the direct management of the Project Office

These works are performed using large construction equipment suitable for the agricultural development area, under the direct management and supervision of the Project Office.

Therefore, volunteers for the operation of construction machines taken from young farmers selected from the development area were given basic technical guidance in such areas as the equipment required for the creation of farm land, and the operation, inspection, maintenance, and management of work machinery, through training on project implementation and courses to form core technicians. At the same time, technical guidance on basic farm land creation methods through construction using machines was provided, contributing to raising the awareness of farmers regarding self-reliant local development in the future (self-help efforts).

Moreover, the handling of miscellaneous items on farm land following work using machinery, and measurement s for the creation of rural roads embankments and land grading, etc., were performed on a participatory basis involving the farmers concerned.

The funding of costs a working table, while funding for materials such as fuel and lubricants for construction machines was performed through disbursement slips.

c) Contract work

Contract work consists of works such as the construction of intake weirs, bridges, and blowpipe, as well as the construction of agricultural facilities such as training facilities, which require special specifications and specialized technicians (reinforcing steel setters, carpenters, painters, and specialized masons. These works require expertise that exceeds by far the experience and knowledge of farmer groups, as well as the procurement of information, equipment, and materials that is not feasible for farmer groups. Consequently, the above works were carried out by local construction companies based on conditions outlined in contracts.

Contract works based on conditions defined in a work contract between a local builder and the JICA Indonesia Office, or according to official construction procedures involving bidding for public works, etc., was performed on the responsibility of the Project Office under the observation of the local office of the Ministry of Agriculture and the project leader.

Further, the Project Office acted as the representative of the JICA Indonesia Office, which is the organ that supervises, inspects, and pays works expenses.

(4) Status of Project Infrastructure Development

FY1991 (¥18.265 million)	Ranometo Village, Ranometo District (No.1) : Land development and development of agricultural facilities (partial)
FY1992 (¥23.504 million)	Palanga village, Palanga district (No.2) : Land development and development of agricultural facilities (partial) Ranometo Village, Ranometo District : Development of agricultural facilities
FY1993 (¥61.228 million)	Kiaea Village, Palanga District (No.3) : Development of agricultural facilities Palanga Village, Palanga District : Development of agricultural facilities Lalobao Village, Tinanga District (No.4) : Land development and development of agricultural facilities Lapulu Village, Tinanga District (No.5) : Land development and development of agricultural facilities (partial) Laeya Village, Lainea District (No.6) : Land development and development of agricultural facilities (partial)
FY1994 (¥38.165 million)	Kiaea Village, Tinanga District (No.5) : Development of agricultural facilities Laeya Village, Lainea District (No.6) : Land development and development of agricultural facilities Sabulakoa Village, Landono District (No.8) : Land development and development of agricultural facilities Onewila Village, Ranometo District (No.7) : Land development and development of agricultural facilities (partial)
FY1995 (¥22.398 million)	
FY1996 (1995 budget carried over)	Onewila Village : Land development and development of agricultural facilities Construction of supplementary irrigation canals, intakes on weirs, etc., and construction of seed storage facilities for the 8 villages involved in the project.

8.5 Technical Support Tasks

(1) Development of audiovisual and other teaching materials

During the R/D period from FY1991 to FY1995, teaching materials for technical guidance were prepared, organized and sent to Indonesia. These materials are listed below.

FY1991	a) Video on "Cultivation of Rice" (Indonesian) b) Video on "Cultivation of Rice (English) c) Slides on "Soil Functions" (paddy soil) (Indonesian) d) Slides on "Soil Functions" (Paddy soil) (English) e) Pamphlet on "Paddy Soil" (Indonesian) f) Pamphlet on "Paddy Soil" (English) g) Pamphlet on "Cultivation of Soybeans" (English) h) Wall chart on "Paddy Cultivation" (Indonesians) i) Wall chart on "Paddy Cultivation" (English) j) Wall chart on "Cultivation of Soybeans" (Indonesian) k) Wall chart on "Cultivation of Soybeans" (English)
FY1992	a) Video on the "Physiology and Fertilization of Rice" (Indonesian) b) Slides on "Farm Soil" (Indonesian) c) Pamphlet on "Cultivation of Rice" (Indonesian) d) Pamphlet on "Farm Soil" (Indonesian) e) Wall chart on "Cultivation of Rice" (Indonesian) f) Wall chart on "Farm Soil" (Indonesian)
FY1993	a) Video on "Operation and Management of Farming Equipment" (Indonesian) b) Slides on "Factors Causing Poor Crops and Countermeasures" (Indonesian) c) Pamphlet on "Factors Causing Poor Crops and Countermeasures" (Indonesian) d) Pamphlet on "Cultivation of Corn" (Indonesian) e) Wall chart on "Factors Causing Poor Crops and Countermeasures" (Indonesian) f) Wall chart on "Cultivation of Corn" (Indonesian)
FY1994	a) Video on "Creation of Farm Land" (Indonesian) b) Slides on "Management of meadows and Usage Techniques" (Indonesian) c) Pamphlet on "Management of Meadows and Usage Techniques" (Indonesian) d) Pamphlet on "Cultivation of Fruits and Vegetables" (Indonesian) e) Wall chart on "Management of Meadows and Usage Techniques" (Indonesian) f) Wall chart on "Cultivation of Fruits and Vegetables"
FY1995	a) Video on "Preservation of Farm Land" (Indonesian) b) Slides on "Management of Farm Land and Usage Techniques" (Indonesian) c) Pamphlet on "Management of Farm Land and Usage Techniques" (Indonesian) d) Pamphlet on "Cultivation of Root Crops" (Indonesian) e) Wall chart on "Management of Farm Land and Usage Techniques (Paddies)" (Indonesian) f) Wall chart on "Cultivation of Root Crops" (Indonesian)

(2) Preparation of Technical Transfer Guidelines

The following guidelines on technical transfers have been prepared and sent to Indonesia.

FY1991	"Calculation of Stability of Fixed Weir and Basic Drop Design" (Indonesian and English)
FY1992	"Techniques of Equipment Creation" (Indonesian)
FY1993	"Standard Design of Wooden Bridges and Aboutments" (Indonesian)
FY1994	Manual on "Farm Land Creation Techniques (planning)" (Indonesian)
FY1995	Technical manual on "Farm land Preservation Techniques (Disaster Prevention)" (Indonesian)

8.6 Infrastructure development results by village wise with work type in the project

(As of January 1997)

Works · Village	Ranometo	Palanga	Kiaea	Lapulu	Lalobao	Laeya	Sabulakoa	Onewila	Total
Planned (ha)									
a) Paddy field area	35	60	30	139	–	–	–	7	271
b) Upland field area	271	488	473	422	603	627	1,262	341	4,787
c) Developable paddy field area	150	120	200	100	120		250	100	1,040
d) Developable upland area	–	80	70	80	50	180	–	–	460
Currently (ha)				*(349.5)					*(871.0)
a) Paddy field area	178.0	127.5	175.0	279.6	7.0	–	20.0	14.0	800.5
b) Upland field area	262.2	510.8	488.0	423.5	628.0	676.0	1,300.0	653.0	4,941.5
c) Paddy field area reclamed by themself	121.1	52.5	145.0	*(209.5) 135.0	–	–	15.0	6.0	*(549.1) 474.6
d) Autonomous paddy development	121.1	52.5	145.0	85.0	–	–	15.0	6.0	366.5
e) Rainfed paddy field				50.0					50.0
f) Upland field area reclamed by themself	17.1	40.0	40.0	47.0	25.0	32.0	38.0	10.0	249.1
From upland field to paddy field (ha)	30.0	30.7	30.5	45.5	–	–	–	–	126.7
Project									
1. Farm land reclamation									
Farm land reclamation (paddy field)	(25.0)	(20.0)	(20.0)	(30.0)	(25.0)	(–)	(30.0)	(20.0)	(170.0)
(ha)	21.9	15.0	–	5.0	7.0	–	5.0	1.0	54.9
No. of participating farms	31	39	–	9	15	–	23	4	121
Area per farm (ha)	0.7	0.4	–	0.6	0.6	–	0.2	0.3	0.5
Farm land reclamation (upland fields, etc.)	(–)	(10.0)	(10.0)	(10.0)	(10.0)	(20.0)	(–)	(–)	(60.0)
(ha)	4.1	3.5	5.5	–	–	17.0		1.9	32.0
No. of participating farms						13			
Area per farm (ha)						0.4			
2. Agricultural infrastructure development									
Intake weirs (Newly constructed)	(2)	(1)	(2)	(2)	(1)		(2)	(1)	(11)
(No. of locations)	4	2	1	1	1		–	–	7
(Renovated)	1	–	3	1	1		2	–	8
Irrigation canals (km)	(2.50)	(1.30)	(4.00)	(4.00)	(3.50)		(2.50)	(4.00)	(24.80)
(Unlined)	1.84	1.18	1.91	1.60	1.36		2.50	2.83	13.45
(Farmer)	–	–	2.20	0.70	–		–	–	2.90
(Fully lined)	–	0.016	0.028	0.08	0.039		0.133	0.02	0.516
Diversion work (No. of locations)	(6)	(3)	(7)	(6)	(6)		(7)	(5)	(40)
	7	3	4	3	7		8	6	38
Drop (No. of locations)	(2)	(3)	(17)	(5)	(9)		(12)	(2)	(50)
	7	2	5	3	1		6	1	23
Aqueducts (No. of locations)	(–)	(–)	(–)	(–)	(–)		(–)	(–)	(–)
	(1.50)	1	1	1	2		(–)	(4.00)	4 (5.50)
Drainage canals (km)	(3.80)	(1.70)	(2.00)	(3.50)	0.30 (2.60)	0.20 (6.20)	0.60 (5.00)	3.55 (2.00)	5.65 (26.3)
Roads (km)	3.76	5.54	9.58	5.50	3.50	4.20	7.20	3.50	42.78
Roads (bridge construction)	(5)	(2)	(3)	(4)	(4)	(5)	(1)	(6)	(30)
(No. of locations)	1	4	–	–	1	1	–	1	7
(Culverts)	(15)	(7)	(8)	(12)	(10)	(25)	(20)	(8)	(105)
(No. of locations)	8	10	11	8	10	8	8	1	64
3. Farming facilities development	(1)	(1)	(–)	(1)	(–)	(1)	(1)	(–)	(5)
Seed storage facilities	2	–	1	1	1	1	–	1	6
Rice mills	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(8)
	1	1	1	1	1	1	1	1	7
Drying facilities	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(40)
	1	1	1	1	1	1	–	1	6
Training centers	(2)	(2)	(1)	(2)	(1)	(2)	(2)	(1)	(13)
	2	2	2	2	2	1	2	1	14
Livestock markets	(1)	(–)	(–)	(–)	(–)	(1)	(–)	(1)	(2)
	1	–	–	–	–	–	–	–	2
Demonstration fattening yards	(1)	(1)	(–)	(1)	(–)	(1)	(1)	(–)	(5)
	1	1	–	1	–	1	1	–	4
Community wells	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(40)
	4	6	8	5	5	5	4	4	41