

CHAPTER 1

CONCEPT OF RURAL DEVELOPMENT ADOPTED BY THE GUIDELINES

CHAPTER 1 CONCEPT OF RURAL DEVELOPMENT¹ ADOPTED BY THE GUIDELINES

< Targets of Chapter 1 >

- Presentation of the historical changes of the concept of rural development
- Presentation of the underlying ideas and characteristics of the Guidelines

1.1 History of Rural Development in Africa

1.1.1 Historical Changes of the Concept of Rural Development (1950 – 1980)

The development approach, i.e. the concept of “how to proceed with development with emphasis on what”, for a developing country is proposed based on various viewpoints and experiences and is continually changing. Such changes of the concept of development always reflect the changes of the background of a developing country and vice-versa.

The concept of rural development in Africa underwent many changes between 1950 and 1980 linked to changes of the times and the different priority themes of each time. Three currents can be identified in this period depending on the specific development emphasis.²

- ① Emphasis on commercialisation (1950 – early 1970’s)
Introduction of cash crops to eliminate the bottlenecks of traditional food production-type agriculture in Africa
- ② Emphasis on social aspects (equality) (1970’s)
Fulfilment of BHN (Basic Human Needs) with additional attention to the poor who were left behind by the approach emphasising cash crops
- ③ Emphasis on a self-sustaining food supply (production system) (1975 -)
Antithesis of the threatened food security due to drought and rapid population increase

(1) Emphasis on Commercialisation (1950 – 1970)

This approach was very popular from the independence rush in the 1950’s to the early 1970’s when the global economy maintained a high growth rate and the comparative advantage of cash crops produced in Africa was very strong. However, this approach emphasising the commercialisation of agriculture gradually attracted criticism, as it was perceived that it would aggravate the gap between regions with good conditions for agricultural production and those with poor conditions and would lead to a decline of food production. With the increasing criticism that

¹ “Rural development” in the Guideline is defined as “the development of non-urban areas where agriculture, forestry and fisheries provide the main livelihood”. The term “agricultural development” often used in the 1970’s was subsequently replaced by the term “rural development” as the purposes of development were expanded to include wide issues, including “health” and “education” following the virtual achievement of a self-sufficient supply of “food” throughout the world in the 1980’s. The HDI (Human Development Index) proposed by the UNDP in the 1990’s is an integral concept of three elements, i.e. income, literacy rate and life expectancy. The direction for rural development in the 21st Century is clearly indicated by the seven strategies for the reduction of poverty by half, education, health and the environment originally proposed by the OECD/DAC in 1996 which have become targets for 2005 – 2015 under the New Global Partnership agreed at the G7 Summit in Lyon. The Asian Development Bank has decided its development strategy for 2000 which calls for the input of more than 40% of the total loan amount into “rural development” based on such definition. The “New African Initiative” proposed by the Organization of African Unity in July, 2001 is a historic declaration of African countries of achieving poverty alleviation centring on rural development at Africa’s own initiative towards the TICAD (Tokyo International Conference on African Development) III in 2003.

² Christopher L. Delgado, “Africa’s Changing Agricultural Development Strategies: Past and Present Paradigms as a Guide to the Future”, IFPRI, 1995. See Chapter 2.2: “Changes of the Paradigm for Rural Development in Africa”, pp 13 – 20 in the Report for the First Year of “the Study for Preparation of Rural Development Methods in Africa”.

this approach was powerless to reduce poverty, the presumption of the approach, i.e. “BHN would be met through the trickle-down effect”, was later recognised as wrong.

(2) BHN Approach (1970 -)

The 1970's saw increasing emphasis on the social aspect of rural development, typically represented by the BHN approach. As symbolised by the Nairobi Speech of McNamara, then President of the World Bank (IBRD), on the elimination of poverty, donors placed this approach at the forefront of their aid efforts. Their direct objective was to expand social services targeting the poor in rural areas where the trickle-down effect had failed to reach. As a development strategy, however, this approach often failed to achieve satisfactory results in terms of lasting medium to long-term effects because of the following reasons³ even though it was effective for short-term relief measures.

- It was politically difficult to exclusively target the poor (in many cases, there was no political party or local government representing the poor in domestic politics) and identification of the poor was a technically costly operation.
- It was often the case that the economic effects were inadequate and financial backing was unavailable as it was unclear where to seek the driving force for short and medium-term growth.
- Even if the situation of the poor was slightly improved, the gap between the rich and the poor continued to widen because of much faster gains by rich farmers due to the top-down policy adopted by donors. Accordingly, the scenario itself was contradictory as rich farmers enjoying faster growth enjoyed more benefits from the redistribution of wealth while rejecting the growth-oriented approach.

It is still uncertain after 20 years of experience whether or not the BHN approach has had any positive effect on growth. In the meantime, the gap between the rich and the poor has steadily widened. There is no guarantee that the same mistake will not be repeated by simply emphasising “poverty reduction” which all donors have been calling for in unison in recent years. There is a real risk that the international community will fail to achieve its various targets by 2015 and it appears much more appropriate to employ an approach which directly targets “a reduction of the gap between the rich and the poor” in the 21st Century.

(3) Emphasis on Self-Sustaining Food Supply (Production System) (1975 -)

Starvation in the Sahel Region and Ethiopia due to continuous drought since around 1975 prompted interest in food security, producing a new approach which emphasises a self-sustaining food supply (production system) as another antithesis. In reality, however, the policy of “emphasising a self-sustaining food supply” has often been implemented “to supply cheap food for urban areas”, causing economic hardship in rural areas in Africa. This approach emphasising a self-sustaining food supply was attempted at the time of the price hike of primary products after the first oil crisis in 1973. African countries were actively borrowing from abroad to finance their industrialisation efforts through import substitution. Many adopted a policy of “over-valuation of the domestic currency” which rapidly eradicated the comparative advantage of their domestic agricultural products. The subsequent price stagnation of primary products in the 1980's and thereafter and imprudent lending by advanced countries induced a debt crisis. At the end of the 20th Century, the self-sufficient rate in food among African countries was still below 80%.

³ Christopher L. Delgado, “Africa's Changing Agricultural Development Strategies: Past and Present Paradigms as a Guide to the Future”, IFPRI, 1995.

1.1.2 Change of Approach: Emphasis on Structural Adjustment Policy and Sustainable Development (1980's)

From the 1970's, the economic environment surrounding developing countries changed from "a favourable wind" to "an adverse wind". Here, a favourable wind means a mixture of the continual growth of the world economy and booming primary products after the oil crises up to that time, while an adverse wind means stagnant demands and the price decline of primary products due to the economic slow down of advanced countries. This change of the environment provided the opportunity for such structural problems to be exposed. To be more precise, these problems were profligate government finance, excessively ambitious projects and market monopoly by inefficient public corporations, all of which had been hidden in the shadow of growth. The problem of accumulated debt in particular caused major turmoil involving the financial markets of advanced countries. The emergence of this debt problem necessitated an adequate response to the underlying problems, making the structural adjustment policy occupy centre stage of the development approach in the 1980's.⁴

While it was believed that structural adjustment would benefit the poor, among others, through improved external competitiveness following the devaluation of local currencies and vitalisation of the market for agricultural products due to the privatisation of public agricultural corporations and other state-owned enterprises, there was growing criticism that structural adjustment often results in the withdrawal of food subsidies, an increase of public charges, including public transport fares, and a reduction of the education and health budgets, all of which would especially hard hit the poor. A reduction of food price subsidies was particularly liable to cause a political crisis based on the dissatisfaction of urban residents losing their vested rights, delaying the process of structural adjustment. Consequently, recent structural adjustment efforts since the 1990's to the present day tend to emphasise "good governance" and "sector-specific development and investment strategies".

1.1.3 Participatory Approach to Rural Development (1990's)

The historical change of the paradigm for rural development in Africa has so far been explained. Against the background of declining aid funds for Africa, the search for a better rural development method is currently in progress having learned from past failures and experience. The current aid environment is summarised below based on information obtained during the field study.

- Raising awareness of ownership by villages and the administration
- Support for strengthening of the ability of villagers to recognise problems and to formulate and implement plans
- Increased work specialisation with the central government acting as the policy formulation/coordination body and local governments and other organisations acting as implementation bodies as a result of the progress of decentralisation programmes

What is common to the above is the posture of supporting the involvement of the people of recipient countries from the initial stage of cooperation so that they can recognise problems and take responsibility for the formulation, implementation and monitoring of plans. This posture illustrates the expectation that not only will the governments of recipient countries play a greater role in their development but also that local resident organisations will substitute government functions, the scope of which is narrowing. Since the 1990's, every donor, recipient country, international aid organisation, international NGO or local NGO has been trying this approach whereby the residents themselves identify the problems in their own area, think of measures to solve the problems and formulate and implement an improvement plan. "Rural development" featuring not only

⁴ Structural adjustment in the early years, however, tended to be "a total demand control policy" to rebuild the macroscopic economic balance of developing countries experiencing bankruptcy in terms of foreign reserves rather than "a development approach". As this considerably differs from the increasing emphasis on "good governance" and "sector-specific development and investment strategies" of recent structural adjustment efforts since the 1990's up to the present, the concept of structural adjustment as a development approach in the early years can be considered to have been on a completely different dimension.

agriculture, forestry and fisheries but also health and education under the initiative of local residents is now taking place throughout the world.

1.2 Underlying Ideas and Characteristics of the “Guidelines for the Preparation of Rural Development Methods for Africa”

1.2.1 Consideration of Diverse Activities and Environment of Villages

To start with, there are many different stances in terms of cooperation ideas for rural development. For example, one idea calls for a leading role by local residents (local community) who are the intended beneficiaries of development right from the beginning until the end with the donor and the government of the recipient country only participating as facilitators. In an extreme case, an external donor and the government of a recipient country may choose not to interfere even if a development plan (project) selected by local residents is undesirable from their viewpoint. Conversely, there is the alternative where an aid organisation will not provide assistance if the planned activities are not in line with its own policy. In another case, it may be necessary for all development processes to be led by external bodies because of an emergency situation where there is no time to await a decision by beneficiaries.

As already mentioned in 1.1.1, many rural development efforts in Africa in the past were based on the top-down approach. Partly in reaction to this past practice, grass-root development efforts have emerged with villagers playing a leading role. It has become a major trend among donors to encourage local residents to participate from the initial stage of development, respecting for the communal function of existing villages. The members of the core organisation in this case may vary depending on the specific country, region or purpose and character of a project. They may consist of traditional and religious leaders of villages selected by local residents with due attention paid to the social and cultural aspects of village life.

In consideration of these movements, the concept of “rural development” used in the Guidelines is defined as “activities required for the improvement and enhancement of people’s lives”. The scope of “rural development” here, therefore, is not limited to “agricultural, forestry and fisheries production” but includes diverse activities required for the improvement and enhancement of the lives of people living in rural areas, i.e. non-urban areas.

1.2.2 Focusing on Livelihoods

It is essential to understand how people maintain their livelihoods in order to identify their needs. The principal livelihoods in Africa may vary from one village to another depending on the natural conditions, social structure, including traditional system and religious background, level of development of economic infrastructure and state of access to finance, etc. of the subject villages for rural development. Even within a single village, the livelihood can considerably vary from one villager to another depending on various factors, such as the possession of land and/or livestock, scale of farming activities, location of the home along a road and access to existing resources in the village. In short, there may be different types of livelihood within the same village in Africa.

For the classification of livelihoods, the Guidelines have referred to the normative concept⁵ of “sustainable livelihoods” (SL). This concept was introduced by the DFID of the UK for the integrated rural development approach which emphasised the long-term improvement of livelihoods in harmony with the environment. According to this concept of SL, people basically maintain their livelihoods by using tangible and intangible resources and assets in their village and their personal abilities. All things in a village ultimately consist of natural capital, social capital, human capital, physical capital and financial capital. By skilfully utilising these capitals, the eradication of poverty becomes possible by recovering from external stresses and shocks.⁶

⁵ In 1998, the DFID introduced the normative concept of “sustainable rural livelihood” (SRL) for rural development in developing countries based on its policies introduced in the 1997 White Paper on International Development to promote “sustainable livelihood” and to improve the management of the “natural and physical environment”. (Diana Carney, ed., “Sustainable Rural Livelihood: What contribution can we make?”, London, DFID, 1998, p. 4)

⁶ Based on Diana Carney, etc., “Sustainable Rural Livelihood: What contribution can we make?”, DFID, 1998.

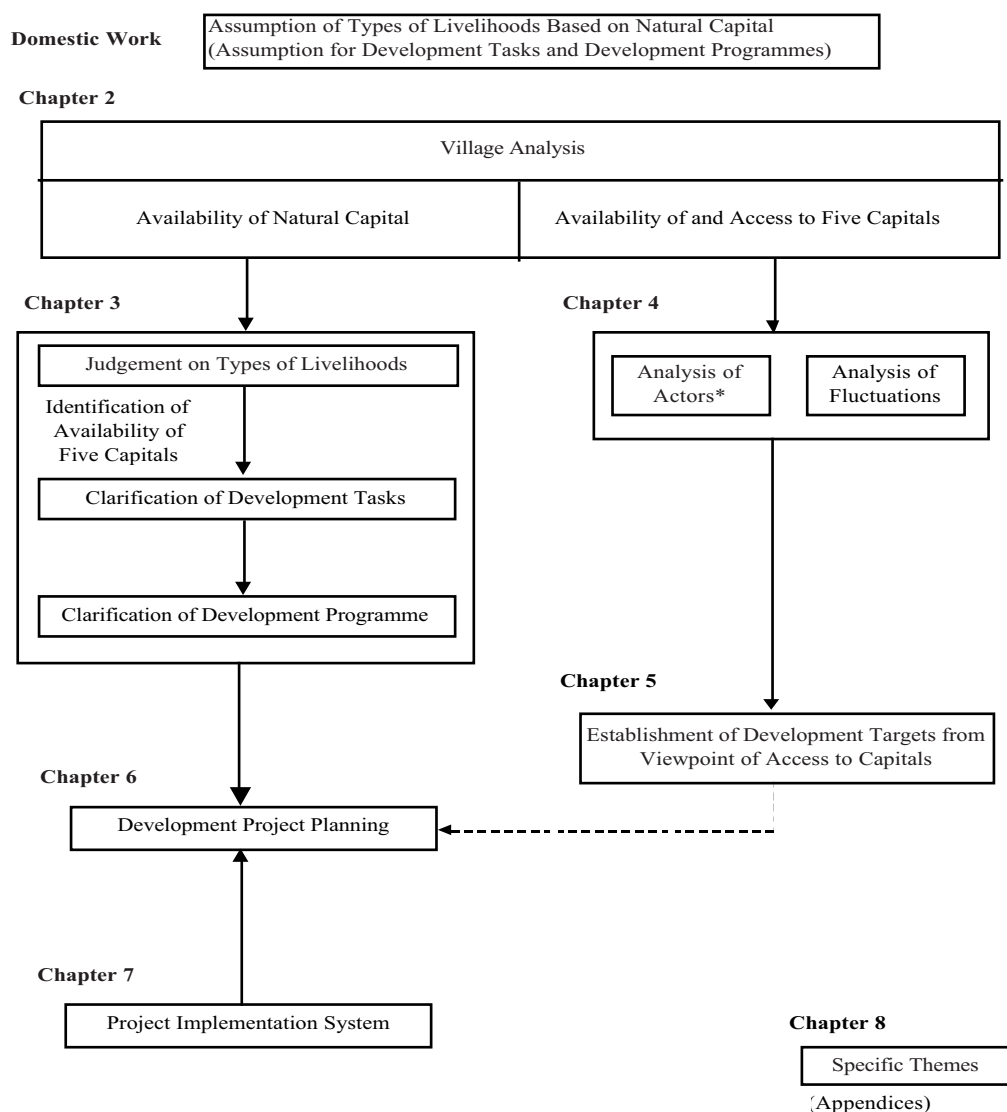
This approach excels in the establishment of a comprehensive picture of the reality of a village and the types of livelihoods of villagers in a relatively short period. The EU, which provides cooperation by placing rural development within the framework of general food security for villages, has now adopted this livelihoods approach for its draft rural development guidelines.⁷

In the Guidelines which define rural development as “activities required for the improvement and enhancement of people’s lives”, these “five capitals” are examined in the context of African villages and the standard study items for each capital in a village are established.⁸ Analysis of a target village using these items can clarify the present situation of the village and the manner in which people maintain their livelihoods using the capitals available in the village (types of livelihoods).

1.2.3 Guidelines for Rural Development Techniques

The Guidelines deal with matters ranging from the identification of livelihoods in a target village to important points for project implementation. The analysis in Chapter 2 through Chapter 7 proceeds in line with Fig. 1 – Underlying Ideas of the Guidelines.

Fig. 1 Underlying Ideas of the Guidelines



* Actors: persons acting with different interests

⁷ European Union, “Guideline for the Design of a Rural Development Profile and Strategic Framework” (Draft)

⁸ See Chapter 2, Village Analysis, Table 1

(1) Domestic Work

Once a target village is identified, a hypothesis for viable types of livelihoods in the target village is prepared based on information and data which are accessible at home. Given the normally limited availability of such information and data, this hypothesis tends to consist of rough assumptions at the regional level.

(2) Rural Community Analysis (see Chapter 2)

A rural community survey on the target village is then conducted on site from two viewpoints: (i) clarification of the availability of the five capitals and (ii) clarification of the different accessibility to each capital by an individual villager or villagers' group. By means of this rural community analysis, the present situation of the target village at the micro level is comprehensively established.

(3) Judgement on Types of Livelihoods (see Chapter 3)

When the availability of the five capitals in the village is established, judgement is made on the types of livelihoods of villagers using these capitals. Basically, villagers create their livelihoods by fully utilising more than one capital and it is impossible to present a uniform picture of how the "five capitals" affect the formation of the livelihoods of people. Nevertheless, the impacts of rainfall and water resources in particular can be considered to be uniform for a single village unless there is some artificial interference. As such, these are significant factors for the formation of the livelihoods of local people. For example, the production structure of areas described as arid or semi-arid where the annual rainfall level is extremely low, creating severe natural conditions, is highly vulnerable to the rainfall level each year and the types of livelihoods are naturally limited to grazing or a mixture of grazing and agriculture. In contrast, in areas with rich water resources, i.e. rivers and lakes with a constant presence of water, some kinds of productive activities can be much more easily conducted throughout the year because of the high rainfall level. These areas are, therefore, believed to usually provide much diverse livelihood alternatives than arid or semi-arid areas.

Special attention is paid in the Guidelines to water resources to classify the types of livelihoods observed in rural villages in Africa into eight types which are then further classified into 14 sub-types. The village survey findings are analysed with the characteristics of each type of livelihood in mind to judge the specific type(s) of livelihoods of people in the target village.

(4) Development Tasks Based on Types of Livelihoods and Basic Ideas for Development Programmes (see Chapter 3)

When judgement is made on the type of livelihood, the problems faced by people with the judged type of livelihood are analysed. It is often the case in African villages that the limited availability of the five capitals is fully utilised to maintain a specific type of livelihood. This means that the degradation or insufficiency of any of these capitals could threaten the maintenance of the established livelihood.⁹

The Guidelines regard the following as the main development tasks.

1) Strengthening of Degraded or Insufficient Capitals

When capitals required to barely maintain the livelihood are degraded, the prevention of degradation and the restoration of degraded capitals become urgent development tasks. One example is measures designed to restore degraded natural capital in arid or semi-arid areas with harsh natural conditions. For a village where soil degradation, i.e. the degradation of natural capital, has serious impacts on productive activities, the development theme is to slow down the speed of the degradation of natural capital or to prevent it as much as possible. The village livelihood can be maintained by focusing on this theme.

⁹ For example, there have been cases of many pastoralists who have lost their livestock due to drought settling down to engage in farming.

In the case of insufficient capital of any type, the development tasks are those which are essential for the maintenance of the type of livelihood and which are feasible, taking the characteristics of the local area where the said type of livelihood prevails into consideration.

2) Enhancement of Usable Capitals

The strengthening of capitals which can be used in the future among the available capitals is also considered to constitute a development theme. For example, in a village where men tend to be absent except during the busy farming season because of the need to work outside the village to overcome the limited types of livelihoods resulting from harsh natural conditions, strengthening of the abilities of women (through literacy education, etc.) constitutes a development theme.

A development programme to achieve development tasks is basically defined as consisting of “activities required to consolidate capitals which are insufficient in the target village or activities required to utilise existing capitals in the target village more effectively”.

(5) Establishment of Development Targets from the Viewpoint of Access to Capitals (see Chapter 4 and Chapter 5)

The rural community survey classifies the situation of availability of the five capitals in the target village. However, the situation of access to these capitals may differ depending on individual villagers or villagers’ groups. The availability of capitals itself may change as these capitals are not necessarily static. Accordingly, the establishment of the availability of the “five capitals” in the target village and analysis of the access of villagers to these capitals is essential.

Different actors¹⁰ have different problems because of their different degree of access to each type of capital even if their livelihood is the same. The Guidelines present important items from the viewpoint of “the actor” when a method to solve a problem(s) (a development project) is to be selected.

(6) Development Project Selection Method (see Chapter 6)

When development tasks and the development programme to achieve them are established, the next stage is the selection of a concrete development project(s). For the selection of such a concrete development project, the method of cooperation (inputs) is examined with reference to the availability of the “five capitals” in the target village. This selection process is also affected by the ideas, policies, budgetary constraints and other factors of the donor or aid organization.

(7) Important Points for the Implementation of Development Project (see Chapter 7)

The important points for the implementation of cooperation for each type of livelihood are discussed in Chapter 3 and also itemised in Table 2 – Development Tasks and Development Programmes by Types of Livelihoods. In addition to these points, there are other important points which are common for the implementation of various development projects. These common points are classified into (i) those for donors and aid organisations when implementing cooperation and (ii) those when a bottom-up rural development technique is opted for to reflect the needs of local residents.

(8) Specific Themes (see Chapter 8)

Various topics which are useful references for the use of the Guidelines are classified by theme. 8.1 – Implementation Principles for Rural Development in Africa and 8.2 – Rural Development in Africa and Gender present principles and viewpoints to be considered in relation to cooperation for rural development in Africa. 8.3 – Irrigation Farming in Africa: Example in Ghana compiles important points for future irrigation farming, referring to the basic policies of the World Bank and Japanese irrigation projects in Ghana. 8.4 – Important Points for the Implementation of Cooperation for the Prevention of Desertification and 8.5 – Desertification from the Viewpoint of Grazing Animals put forward important themes which must be considered for any rural

¹⁰ Persons acting with different interests

development efforts, particularly in arid or semi-arid areas. 8.6 – Food Security and Rural Development introduces the Special Programme for Food Security of the FAO while 8.7 – Important Points for the Implementation of Rural Community Surveys clarifies the important points for the implementation of rural studies in Africa based on the actual experience of rural studies.

(9) Appendix

A sample rural community survey questionnaire to be used for village analysis based on the “five capitals” is also added as an appendix.

1.2.4 On Table 2: Development Tasks and Development Programmes by Types of Livelihoods

Table 2 – Development Tasks and Development Programmes by Types of Livelihoods lists the “analysis of the present situation: availability of five capitals”, “development tasks”, “development programmes”, “background and important points for each actor” and “lessons learned” which are assumed for each type of livelihood. These assumptions are made based on the findings of a rural community survey and a case study on development projects in seven countries¹¹ in various parts of Africa. Even though the items in Table 2 are not exhaustive, they are presented here as reference materials to facilitate understanding of the ideas adopted by the Guidelines and to think about the required rural development efforts for each type of livelihood.

The actual duration of individual development programmes could be short, medium or long-term. The desirable combination of these programmes varies depending on the purpose(s) and target geographical area of a specific project. The development tasks and development programmes listed in Table 2 should be used as a check list for the formulation of a rural development project.

Finally, it must be noted that the processes from village analysis to the implementation of a development project do not form a unidirectional flow but involve constant backward and forward references. As such, each process should be referred to at an appropriate time.

The relationship between the components of Table 2 and the Chapters of the Guidelines is shown below.

Rainfall/ Water Resources	Types of Livelihoods		Analysis of Present Situation/Availability of Five Capitals					Development Task	Development Programme	Each Actor (Background; Important Points)	Lessons Learned
	Primary Category	Seco ndary Cate gory	Natural	Social	Human	Physical	Financial				
	Ch. 3	Ch. 3	Ch. 2 and Ch. 4					Ch. 3	Ch. 3 Ch. 6	Ch. 5	Ch. 7

¹¹ Mali, Senegal, Uganda, Ethiopia, Kenya, Mauritania and Mozambique

1.3 Exclusions from the Scope of the Guidelines for Rural Development Techniques

The issues excluded from the scope of the Guidelines are explained below.

(1) Exclusion of Side Jobs from Types of Livelihoods

In Africa where the natural conditions are much more severe than in other parts of the world, it is quite risky to depend on a single type of livelihood because of the unreliable rainfall, drought and other phenomena. In addition, the use of the capitals available in a local area seldom provides enough food to maintain life, prompting most households to disperse the risk. For example, there are various economic activities described as “side jobs” to supplement the household income. These include wage labour in the local area, work outside the local area (including work in a foreign country), brewing of alcohol and small-scale trade. In some cases, a side job may become the main livelihood. In the Guidelines, however, agriculture, forestry and fisheries are considered to be the main types of livelihoods of which classification is made based on the level of rainfall and the scale of water resources. Accordingly, side jobs are not considered in the determination of the types of livelihoods.

(2) Judgement on Types of Livelihoods at the Time of the Study

Unlike Asia where the preservation of local types of livelihoods is advantageous to a certain extent, people in Africa are engaged in diverse activities to disperse the risk. There is the medium to long-term alternative for people to opt for a different type of livelihood through emigration or settlement. In the Guidelines, the types of livelihoods at the time of the Study are judged and the assumed development programmes to solve the problems faced by people with specific types of livelihoods are presented.

(3) No Reference to Impacts of Policy Environment on Villages

The external environment for villages, which consists of the economic policy of the government and changes of the political situation, etc., is an essential factor of any approach to rural development. The impacts of “the external environment” on rural development constitute a major theme which itself demands independent study. As the Guidelines focus on villages at the micro level, it only refers to the external environment as a point to note for the implementation of rural development from the viewpoint of villages.

Box 1.1 Example of Changing Livelihoods Among Pastoralists in Mauritania

Until a drought of an unprecedented scale occurred in 1973, different races in the arid areas of Mauritania were engaged in different types of livelihoods. Arab Berbers called the Maure were entirely engaged in grazing while black Mauritians were engaged in farming. The conflict over resources between the pastoralists and farmers could be described as a racial conflict. Following the severest drought in 1973, further drought continued until 1983. The death of camels which were the main means of transportation for pastoralists made it difficult for pastoralists to move around. As a result, pastoralists settled down instead of travelling with tents. As it was extremely difficult to move through the desert consisting of continual sand dunes without camels, new settlements tended to be established along newly constructed roads. It was also convenient for the government to see people living in clusters to facilitate the provision of social services. In 1982, the government enacted the Land Tenure Act for the first time, legally permitting settlements on roadside public land. As a result, pastoralists began to settle down at such land to commence farming. With the favourable turn of the weather conditions after 1983, however, grazing has once again become active and there has been a shift from dependence on farming to a mixture of farming and grazing (although the style of grazing has changed from the pastoralistic practice to entrusting the work to specialist cattlemen).

CHAPTER 2

RURAL COMMUNITY ANALYSIS

CHAPTER 2 RURAL COMMUNITY ANALYSIS

Targets of Chapter 2

- Explanation of the concept of “five capitals”
- Introduction of a rural community analysis technique using “five capitals”
- Explanation of the idea of access to capital

2.1 Rural Community Analysis from the Viewpoint of “Five Capitals”

When a target village for rural development is decided, the current situation of the said village must be firstly analysed. However, it may be found unexpectedly difficult to obtain a wide range of information on the target village within a limited period. One useful approach to understand the present situation of a village is to focus on the “five capitals” referred to in Chapter 1 to examine village profile. The basic idea of this approach is that a village’s tangible as well as intangible resources, assets and capabilities, including those causing negative impacts on the village, ultimately consist of five types of capital, i.e. natural, social, human, physical and financial. The idea is that strengthening of the access to these five capitals will enable recovery from external stress or shock, making the elimination of poverty possible.

The five capitals are defined as follows in the Guidelines based on their definitions given by the DFID of the UK.¹

The word “capital” is used here as these elements are regarded as original capitals which can be invested in economic activities and/or for the improvement of living conditions. However, its meaning differs from the definition of “capital” used in economics in the strict sense. Although each capital is defined in the manner described earlier, the same item can be classified under different capitals. For example, “livestock” is regarded as “physical capital” if it is used as draft animals but is classified as “financial capital” if it constitutes a means of saving. Accordingly, it is unnecessary to regard each capital as a fixed concept. In an extreme case, it should be sufficient if the concept of each capital is agreed upon by the members of each study team.

Such understanding means that the current situation of a village can be surveyed in an almost unbiased manner in a relatively short period of time if the scope of each capital is determined prior to the commencement of a rural community survey with identified study items distributed to the study team members. While the concrete study items vary depending on the characteristics of the country or region involved, Table 1 gives examples of the standard study items.

¹ Reference Material: D. Carney (ed.), *Sustainable Rural Livelihoods: What contribution can we make?* Department of International Development (DFID), 1998.

Table 1 Standard Study Items for Each Type of Capital

Natural Capital	Rain (rainfall, period of rain, rainfall distribution and annual fluctuation); temperature (maximum, minimum and mean); elevation; relative humidity; topography (inclination); groundwater; rivers and lakes; soil fertility; water drainage; fuel resources (fuel wood and cow dung, etc.); natural disasters; land use (existence of undeveloped land and fallow land, etc.); conditions of natural resources (wild animals and plants, trees, grasses and fruits); distance from nearby town Pasture; farm produce, livestock, fish catch; cultivated area; planted area; grassland area; forest area
Social Capital	Ethnic groups; religion; traditional and non-traditional organizations; distribution type of houses; agricultural technology extension service and vocational training system; land ownership system; village history Response system to food; funding and labour shortage (general mutual help system); mutual help system for the socially weak; leader selection method; decision-making system of the community; information conveyance system; land distribution system; configuration of households (nuclear/extended families and polygamy, etc.); division of work according to gender; population inflow/outflow
Human Capital	Population (total, by sex and by age group); adult literacy rate; level of education; average life expectancy; main diseases; infant mortality rate; conditions of nutrition (food supply situation throughout the year, etc.); existence of final decision-makers (group) in the village; farmers (landowners and farm employees); working situation of women (especially when men are absent)
Physical Capital	Water supply system; quality of housing; access to means of communication (telephone and postal services); conditions of village roads and trunk roads throughout the year; means of transportation (access to public transport services and possession of vehicles at the household level); schools; medical facilities; village meeting hall; agricultural infrastructure; agricultural machinery and tools; fishing gear; production equipment
Financial Capital	Savings at the household level (including livestock as “mobile deposits”); loan opportunities in the community (personal money lenders and group finance projects); access to external loan opportunities (formal banks, etc.); opportunities for side jobs; opportunities to work outside the village; remittance from outside the village

2.2 Availability of Each Capital and Different Access to Different Capitals

Rural community analysis from the viewpoint of the five capitals must analyse both the situation of availability, i.e. how much capitals exist in the target village, and the situation of access, i.e. how much capitals are actually used by villagers.

The availability of the five capitals in terms of quantity and quality can be clarified in a relatively short time through observation by even outsiders (study team members). The observation results can then lead to further examination to compare the amount of each capital (high or low level) between different villages and the situation of an increase or decrease of each capital (increased or decreased level) in the same village over a long period of time (see Fig. 2).

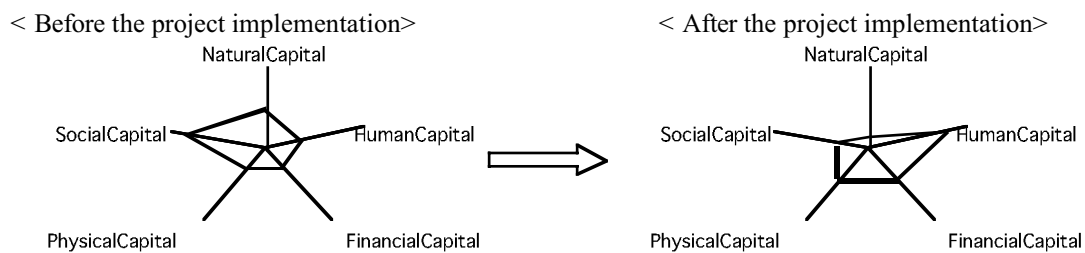
Fig. 2 Analysis Based on the Availability of Five Capitals

Example 1: Comparison of Capital Availability Between Two Villages



Fig. 3 Analysis Based on the Availability of Five Capitals

Example 2: Comparison of Pre-Development and Post-Development Project States in the Same Village



The types of livelihoods introduced in Chapter 3 are primarily determined by the availability of rainfall and water resources (natural capital) in the village concerned. It must be noted that the “existence” of the five capitals in a village does not necessarily mean that villagers can “use” these capitals. Analysis of how much each capital is individually or collectively used by villagers for what purposes is a time-consuming process compared to clarification of the availability of capitals, requiring knowledge of cultural anthropology on the part of the study team members. As described in detail in Chapter 4, analysis of the situation of access to the five capitals can reveal various facts, including, for example, the monopoly of a certain capital(s) by a specific group of villagers, the use of different capitals by different groups to achieve the same objective and fluctuation of the amount of a specific capital each year. In short, the complicated state of the lives of villagers can be vividly described.

In a rural community analysis for the planning of rural development, a clear understanding of the availability of each capital must accordingly be obtained first to establish an overall picture of the target village, followed by detailed analysis of access by actor to each type of capital.

CHAPTER 3

DEVELOPMENT TASKS AND DEVELOPMENT PROGRAMMES BY TYPES OF LIVELIHOODS

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Targets of Chapter 3

- Presentation of materials for judgement on the types of livelihoods of a target community, taking the availability of the five capitals in the community into consideration
- Presentation of materials for the formulation of development tasks by types of livelihoods.
- Presentation of materials for the examination of development programmes which are required to achieve the development tasks
- Presentation of “Table 2 – Development Tasks and Development Programmes by Types of Livelihoods” which forms the backbone of the

3.1 Judgement on the Types of Livelihoods

3.1.1 Classification of the Types of Livelihoods Based on Water Resources¹

Water resources, including rainfall, are relatively evenly distributed to all people, determining the ways in which people maintain their lives (livelihoods) unless there is artificial interference. When focusing on water resources, there are eight main types of livelihoods (primary types) in African communities which are further divided into 14 sub-types (secondary categories) as shown in the next page. In general, Type 1 through Type 5 are based on rainfall while Type 6 through Type 8 are based on other water resources.

In the case of Type 1 through Type 5, the maintenance of livelihoods is dependent on rainfall. In arid or semi-arid areas with harsh natural conditions and low annual rainfall, the production structure is extremely vulnerable to unsteady and low level rainfall. The feasible livelihoods are naturally limited and the main part of livelihoods is pasturage. An increase of the rainfall enables some types of production activities throughout the year and the types of livelihoods become more diverse than those in arid or semi-arid areas. In general, the weight of agriculture in livelihoods tends to increase.

Type 6 through Type 8 represent livelihoods in areas where access to other water resources provided by permanent rivers, lakes and groundwater in addition to rainwater is possible.

3.1.2 Judgement on the Types of Livelihoods

While the annual rainfall is mainly used here as the judgement criterion for the types of livelihoods, it is only one criterion. For example, in a region with many arid and semi-arid areas, the value of rainfall as the criterion to judge the types of livelihoods tends to be low. Although rainfall is one useful criterion to judge the types of livelihoods, the rainfall pattern, i.e. whether or not the necessary level of rainfall is available during the planting and other specific periods, is more important than rainfall in Africa which is dominated by rainfed agriculture. Accordingly, judgement on the types of livelihoods must take the rainfall pattern and rainfall fluctuations from one year to another into consideration in addition to the rainfall itself.

The characteristics of each type of livelihood are summarised later for judgement on the types of livelihoods. There, each type of livelihood is roughly explained and the assumed availability of the five capitals in a community to sustain a specific type of livelihood is also explained. In Table 2 – Development Tasks and Development Programmes by Types of Livelihoods, the characteristics of each type of livelihood in terms of the “five capitals are presented for reference purposes using actual cases of field studies conducted in African

¹ Rural community analysis clarifies the availability of the “five capitals” in a target community. Particular attention is paid to the following points in determining the types of livelihoods based on such “five capitals”.

- Under the harsh natural conditions in Africa, livelihoods are significantly affected by rainfall. Rainfall is particularly important in rainfed agricultural areas.
- Agriculture in Africa is generally characterised by a low input level. Because of few external impacts, livelihoods tend to be determined by indigenous “natural capital” consisting of rainfall, period of rain and usable land area, etc.

countries.² The rural community survey results must be analysed to determine the types of livelihoods in a target community taking these examples into consideration.

Types of Livelihoods	
< Types of Livelihoods Based on Rainfall >	
Primary Categories (mean annual rainfall)¹⁾	Secondary Categories
1. Water harvesting agriculture (less than 400 mm)	1-1 Oasis agriculture type 1-2 Crops for self-consumption (rainfed agriculture) type
2. Pasturage (less than 400 mm)	2 Pasturage (long distance) type
3. Pasturage with agriculture (400 – 800 mm)	3 Pasturage + crops for self-consumption type
4. Agriculture with pasturage (400 – 800 mm) (domestic animals in some parts)	4-1 Crops for self-consumption + (grazing animals/domestic animals) type 4-2 Crops for self-consumption + (cash and/or commodity crops) + (domestic animals/grazing animals) type
5. Agriculture (800 mm+) (+ Domestic Animals)	5-1 Crops for self-consumption type (including valley side fields) 5-2 Crops for self-consumption + (cash and/or commodity crops) type (suburban type) 5-3 Crops for self-consumption + (cash and/or commodity crops) + forest type
< Types of Livelihoods Based on Any Water Resources >	
Primary Categories	Secondary Categories²⁾
6. Commodity crop agriculture (450 mm+) ³⁾	6 Commodity crops + crops for self-consumption type (the types of crops vary depending on rainfall and temperature)
7. Irrigation	7-1 Crops for self-consumption type 7-2 Crops for self-consumption + (cash or commodity crops) type
8. Fishery + crops for self-consumption	8-1 Freshwater fishery + crops for self-consumption type 8-2 Coastal fishery + crops for self-consumption type
Notes	
1) The annual rainfall figure is used as the yardstick and the boundary values change depending on the situation of each country.	
2) The types of self-consumption, commodity and cash crops vary depending on the country, region, rainfall and elevation (temperature).	
3) The figure indicates the minimum rainfall during the growth period to maintain the quality of the commodity crop (for example, cotton).	

3.2 Development Tasks

Once the type of livelihood is judged, the necessary tasks to sustain such livelihood should be analysed. In those pages explaining the types of livelihoods, the development tasks for each type of livelihood are described in a box. These tasks are identified based on the judgement of those capitals which require enhancement because of insufficiency or deterioration and those capitals which can be used in the coming years. In an actual rural development study, development tasks for the target type of livelihood should be formulated based on the rural community analysis results, referring to the listed development themes in the box.⁷

² Seven countries located in arid to wet zones, i.e. Mali, Senegal, Uganda, Ethiopia, Kenya, Mauritania and Mozambique.

3.3 Development Programmes

Examples of viable responses to achieve development tasks are given under Development Programmes in Table 2. The necessary activities (development projects) to sustain the target type of livelihood should be considered with reference to the given examples of development programmes.

1 Water Harvesting Agriculture (annual rainfall: less than 400 mm)

The level of rainfall makes it difficult to manage agriculture relying solely on rain. Agriculture is made possible by means of catching groundwater and/or surface water during the rainy season. There are two types of livelihoods, i.e. oasis agriculture type and crops for self-consumption type (rainfed agriculture).

The oasis agriculture type uses the groundwater at oases dotted in the desert. The crops for self-consumption type (rainfed agriculture) is observed in communities dotted from the agro-pastoral zone to the agro-silvo-pastoral zone where the annual rainfall is higher than the desert zone. This type of agriculture is practiced by black Africans who are generally engaged in agriculture.

1-1 Oasis Agriculture Type

This sub-type is found in extremely arid areas with a high groundwater table or springs which are dotted in the desert or semi-desert zone. As oases are often isolated because of poor access from other areas, farming is of the local recycling type using existing natural resources to the maximum. In general, oases are located near a mountain range where groundwater is likely to accumulate and the size of an oasis is determined by the quantity of available water. Indigenous or planted date palm trees form the basis for farming. Vegetables and crops are cultivated as intercrops. Domestic animals raised in the dwelling area are also an important livelihood and camels and goats are popularly raised because of the tolerance to drought and poor meal.

Animals that are grazed through travelling outside the settlement area other than domestic animals for self-consumption are entrusted for raising in distant areas with many watering places and plenty of grass, or are raised by family members.

Endowments of Assumed Five Capitals

Natural Capital	Site with a high groundwater table or springs in an extremely arid area Low level of rainfall Near a mountain or mountain range Depletion and/or deterioration of the natural environment and resources (desertification) Decrease of watering places for animals
Social Capital	Mutual help within the same ethnic group Oasis associations established by oasis landowners Difficult access by the landless and employed people to the oasis associations
Human Capital	High literacy and school enrolment rates among landowner households Shortage of labour required for manual irrigation Low literacy and school enrolment rates among the landless and employee households
Physical Capital	Electric and water supply, school and clinic, etc. are in place in urban oases insufficient at community oases (small to medium size oases) Irrigation boreholes (requiring maintenance and improvement)
Financial Capital	Camels and goats, etc. as assets Informal personal loans Remittance by people working away from home

(1) Development Tasks

Oases form the front line in the prevention of desertification. The maintenance of natural capital to preserve oases is an important task linked to the prevention of desertification. The present population, oasis agriculture and the number of domestic animals should be sustained without causing any negative impacts on the natural environment while preventing a further deterioration of such natural capital as land and water under a harsh natural environment. There are gaps in terms of the level of education, accumulation of assets and access to social capital between oasis landowner households and employee households. Different assistance methods should, therefore, be applied for different groups. BHN-related assistance for landless households and employee households is particularly important.

- Prevention of desertification: assistance for oases as local development bases
- Maintenance of livelihood (oasis agriculture)
- WID
- Fulfilment of BHN (education)

(2) Remarks

This type of livelihood is basically influenced by Arab tradition and careful consideration of the socioeconomic impacts of Arab tradition is essential. For example, the slavery system which has officially been abolished may have visibly or invisibly survived. The recruitment of a person with extensive knowledge of the local situation is, therefore, essential to obtain an extensive range of information. There are many actors at an oasis, including households which own land around the oasis, landless households (including those headed by women) and households of employed workers, etc. When external intervention, including aid, is conducted without proper consultations with these actors, the bipolarisation process of the rich and the poor could further progress, aggravating inequality.³ Prior to the commencement of a project, it is essential to gather information by means of not only using the traditional information gathering system but also by means of conducting wide-ranging interviews/surveys with key personnel in rural development with a view to carefully examining a suitable cooperation approach for each type of actor. Moreover, in a community such as an oasis where the traditional system is firmly established, assistance for women (making gender the main issue) which does not unconsciously leave women (and other socially weak) outside the aid framework is necessary instead of “women’s relief projects” which exclusively feature women.

1-2 Crops for Self-Consumption Type (Rainfed Agriculture)

Surface water originating from little rain is caught for storage or its speed of flow is delayed for group permeation using a simple earth or rock weir construction in a relatively low and flat area where a wadi is located. When the rainy season ends, the stored water is discharged for the cultivation of crops for self-consumption. Compared to an oasis area, the annual rainfall level is slightly higher. Even though shrubs and grass are abundant during the rainy season, the annual rainfall of less than 400 mm is basically low. Self-sufficient food production is difficult to achieve because agriculture is dependent on an unstable as well as small quantity of rainwater. Working abroad or in other areas is fairly common. There is a high degree of dependence on earnings from other than agriculture, including firewood, charcoal and Arabian rubber, in areas with many shrubs. Once the rainy season starts, damage to crops by grazing animals which have moved into this type of area to escape bloodsucking insects cause conflict between pastoralists and farmers.

³ For example, people belonging to a landowners’ households are generally better educated, have rich stock in terms of land and pasturing stock, etc. and have relatively easy access to the various capitals at the oasis, including the mutual help system (strong social capital) at the oasis. In contrast, the people of employed workers’ households or landless households are generally not well educated and find access to such various capitals as land and the mutual help system at the oasis difficult. Since all projects in progress at one oasis in Mauritania (such as by the IFAD, EU and the World Bank) target landowners’ households, assistance for the BHN of landless or employed workers’ households will be highly significant. The gap between the haves and the have nots is widening in terms of the access to capitals.

Endowments of Assumed Five Capitals

Natural Capital	Topography suitable for catching water near the dwelling area Unstable as well as small quantity of rainwater Depletion of fuel wood resources near the dwelling area Depletion and/or deterioration of the natural environment and resources (desertification)
Social Capital	Decision-making by the group of elders Traditional mutual help function Traditional land use system Strong bonds based on blood relationships
Human Capital	People, particularly young people, with experience of work away from home Low literacy rate Poor nutritional conditions (absolute shortage of food)
Physical Capital	communities Absence or shortage of such BHN-related facilities and schools and clinics except in urban areas Insufficient weirs Boreholes to obtain drinking water (shortage)
Financial Capital	Domestic animals, such as goats and sheep, as assets Non-agricultural income from the sale of charcoal and firewood, etc. Informal personal loans Remittance by people working away from home

(1) Development Tasks

This type of livelihood is observed with farmers who have settled in areas which are traditionally used for pasturage. The conditions for agricultural production are far from ideal and conflict over the limited natural capital (pasture land and water) is likely to occur between pastoralists and farmers. There is a high risk of the progress of desertification once the existing natural capital is deteriorated, making the prevention of the deterioration of the limited natural capital (or the restoration of natural resources) the most important task.

Meanwhile, the maintenance or improvement of rainfed agriculture is important by means of improving as well as increasing the number of weirs. Cooperation to create opportunities for non-agricultural income is also important because of the difficulty of maintaining the livelihood based on agricultural production alone.

- Maintenance of livelihood (rainfed agriculture)
- Fulfilment of BHN (sufficient food supply, health/hygiene and education)
- Maintenance and restoration of natural resources
- Non-agricultural income
- WID

(2) Remarks

To achieve self-sufficiency in food is basically difficult and livelihoods are supplemented by money remitted from those working outside their own community. While the urgent issue is to sustain one's livelihood, the earning of sufficient income to supplement the shortfall of income from the main means of livelihood is equally important. The limited availability of natural capital and the competitive relationship between pastoralists moving in areas around a community and farmers regarding water require careful consideration. It must be noted that strong social capital tends to develop under strong leadership to survive the harsh natural environment and that local residents often develop a mutual help system. It must also be noted that strong community bonds may create some groups (young people's and women's) who cannot fully express their opinions to the group of elders who make the decisions.

Severe natural conditions, including limited rainfall, impose a heavy work burden on women in terms of farming and daily life. Despite this, it is often the case that the contribution by women is not properly recognised or evaluated due to insufficient information and/or education. Women themselves tend to accept the situation as their "fate" rather than complaining. What is required is small-scale aid to reduce the heavy burden on women and to provide information which assists the gradual transformation of the established perception of gender roles.

2 Pasturage (annual rainfall: less than 400 mm)

This livelihood is characterised by strong dependence on pasturing animals (animals raised by travelling outside the permanent dwelling area). Natural grass, etc. grows in arid areas with low rainfall which cannot be directly used by humans and is converted into meat, milk and dairy products via animals. The subject area for pasturage varies from one country or region to another, ranging from extremely arid areas with annual rainfall of less than 200 mm to areas with annual rainfall of more than 1,000 mm. There are two types of pasturage. One involves free movement in search of vegetation while the other involves regular seasonal travel in a predetermined pattern each year, including moves to drier areas to escape bloodsucking insects or to prevent animals from contacting diseases during the rainy season.

2 Pasturage (Long Distance) Type

This type of livelihood is maintained by pasturage involving travelling over long distances to seek water and grass in areas of vast communal land. There are two types. One is without a permanent camp with the herd and people constantly on the move to find feed while the other is a permanent camp with the animals finding feed around the camp. The latter is further divided into the type where domestic animals return to camp every day for milking and the meat-producing type where the animals are gathered every several days for water. Two types of travelling methods exist. One involves free and irregular movement in search of vegetation while the other involves regular seasonal migration, including a move to a drier area to protect the animals from bloodsucking insects during the rainy season.

Endowments of Assumed Five Capitals

Natural Capital	Vast communally-owned pasture land Low rainfall Trend of an annual decline of pasture land due to the establishment of a national park and the expansion of privately-owned land Quantitative and qualitative decline of grass Declined quality of domestic animals (thin and sick, etc.) Deterioration of the natural environment and resources (desertification) Decrease of watering places (lakes, rivers and groundwater)
Social Capital	Original nomadic culture and customs Strong unity and mutual help system within the same ethnic group Mutual help between pastoralists (informal information conveyance)
Human Capital	Strong charismatic leadership within a clan Low literacy rate Poor hygiene
Physical Capital	Absence of roads General difficulty of access to primary schools and clinics because of the travelling lifestyle associated with pasturage Absence of facilities to deal with animal diseases
Financial Capital	Absence of a financial institution network (high trading cost) Informal personal loans Camels, goats and sheep as assets Income from such dairy products as milk and butter, etc. and from the sale of meat

(1) Development Tasks

This type of livelihood is maintained by travelling through large areas of pasture land to secure water and grass and the usable capitals are extremely limited. The biggest problem for the maintenance of this type of livelihood is the continual exploitation and deterioration of the limited natural capital. The most important task is, therefore, to prevent any further deterioration of the natural capital (land and water, etc.) under the harsh natural environment in order to maintain the existing population and number of animals without causing any negative impacts on the natural environment. At the same time, the shortage of BHN-related services, the development of which appears difficult from a physical point of view, is best dealt with by mainly soft assistance featuring health and hygiene education, etc. which is appropriate for society and the natural environment.

- Maintenance of livelihood (pasturage)
- Maintenance of livelihood (crops for self-consumption)
- Fulfilment of BHN (drinking water, disease control and education)
- Natural environment improvement (restoration of vegetation)
- Women in development

(2) Remarks

A major task in pastoral areas is the maintenance of limited resources (pasture and water resources) and cooperation to assist the effective use of limited resources is of great importance. In general, people living in these areas basically have the same social background, including the same religion. As different ethnic groups have different pasturing stock, careful consideration of the original culture and customs of each ethnic group is essential in any attempt to provide cooperation for pastoralists.

Pastoralists maintain their livelihoods while travelling through pasture land and their organization in permanent settlements is difficult. In consideration of the fact that they are scattered over a wide area, there is a limit for assistance for physical capital and the provision of straight-forward assistance focusing on BHN is more realistic.

In general, domestic animals are regarded as assets of which the management is usually left to men. While women have access to daily raising, milking and feed management, etc., they lack any decision-making power. In some cases, however, women can make decisions on the processing and sale of milk even if they do not have the power to decide on the sale of a cow. What is important here is cooperation for activities to promote the economic activities of women, albeit on a small scale, in order to create “cash” or “assets” which women can freely control.

3 Pasturage with Agriculture (annual rainfall: 400 – 800 mm)

This is permanent settlement type pasturage. While the actual size varies, relatively large land is owned. Pasturage is conducted on individually owned land as well as on communal pasture land. While there is strong dependence on pasturage to maintain this type of livelihood, farming for self-consumption is also conducted around the permanent settlement area.

3 Pasturage + Crops for Self-Consumption Type

While the livelihood is mainly dependent on the raising of domestic animals, food crops are also cultivated for self-consumption. In general, market access is poor. Crops for marketing are cultivated to earn cash if good market access is available. Communal pasture land is used by means of either scattered dwellings over a wide area or settlements. Cultivation is conducted by full-time farmers or such members of nomadic families as women, children and old people (settlement-based cultivation).

Endowments of Assumed Five Capitals

Natural Capital	Unreliable rain Drinking water for domestic animals and agricultural water during the dry season (shortage) Quantitative as well as qualitative decline of grass (sparse vegetation) Soil loss/degradation Declining soil productivity
Social Capital	Strong unity with mutual help within the same ethnic group Mutual help between pastoralists (informal information conveyance) Strong bonds based on blood relationships
Human Capital	Strong charismatic leadership within a clan Low literacy rate Diseases (delay in the implementation of preventive measures)
Physical Capital	Safe drinking water (shortage) Watering places for domestic animals (shortage) Veterinary practices (shortage) Absence of community roads
Financial Capital	Absence of a financial institution network (high trading cost) Cattle, goats and sheep as assets

(1) Development Tasks

The development tasks for this type of livelihood are basically the same as those for the pasturage type even though there are more cases of permanent settlements being established. Under the harsh natural conditions, natural capital appears to be excessively used and its deterioration poses a major problem for the maintenance of livelihood. In a situation with few options, maintenance of the existing livelihood is the biggest task. Strong positive effects are assumed to result from the prevention of any further deterioration of essential natural capital (measures to maintain the natural environment) and the provision of better BHN-related services in response to a higher settlement ratio than the pasturage type.

- Maintenance of livelihood (pasturage)
- Maintenance of livelihood (crops for self-consumption)
- Fulfilment of BHN (drinking water, disease control and education)
- Natural environment improvement (restoration of vegetation)
- WID

(2) Remarks

This type of livelihood is often seen in areas originally dominated by pastoralists into which farmers have moved because of increased population pressure in arable land. As a result, the weight of pasturage in livelihood maintenance is high. As permanent settlement or semi-permanent settlement type farmers who have commenced farming in some areas of original pasture land use communal pasture land hitherto used exclusively by

pastoralists, the size of pasture land for pastoralists is declining. Pastoralists travelling around settlement areas must, therefore, be taken into proper consideration for the implementation of cooperation. In this case, environmental education for not only adults but also for children is effective for the development of a sustainable environment. Different approaches are required for even the same household if some members are mainly engaged in farming and others in the raising of grazing animals. As in the case of Type 2 pasturage, the scope of assistance for physical capital is limited because of the low population density and it is again more realistic to focus on assistance for straight-forward BHN.⁴

⁴ For example, people can be trained as assistants for veterinary surgeons to conduct simple medical treatment (worming, castration and horn shortening, etc.) to provide veterinary care in remote areas.

4 Agriculture with Pasturage (annual rainfall: 400 – 800 mm)

This type is characterised by the higher weight of agriculture in the livelihood in semi-arid areas. The size of the land owned is small to medium and the cultivation of crops for self-consumption is the main activity. At the same time, small-scale pasturage is also conducted and small amounts of commodity and/or cash crops are cultivated to earn cash. Domestic animals are raised for work or milk or as assets. Raising may be entrusted to pastoralists.

4-1 Crops for Self-Consumption + (Grazing animals/Domestic Animals) Type

This type is often observed in rural areas with poor market access. A shortage of food for self-consumption may occur because of drought damage. Depending on the specific local conditions, non-agricultural income from charcoal production or work away from home constitutes an important means of maintaining the livelihood.

4-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) + (Domestic Animals/Grazing animals)

Market access is relatively good. The crops for sale are cultivated on a small scale to earn cash. Even if the prices are low because of poor quality and low yield, cultivation tends to continue to earn cash.

Endowments of Assumed Five Capitals

Natural Capital	Unreliable rain (drought) Shortage of drinking water for domestic animals and agricultural water during the dry season Decline of soil fertility Soil erosion due to clearing Communal pasture land and residual crops (decrease)
Social Capital	Traditional mutual help Groups formed with administrative guidance (women’s groups and youth groups, etc.) Strong bonds based on blood relationships Mutual help between farmers and pastoralists Possible poor functioning of social capital due to long-term work away from home
Human Capital	Charismatic leader Low literacy rate Delay in the implementation of disease prevention and control measures Heavy work burden on women Shortage of labour at peak times for agricultural work (work away from home)
Physical Capital	Shortage of school and medical facilities (for humans and animals) Absence of drinking water supply facilities Presence of rural roads for the transportation of cash crops Rural roads passable all year round (shortage)
Financial Capital	Cattle (cows), goats and sheep as assets Informal personal loans Remittance by people working away from home Shortage of stable opportunities to earn non-agricultural income

(1) Development Tasks

The increasing importance of agriculture over pasturage gradually makes it difficult to secure sufficient pasture land and watering places to raise domestic animals. The important task is to ensure the balanced distribution of resources as much as possible between agriculture and grazing animals by preventing any further deterioration of resources due to competition between agriculture and pasturage through the use of hitherto unused resources to maintain the livelihood. The crops for self-consumption + (grazing animals/domestic animals) type faces the task of securing a stable supply of crops for self-consumption by means of rainfed agriculture under the condition of unstable rainfall. In contrast, the task faced by the crops for self-consumption + (cash and/or

commodity crops) + (domestic animals/grazing animals) type is the simultaneous promotion of cash crop cultivation and restoration of the natural capital exploited by such cultivation. As work away from home during the dry season can be assumed because of the difficulty of maintaining the livelihood based solely on agriculture for both types, reduction of the work load on women during the temporary absence of men also poses a major task.

4-1 Crops for Self-Consumption + (Domestic Animals/Grazing animals) Type

- Maintenance and improvement of livelihood (crops for self-consumption)
- Maintenance of livelihood (pasturage)
- Fulfilment of BHN (disease control and education)
- Efficient sharing of resources between agriculture and pasturage
- Natural environment improvement (restoration/conservation of vegetation)
- WID

4-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) + (Domestic Animals/Grazing animals) Type

- Maintenance and improvement of livelihood (promotion of cash and commodity crop cultivation)
- Maintenance and improvement of livelihood (crops for self-consumption)
- Fulfilment of BHN (literacy education, health and hygiene)
- Natural environment improvement (restoration/conservation of vegetation)
- Efficient sharing of resources between agriculture and pasturage
- Non-agricultural income
- WID

(2) Remarks

As a result of increasing population pressure, farmers have moved into areas originally inhabited by pastoralists for farming purposes and the weight of agriculture in livelihood maintenance is high. Collaboration as well as competition between pastoralists and farmers regarding limited resources is simultaneously taking place, making the effective use and management of resources between farming and pasturage a major task. The management of natural resources in parallel with activities which have economic merits for local residents is essential. A self-sufficient supply of food is basically difficult to achieve due to the unsteady as well as low level of rainfall and many people, mainly men, seek employment outside the community during the dry season. In areas where men often work outside the community, women are the de facto heads of the household (and mainly responsible for farming) even though men (husbands, fathers and brothers, etc.) are often the registered landowners. When men are absent from the community, women are the decision-makers. Nevertheless, women cannot obtain loans using land as collateral. This situation illustrates the gap between “theory” and “practice”. For the implementation of a project, the position of women must be taken into proper consideration in addition to consideration of reducing the work burden on women during the period of men’s absence.

5 Agriculture (+ Domestic Animals) (annual rainfall: 800 mm +)

Agricultural production is the principal livelihood as the natural conditions (rainfall) are relatively favourable. In general, the population size is fairly large and the cultivation area per farming household tends to be small. There is a growing deterioration of the environment due to felling to enlarge the cultivation area, soil erosion by terraced farming and soil degradation by the intensive use of limited farmland. Cows are sometimes reared for supplementary purposes, such as milking. In areas with poor market access, maintenance of the livelihood by agriculture alone is difficult, resulting in greater dependence on non-agricultural income.

The use of forest resources is included in this type of livelihood in areas where rich forests exist due to favourable natural conditions (rainfall) and where the traditional land use system with vague individual land ownership still exists (5-3 – Crops for Self Consumption + (Cash and/or Commodity Crops) + Forest Type). Farmland is distributed on the basis of the traditional land use system of a specific ethnic group or region. The emergence of this type of livelihood is difficult in a country (region) where forests are strictly managed by the government and individual land ownership is at an advanced stage.

5-1 Crops for Self-Consumption (Including Valley Side Farmland)

Except for drought, a self-sufficient supply of food is basically feasible. This type is often found in rural areas with poor market access. When the production volume of food crops for self-consumption is insufficient due to unstable rainfall, non-agricultural income is sought by means of charcoal production or working for neighbouring farming households. The introduction of cash crops in these areas tends to result in men playing a leading role.

5-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) Type (Suburban Type)

This type of livelihood develops in suburban areas and is maintained through the intensive cultivation of fresh vegetables, etc. which are unsuitable for long distance transportation.

5-3 Crops for Self-Consumption + (Cash and/or Commodity Crops) + Forest Type

Although food crops for self-consumption are mainly produced, cash/commodity crops are also cultivated depending on the market access situation. This type of livelihood is also supported by income from firewood collection and charcoal making as well as waged labour for felling and sawing using the rich forest resources. The forest resources have been depleted in suburban areas because of development but are still abundant outside the said areas.

Endowments of Assumed Five Capitals

Natural Capital	Unreliable rain (5-1 Crops for Self-Consumption Type) Rich natural resources (forests and grass) Sufficient large communal land required by local residents (5-3 Crops for Self-Consumption + (Cash and/or Commodity Crops) + Forest Type) Soil loss/soil degradation and decline of the soil productivity due to the intensive use of farmland (shortening of the fallow period, farming on slopes and repeated cultivation of the same crop on the same land)
Social Capital	Difficult access to land Mutual help based on blood relationships or between friends (food and cash) Joint involvement in local public work Visits by agricultural extension workers Functioning as the lowest body in the local administrative hierarchy
Human Capital	Community head (civil conflict mediation function) Knowledge required for the cultivation and sale of cash/commodity crops (shortage) Agricultural skills (shortage) Low adult literacy rate
Physical Capital	Abundant wells and water storages (water fetching sites) Relatively well-developed health and education facilities in suburban areas but extreme shortage in remote communities Shortage of work animals and agricultural tools used in combination with work animals Insufficient public transport system
Financial Capital	Informal personal loans Remittance by people working away from home Income from the sale of all year round cash crops (bananas, etc.) Cash income from the sale of firewood and charcoal

(1) Development Tasks

Even though there is much cultivable land because of the favourable conditions for farming, the clearance and cultivation of such land as waste land and sloping land which has hitherto not been used is necessary because of the increasing population pressure. The existing cultivated land is facing serious problems caused by intensive farming practices, including soil erosion, soil degradation and a decline of the soil fertility, because of shortening of the fallow period, cultivation on sloping land and the repeated cultivation of the same crop on the same land.

Among the three types, 5-3 Crops for Self-Consumption + (Cash and/or Commodity Crops) + Forest Type enjoys relatively rich resources but such resources are showing a trend of degradation and depletion. The more effective use of such limited resources as land, etc., therefore, poses the major task for the maintenance of this type of livelihood.

The development of infrastructure for the sale of commodity/cash crops is also an important task together with acquisition of the knowledge required for the sale of agricultural products by farmers. In the case of the latter, the grouping of producers is particularly important. However, it must be noted that the availability of many livelihood options for individuals makes it possible to maintain one's livelihood without the cooperation of others. As a result, grouping becomes difficult with an increasing tendency towards individualism. The cultivation of commodity/cash crops faces the additional task of securing funds for the procurement of agricultural inputs.

With the agriculture-based livelihood, the gap between the rich (who employ farm workers to cultivate cash crops on a large scale) and the poor (who are landless people providing labour) may well widen, creating the new task of introducing measures to prevent or alleviate such a development.

5-1 Crops for Self-Consumption Type (Including Valley Side Farmland)

- Improvement of livelihood (agriculture)
- Non-agricultural income
- Fulfilment of BHN (education and nutrition)
- Natural environment improvement (forest conservation to curtail firewood consumption)
- Maintenance of livelihood (raising of domestic animals)
- WID

5-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) Type (Suburban Type)

- Natural environment improvement (forest conservation to curtail firewood consumption)
- Fulfilment of BHN (diversified education and hygiene)
- Promotion of livelihood (cash and/or commodity crops)
- Establishment of farmers' groups
- WID

5-3 Crops for Self-Consumption + (Cash and/or Commodity Crops) + Forest Type

- Improvement of livelihood (increase of the added value of agricultural products)
- Natural environment improvement (forest conservation and soil erosion control measures)
- WID
- Establishment of farmers' groups

(2) Remarks

Except for drought, a self-sufficient supply of food is basically feasible in areas of this type and the pending tasks are an increase of the added value and the marketing of agricultural products. Although the organization of farmers is essential for the efficient marketing of products, this is difficult because of widespread individualism due to the fact that the relatively favourable natural conditions make it possible for farmers to live without mutual cooperation. Clear incentives, including economic returns, for individual farmers are required to facilitate the participation of farmers in the planned group(s).

The management of natural resources should be conducted in parallel with activities which promise quick economic returns. However, special consideration is required to reduce the load on the environment if crops with high cash earning potential are introduced.

There are many precedents for the progressive conversion of forest resources to cash at the local level even though the necessity to introduce measures to address the fast-declining rich forest resources is emphasised at the national level. Active coordination of the opinions of local residents, officials of the local and central governments and representatives of aid organizations is, therefore, required.

In Africa, 80% of the crops produced for self-consumption are said to be produced by women. It is, therefore, no exaggeration to say that women are the key to a stable food supply for households. Development projects tend to focus on the cultivation of cash crops and pasturage to ensure the sustainability of project effects. Assistance to achieve the sustainable cultivation of subsistence crops is also important while properly recognising gender roles.

6 Commodity Crop Agriculture (annual rainfall: 450 mm +)

This type of livelihood is mainly maintained by the cultivation of commodity crops (crops of which the production is encouraged by the government and of which the sales route is limited to export) and crops for self-consumption. This type of livelihood is particularly widely observed in West Africa.

6 Commodity Crops + Crops for Self-Consumption Type

Crops are commercially cultivated on a large scale. As the quality and yield of the produce are key points, the types of crops to be cultivated are determined by the level of rainfall during the cultivation period. In addition to rainfall, the elevation and temperature are also factors to determine the types of crops to be cultivated. Cotton, peanuts and bananas in West Africa and sisal, coffee and tea in East Africa are typical commodity crops, providing important sources to earn foreign currencies. The scale of cultivation is generally large but small farmers are also engaged in the cultivation of commodity crops in some regions.

Endowments of Assumed Five Capitals

Natural Capital	Minimum rainfall during the crop growth period to ensure quality Large cultivation area Fertile soil
Social Capital	Organized farmers Guaranteed crop purchase system (by public corporations and private enterprises, etc.) Input supply system
Human Capital	Personnel capable of supervising the sale of inputs and the bulk purchase of produce (at a government corporation, etc.) Agricultural extension workers
Physical Capital	Developed roads Means of transporting agricultural products Storage facilities Agricultural tools
Financial Capital	Funds to purchase various inputs

(1) Development Tasks

Commodity crops cultivated mainly for export are purchased in bulk by a government corporation, etc. Improvement of the purchase system through structural adjustment and other means is in progress as the problems of public corporations, including the lack of transparency in the collection of payments and business management, have been highlighted. It is practically impossible for a single farming household to adjust the size of the planting area in response to the trends of the global market (most commodity crops except for peanuts and cotton are perennials). This makes it necessary for the types of varieties, inputs and marketing, etc. to be determined by specialist organizations (public corporations, etc.), including private enterprises. In Africa, small farmers play an important role in the cultivation of commodity crops in addition to large plantations. A proper response to the needs of small farmers for the purchase of agricultural inputs and the marketing of products poses an important development task. Moreover, in the case of commodity crop cultivation in rainfed agriculture areas, measures to alleviate the negative impacts of an unstable rain pattern are critical. Another important task is to secure stable income in the face of sales price fluctuations of crops.

- Improvement of livelihood (commodity crops)
- Fulfilment of BHN
- Grouping of farmers
- Natural environment improvement
- WID

(2) Remarks

In areas where commodity crops are cultivated, providing the opportunity to earn cash income, assistance for the technological improvement or extension of a group must clearly state individual member's responsibilities for the proper management of agricultural equipment and tools, and for loan repayment. The sustainability of technologies can be facilitated by making farmers repay at least part of the cost of the introduction of technologies.

Women are often forced to work in the commodity crop-producing fields of the "family", the decision-making power for which rests with men, in addition to their engagement in the cultivation of crops for self-consumption. As a result, the work load of women is quite heavy. When each household is regarded as "a family" with the male household head stating that the project need is assistance for the cultivation of commodity crops, it must be noted that differences in the needs, such as those of women, within each "household" may be overlooked. With households headed by women, it is often the case that the cultivation of commodity crops is not a viable option because of the generally small cultivation area and the lack of access to credit for the purchase of such necessary inputs as fertiliser and agrochemicals. When a project intends the promotion of commodity crop cultivation, those actors which will not enjoy equal benefits must be taken into proper consideration.

7 Irrigation (Irrigation Water Sources: Rivers, Lakes and Groundwater)

With this type of livelihood, such water resources as river water, lake water and groundwater are artificially controlled by the method called “irrigation” to ensure a stable supply of agricultural water. With the development of irrigation facilities, the effective use of water resources becomes feasible for that farmland which is dependent on rainwater. As a result, stable farming and an increase of income become possible.

Irrigated agriculture is largely classified as the traditional type using the natural increase and decrease of river water (also described as the flood type of the flood plain type) and the modern water management type. In general, the idea of irrigation invokes the concept of modern water management but traditional irrigated agriculture using natural fluctuations of the river water level for dry field farming to grow rice and other crops is particularly important in arid areas in Africa. One example of smoothly run large-scale irrigation can be found with the gravity irrigation system (covering a total area of 60,000 ha) provided by the Markala Dam managed by the Office du Niger along Niger River in Mali.

7-1 Crops for Self-Consumption Type

The steady harvesting of crops for self-consumption is aimed at by completing crop growth with supplementary irrigation in marginal areas for the cultivation of crops for self-consumption where even the self-sufficient supply of crops is difficult because of a highly likelihood of drought resulting from unreliable rain.

7-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) Type

The stabilisation of crop cultivation is aimed at by irrigation to redress the problems of the unstable quality and yield of cash crops due to unstable rain despite the high dependency on such crops to maintain the livelihood.

Endowments of Assumed Five Capitals

Natural Capital	Water sources Salt damage Depletion of groundwater
Social Capital	Residents' association to operate and maintain irrigation facilities
Human Capital	Beneficiaries of irrigation facilities who are capable of operating and maintaining such facilities in correspondence with the scope of their benefits Diseases originating from the development of irrigation facilities
Physical Capital	Irrigation facilities which can be operated and maintained within the technical (gravity type irrigation, etc.) and financial capabilities of local residents Use of raw materials which can be procured locally Development of economic infrastructure (roads, etc.) to link production to sales
Financial Capital	Access to credit to finance the maintenance cost of irrigation facilities and inputs for cash crops

(1) Development Tasks

7-1 Crops for Self-Consumption Type

- Improvement of livelihood (secured food supply)
- Fulfilment of BHN (control of local diseases associated with wet land)
- Development of stable water resources
- Grouping of farmers
- WID

7-2 Crops for Self-Consumption + (Cash and/or Commodity Crops) Type

- Maintenance of livelihood (irrigation facilities)
- Fulfilment of BHN (control of local diseases associated with wet land)
- Improvement of livelihood (cash/commodity crops)
- Grouping of farmers
- Development of stable water resource

(2) Remarks

The construction of irrigation facilities in an area traditionally used by pastoralists may lead to confrontation between farmers and pastoralists over water and farmland. Meanwhile, settled pastoralists may not be able to successfully adapt to irrigated cultivation which is a completely different type of livelihood to pasturage. For the implementation of a project, the background of the people residing in the target area (or people who may migrate) must be properly considered.

The introduction of various agricultural machinery in areas of extensive farming may result in the implementation of only half of a project due to the shortage of spare parts and other reasons. The introduction of agricultural inputs for the development of an irrigation system must be carefully conducted. Irrigation using a pump often faces maintenance problems and water distribution should basically rely on the gravity method. Production areas of rice, one of the major cash crops, sometimes see a price difference between of the different level of rice cleaning. Cooperation for post-harvest operation together with assistance for irrigation is important to ensure the sale of rice at a better price. An irrigation cooperative to operate and maintain irrigation facilities should be established with the participation of a farmers' organization. However, as there is no culture of sharing property/assets in some parts of Africa, experience is unavailable for the proper operation and management of such common property as "irrigation facilities". In these areas, intense consultations between the donor and farmers are required at the onset of a project on the idea of "an irrigation cooperative". It is often the case that water rights are principally vested with household heads who are landowners and that farmland (different from family farmland) owned by women has low priority. Considering the fact that women are key players in ensuring a stable food supply for families and that the personal income of women is likely to be used for the welfare of family members, the role and contribution of women in communities must be appropriately evaluated and the evaluation results reflected on a project.

8 Fishery + Crops for Self-Consumption

The principal livelihood is fishery at rivers, lakes or the sea. It is believed that the cultivation of crops for self-consumption is also conducted in many fishing communities. There appear to be diverse components of the natural, social, human and physical capitals.

8-1 Freshwater Fishery + Crops for Self-Consumption Type

Freshwater fishery is often conducted using traditional dug-out canoes or simple nets or by hand-lining. Depending on the market access, the fish is either sold fresh or dried (smoked) using firewood. Processing of the fish is common to improve the preservability and transportability of the fish which is an important source of protein in the region.

8-2 Coastal Fishery + Crops for Self-Consumption Type

This type of livelihood is seen along the coast and generally involves small fishing boats. The cultivation of crops for self-consumption plays a supplementary role. Depending on the fish, the fish is either sold fresh or dried (smoked) using firewood. Processing of the fish is common to improve the preservability and transportability of the fish which is an important source of protein in the region.

Endowments of Assumed Five Capitals

Natural Capital	Negative impacts of contaminated rivers, etc. on fishery Rich water resources (rivers and lakes) Rich fishery resources Favourable coastal topography (coastal fishery)
Social Capital	Vulnerability of social capital due to different senses of values between fishing households and farming households, reflecting different livelihoods.
Human Capital	Diversity of human capital because of the scattered existence of this type of livelihood in areas with a varying population density
Physical Capital	Fishing boats and gear Fish markets and mooring sites Cold storage and other temporary storage facilities
Financial Capital	Strong demand for funding as the size of income from fishing activities considerably varies depending on the ownership of a fishing boat and gear as well as their quality

(1) Development Tasks

8-1 Freshwater Fishery + Crops for Self-Consumption Type

- Promotion of livelihood (fishery)
- Creation of supplementary role of agriculture to fishery

8-2 Coastal Fishery

- Promotion of livelihood (coastal fishery)

(2) Remarks

In fishing communities, the fishing itself is mainly conducted by men. Women play an important role as middlemen and also in fish processing and marketing businesses. Women can be observed running stalls which serve meals for fishermen and middlemen around fish markets. Careful consideration from a broad viewpoint is required for fish market development as indirect positive as well as negative impacts can easily result. One possible negative impact is the elimination of small women traders and/or women serving meals at stalls around fish markets.

There is special concern in regard to the spread of HIV/AIDS in fishing communities in Africa. HIV/AIDS not only reduces the level of the labour force for the local economy but also increases the number of households headed by women, AIDS orphans and under-age household heads. As a result, there is a strong prospect of a rising social burden. Given the particularly high HIV/AIDS infection rate in Africa, HIV/AIDS education activities must be implemented together with assistance for fishery.

How to Use Table 2 “Development Tasks and Development Programmes by Types of Livelihoods”

1 Purposes and Basic Approach of the

The Guidelines present one approach, incorporating processes from the analysis of a target community to the planning of development projects, to assist those involved in practical work for development cooperation for peoples in Africa.⁵

The main characteristic of the Guidelines is its focus on the manner in which people maintain, improve and/or enhance their lives (livelihoods) in order to identify the necessary components of development work. It is basically understood that people maintain their lives by using the tangible and intangible resources, assets or abilities in their communities (these are assumed to consist of natural, social, human, physical and financial capitals and the availability of these “five capitals”⁶ is established to judge the prevailing livelihoods⁷). Based on such understanding, the methods to identify development tasks and to plan the necessary development projects are presented for each type of livelihood.

Prior to the commencement of a field survey, the general situation of the target community should be established to infer the likely development tasks using this table. After completion of the field survey, development projects should be planned based on the community survey results while also referring to this table.

2 Configuration of the Table

As Table 2 compiles the main points of the Guidelines, it is advised that the relevant chapter of the Guidelines be referred to when each item in the table is consulted.

Rainfall/Water Resources (1)	Types of Livelihoods		Analysis of Present Situation/ Availability of Five Capitals (3)					Development Task (4)	Development Programme	Each Actor (Background; Important Points)(5)	Lessons Learned
	Primary Category (2)	Secondary Category (2)	Natural	Social	Human	Physic	Financi				
Ch. 3	Ch. 3		Ch. 2 and Ch. 4					Ch. 3	Ch. 3 Ch. 6	Ch. 5	Ch. 7

- (1) These provide one yardstick to judge a type of livelihood. The range of figures varies depending on the area and it is necessary to analyse the rainfall pattern and annual rainfall fluctuation in addition to the mean rainfall. Rainfall is not an absolute value and its marginal value changes depending on the conditions of each country and the subject year.
- (2) Livelihood here is classified based on the production activity on which local life is mainly relied upon. The types of crops for self-consumption and commodity crops vary depending on the country, region, rainfall and elevation (temperature).
- (3) Here, the specific findings of a rural survey conducted in seven countries are described for reference purposes. As the livelihood types (primary category 6 through 8 can exist irrespective of the level of rainfall or water resources, the availability of the five capitals cannot be described in a typical fashion. As a result, the corresponding columns are left blank.
- (4) Development programmes can be implemented from the short, medium or long-term. The desirable combination varies from one area to another.
- (5) Persons with different interests.

⁵ Sub-Saharan Africa is described as “Africa” in the Guidelines.

⁶ As these elements are regarded as original capitals which can be input for economic activities and improvement of the local living standard, the word “capital” is used. In the strict sense, however, its meaning differs from that of “capital” used in economics.

⁷ For the classification of livelihoods, “sustainable livelihoods”, the normative concept used by the integrated rural development approach (developed by the DFID of the UK) is referred to.

3 Five Capitals

The five capitals are a tool to study the current situation of the target community without many omissions in a relatively short period of time and it is unnecessary to fix the concept of each capital. It should be sufficient for a study team to agree on the concept of each capital and to list all of the study items under the category of each capital prior to the commencement of a community study for the assignment of the study items to each study team member. While the definition of each capital is given below, items may be classified under different capitals depending on the purpose of their use. For example, livestock (domestic animals) on their own belong to “natural capital” but also belong to “physical capital” if used for work as a type of agricultural tool. Livestock can also belong to “financial capital” if pastoralists use livestock as “mobile deposits” (means of creating an asset).

< Five Capitals >	
Natural Capital:	The natural resource stocks from which resource flows useful for livelihoods are derived (e.g. land, water, wildlife, biodiversity, environmental resources).
Social Capital:	The social resources (networks, membership of groups, relationships of trust, access to wider institutions of society) upon which people draw in pursuit of livelihoods.
Human Capital:	The skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies.
Physical Capital:	The basic infrastructure (transport, shelter, water, energy and communications) and the production equipment and means which enable people to pursue their livelihoods.
Financial Capital:	The financial resources which are available to people (whether savings, supplies of credit or regular remittances or pensions) and which provide them with different livelihood options.

The concrete study items vary depending on the characteristics of the target country or region. The standard items are listed below.

Standard Study Items for Each Type of Capital

Natural Capital	Rain (rainfall, period of rain, rainfall distribution and annual fluctuation); temperature (maximum, minimum and mean); elevation; relative humidity; topography (inclination); groundwater; rivers and lakes; soil fertility; water drainage; fuel resources (fuel wood and cow dung, etc.); natural disasters; land use (existence of undeveloped land and fallow land, etc.); conditions of natural resources (wild animals and plants, trees, grasses and fruits); distance from nearby town Pasture; farm produce, livestock, fish catch; cultivated area; planted area; grassland area; forest area
Social Capital	Ethnic groups; religion; traditional and non-traditional organizations; distribution type of houses; agricultural technology extension service and vocational training system; land ownership system; community history Response system to food; funding and/or labour shortage (general mutual help system); mutual help system for the socially weak; leader selection method; decision-making system of the community; information conveyance system; land distribution system; configuration of households (nuclear/extended families and polygamy, etc.); division of work according to gender; population inflow/outflow
Human Capital	Population (total, by sex and by age group); adult literacy rate; level of education; average life expectancy; main diseases; infant mortality rate; conditions of nutrition (food supply situation throughout the year, etc.); existence of final decision-makers (group) in the community; farmers (landowners and farm employees); working situation of women (especially when men are absent)
Physical Capital	Water supply system; quality of housing; access to means of communication (telephone and postal services); conditions of community roads and trunk roads throughout the year; means of transportation (access to public transport services and possession of vehicles at the household level); schools; medical facilities; community meeting hall; agricultural infrastructure; agricultural machinery and tools; fishing gear; production equipment
Financial Capital	Savings at the household level (including livestock as “mobile deposits”); loan opportunities in the community (personal money lenders and group finance projects); access to external loan opportunities (formal banks, etc.); opportunities for side jobs; opportunities to work outside the community; money transfer from outside the community

Table 2 Development Tasks and Development Programmes by Types of Livelihoods

Rainfall/ Water Resources	Livelihood		Analysis of Present Situation/Availability of Five Capitals			By Actor (Background and Important Points)	Lessons Learned	Development Tasks		Development Programmes
	Primary Category (2)	Secondary Category (3)	Natural Capital	Social Capital	Human Capital			Physical Capital	Financial Capital	
Less than 400 mm	1-1. Oasis Agriculture	<ul style="list-style-type: none"> · Suitable topography to catch water (wadi along a mountain range) · Soil erosion (by wind and water) · Fuel shortage (firewood; charcoal) · Aging of date palm trees and few excellent species · Domestic animals and poultry at oases (goats, sheep and chickens); cows or cattle are not favoured because of need for large volume of resources) 	<ul style="list-style-type: none"> · Traditional mutual help system: joint work, lending of food, savings and loans and redistribution of wealth by the rich to the poor (gift under Islamic teaching: zakah) · Oasis cooperative consisting of landowners (landless people or employed workers not included) · Informal information conveyance system among pastoralists 	<ul style="list-style-type: none"> · Presence of leaders, mainly consisting of landowners, at oases · Bipolarisation between landowner households, and households of landless people and employed workers in terms of literacy and school enrolment rates. · Craftsmen's groups (blacksmiths, etc.) · Lack of people for oasis management when oasis landowners are absent · Shortage of agricultural workers 	<p>(Background)</p> <ul style="list-style-type: none"> · Most landowners at an oasis entrust the raising of livestock on different scales to outsiders. In this sense, landowners can be said to possess the stock. · Probably because of the worker shortage, landless residents work under relatively favourable conditions. · As landless households and those of employed workers find it difficult to have access to traditional mutual help organisations or non-traditional organisations (oasis cooperatives and agricultural extension groups, etc.), they are unlikely to become the beneficiaries of a project which is implemented through these organisations. <p>(Important Points)</p> <ul style="list-style-type: none"> · There are gaps in terms of the educational standard and accumulated assets, etc. between landowner households and those of employed workers, requiring different assistance approaches. These gaps must be taken into consideration at the planning stage. · There are cases where the slavery system, officially abolished, still exists in a tangible or intangible form. Careful attention must be paid to the historical and social background of each village when selecting the target village(s). 	<ul style="list-style-type: none"> · In view of the basic Arab influence, sufficient consideration must be given to the socioeconomic influences of Arab traditions. The employment of someone with profound knowledge of the local situation is essential for project implementation. · For the effective management of natural resources over a wide area, such as the recharging of groundwater, a project must target multiple villages (oases) at the same time. For this purpose, it is important to skilfully link traditional organisations in villages with administrative organisations. · For the fixation of sand dunes, possible impacts on the surrounding environment must be carefully examined when the introduction of exotic species is planned. The currently planted exotic species consume much water, causing adverse impacts on the environment. <p>(Subject area for rural community survey) El Adara Oasis Cooperative in the Tidjikja District, Tagant Province, Mauritania</p>	<ul style="list-style-type: none"> · Electricity and water supply systems or clinic at urban oases; lack of a clinic at rural oases · Presence of schools (Islamic or modern) at urban oases · Agricultural bore holes at each oasis farmland. Some are buried by sand and, therefore, are unusable · Strong need for wind-operated or photovoltaic pump to extract groundwater 	<ul style="list-style-type: none"> · Tontine (group savings and loan system, mainly established by a small number of women) · Remittance by those working away from home · Borrowing from friends and relatives · Camels and goats, etc. as assets 	<ul style="list-style-type: none"> · Natural environment improvement measures/desertification control measures · Maintenance of livelihood (oasis agriculture) · Fulfilment of BHN (education) · Assistance for oasis as a base for local development · WID 	<ul style="list-style-type: none"> · Fixation of sand dunes (windbreak fencing and planting) · Water storage/acceleration of groundwater recharging preventing flushing out <ul style="list-style-type: none"> · Prevention of excessive water use · Improvement of cultivation techniques · Support for domestic animals (collaboration between farmers and pastoralists) · Construction of wells (bore holes) · Literacy education · Improvement of nutrition · Basic medical care (prevention of infectious diseases) · Improvement of trunk and rural roads (introduction of windbreak forests to protect roads) · Fostering of women's groups

Rainfall/ Water Resources	Livelihood		Analysis of Present Situation/Availability of Five Capitals					Development Tasks	Development Programmes	By Actor (Background and Important Points)	Lessons Learned
	Primary Category (2)	Secondary Category (3)	Natural Capital	Social Capital	Human Capital	Physical Capital	Financial Capital				
	2. Pasturage	2. Pasturage (Long Distance)	<ul style="list-style-type: none"> Communal pasture land with sparse vegetation Watering sites (shortage) Grazing animals (camels, goats, sheep and cows) 	<ul style="list-style-type: none"> Strong unity of ethnic groups (forced observance of ethnic rules) Mutual help within the ethnic group Informal information conveyance system among pastoralists 	<ul style="list-style-type: none"> Charismatic leader (tribal chief or elder who controls all the power) 	<ul style="list-style-type: none"> Water supply using animals Lack of roads Watering sites Shortage of veterinary clinics 	<ul style="list-style-type: none"> Sale proceeds from milk and butter Camels, goats, sheep and cows, etc. as assets 	<ul style="list-style-type: none"> Maintenance of livelihood (pasturage) Steady fulfilment of BHN (health, hygiene and education) Natural environment improvement measures (prevention of desertification/recycling of natural capital) WID 	<ul style="list-style-type: none"> Restoration and improvement of pasture land Supply of water for grazing animals (storage of surface water after rain and other means) Improvement of breeds to those with less consumption of resources and more production of milk Animal hygiene (prevention of diseases) Education on resources and environment to prevent excessive grazing (educational activities) Management of animal herds to maintain level of existing resources (establishment of appropriate male-female ratio) Supply of safe drinking water (shallow wells/bore holes and guidance on filtering) Basic medical care (prevention of infectious diseases) Health and hygiene education to suit local and natural environments Food for work (only at time of an emergency, such as drought) Water storage (promotion of techniques to recharge groundwater to prevent flushing out) Planting Fixation of sand dunes Fostering of women's groups (economic activities and nutrition improvement) 	<p>(Background)</p> <ul style="list-style-type: none"> pastoralists generally have the same religious faith and background Strong leadership Different pasturing stock depending on ethnic group Cattle for Peul Group (Mauritania and Mali) Camels for Tuareg Group (Algeria and Mali) Camels for Maure Group (Mauritania and Mali) Camels for Karayu Group (Ethiopia); cattle for Porana Group (Ethiopia and Kenya) <p>(Important Point)</p> <p>The situation of each actor differs depending on the form of pasturage and farming. The type of pasturing stock also differs depending on the ethnic group, making careful consideration of the culture, customs and habits of pastoralists essential.</p>	<ul style="list-style-type: none"> Consideration of the original culture of pastoralists is necessary. As people are constantly on the move on pasture land, the establishment of settlement-based organisations is difficult. Cooperation should at least aim at maintaining and effectively using the existing amount of resources (pasture land) Assistance in terms of physical capital is limited given the sparse population density and should mainly focus on BHN. Development of watering sites on pasture land tends to increase the access of animals to such sites, reducing vegetation in the surrounding area. Careful planning is, therefore, required for the construction of watering sites, taking their impacts on the environment into consideration.
400~800mm	3. Pasturage with Agriculture	3. Pasturage + Crops for Self-Consumption	<ul style="list-style-type: none"> Unreliable rainfall Communal pasture land (sparse vegetation) Privately-owned pasture land Farmland (limited) Watering sites (shortage) Grazing animals (cows, goats and sheep) Crop residuals 	<ul style="list-style-type: none"> Strong unity within ethnic group Mutual help within ethnic group Strong bonds based on blood relationships Informal information system Organisation established with administrative guidance 	<ul style="list-style-type: none"> Charismatic leader (tribal chief or elder who controls all the power) Few village heads elected by voting Low adult literacy rate Insufficient measures to prevent/control diseases 	<ul style="list-style-type: none"> Difficult access to safe drinking water Watering sites (shortage) Lack of roads Veterinary clinics (shortage) 	<ul style="list-style-type: none"> Domestic animals as assets (cows, goats and sheep) Sale of milk and dairy products 	<ul style="list-style-type: none"> Maintenance of livelihood (pasturage) Maintenance of livelihood (crops for self-consumption) Fulfilment of BHN (drinking water, disease control and education) Natural environment improvement measures (restoration of vegetation) WID 	<ul style="list-style-type: none"> Management of common pasture land (restoration and improvement of pasture land) Improvement of breeds to those with less consumption of resources and more production of milk; animal hygiene (measures to control animal diseases; revolving fund for veterinary drugs) Supply of water for domestic animals (storage of surface water after rain) Improvement of food crop cultivation techniques Improvement of farmland Effective use of rainwater (water harvesting) Supply of safe drinking water Introduction of health posts Adult literacy education Food for work (only at time of an emergency, such as drought) Prevention of soil erosion (introduction of green belts and planting of ground cover plants; banking with stones and earth; terracing on sloping land) Enclosure of waste land Planting (nursing and distribution of multi-purpose trees and fruit trees, etc.) Fostering of women's groups (economic activities and nutrition improvement) 	<p>(Background)</p> <ul style="list-style-type: none"> Grazing animals by transhumance for long periods in search of grass and water during dry season In the case of pasturage with regular moving with their animals, farming is often conducted at the same time. Some family members (women, children and old people) remain at home to conduct farming work. The moving distance has been becoming longer in recent years and those who find it difficult to travel far are left behind. In areas with mixed pasturage and agriculture created as a result of the resettlement policy, conflict between agriculture and pasturage is crucial is not very noticeable. <p>(Improvement Point)</p> <ul style="list-style-type: none"> Different approaches are required for people who are permanent settlers and those who move regularly. 	<ul style="list-style-type: none"> Environmental education for not only adults but also for children is effective to achieve a sustainable environment and development. The fostering of villagers as veterinary assistants to provide animal hygiene involving simple treatment (parasite control, castration and dehorning, etc.) in remote areas is necessary. Additional measures are required to deal with the risk that these assistants may move to other areas because of drought and other reasons. For the continued operation of a revolving fund for animal drugs, it is necessary to establish a mechanism whereby the funds to continue activities are reserved both by the local organisation in charge (for example, local office of the Ministry of Agriculture) and drug retailers. The methods for drug application, monitoring of operation and management of the repaid funds should be determined in advanced and regular follow-up should be conducted. Separate watering sites for humans and animals (for hygiene) As pasture land is used by both permanent settlers and semi-permanent settled farmers, special attention must be paid to the decline of pasture land for pastoralists Assistance for physical capital is limited given the sparse population density and assistance should mainly focus on BHN. For the fostering of animals with locally available fed, improvement of breeds should be conducted with a crossbreed ratio of 50%. An integral approach should be adopted, including the dissemination of an appropriate raising method, improvement of the feed crops in consideration of the local breeds and use of crop residuals. <p>(Subject site of rural community survey) Bitachas Village, Kofele District, Arsi County, Oromiya Province, Ethiopia</p>

Rainfall/ Water Resources	Livelihood		Analysis of Present Situation/Availability of Five Capitals					Development Tasks	Development Programmes	By Actor (Background and Important Points)	Lessons Learned
	Primary Category (2)	Secondary Category (3)	Natural Capital	Social Capital	Human Capital	Physical Capital	Financial Capital				
400~800mm	4. Agriculture with Pasturage	4-1. Crops for Self- Consumption + (Grazing Animals/Domes- tic Animals)	<ul style="list-style-type: none"> Communal pasture land near village with declining trend of grassland; shortage of feeding grass and crop residuals during dry season Unreliable rainfall (drought) Shortage of water for animals and farming during dry season Soil erosion due to land clearance (gullies) Shortage of fuelwood (sorghum stems and cow dung also used) Decline of soil fertility Damage by wild boar and monkeys, etc. 	<ul style="list-style-type: none"> Traditional mutual help (offer of food in exchange for labour; payment of wages) Strong bonds based on blood relationships Mutual help for farming work (work sharing; lending of work animals and agricultural machinery/tools or entrusted work) Mutual help between farmers and pastoralists (mutual use of crop residuals and animal dung) 	<ul style="list-style-type: none"> Charismatic leader (tribal chief or elder who controls all the power) Low adult literacy rate Poor health due to slow implementation of disease prevention or control measures Heavy work burden on women Teacher shortage (both quality and quantity) 	<ul style="list-style-type: none"> Difficult access to safe drinking water Difficult access to watering sites during dry season (for animals and humans) Draft animals + agricultural tools/carts Shortage of health care facilities, equipment and drugs suitable for local needs Shortage of primary schools Difficult access to trunk road (local roads sometimes become impassable by vehicles during rainy season) 	<ul style="list-style-type: none"> Domestic animals as assets (cows, goats and sheep, etc.) Non-agricultural income from work away from home, charcoal making and sale of firewood, etc. Borrowing from friends and relatives 	<ul style="list-style-type: none"> Maintenance of livelihood (crops for self-consumption) Maintenance of livelihood (pasturage) Fulfilment of BHN (disease control and education) Effective use of resources for both agriculture and pasturage Non-agricultural income Natural environment improvement measures (restoration/conservation of vegetation) WID 	<ul style="list-style-type: none"> Agricultural research and extension (selection of species/varieties, effective use of inputs and improvement of cultivation techniques) Effective use of rainwater (water harvesting) Improvement of soil fertility Management of common pasture land Improvement of breeds Animal hygiene (measures to control animal diseases; revolving fund for veterinary drugs) Primary education and adult literacy education Consolidation of grassroots medical care facilities Supply of safe drinking water (shallow wells/bore holes and guidance on boiling and filtering) Food for work (only at time of an emergency, such as drought) Improved ovens R & D on and dissemination of feed crops (excellent feed crops) Planting (nursing and distribution of multi-purpose trees) Biogas Planting (fuelwood) Pasture land restoration and improvement measures and soil erosion control measures (grooves along contour lines to slow down the speed of flow) Planting Improved ovens Enclosure of waste land Reduction of work load on women (wells, threshing machines and improved ovens, etc.) Fostering of women's groups (economic activities and nutrition improvement) 	<p>(Background)</p> <ul style="list-style-type: none"> This is an area where farming has commenced by those moving into an area inhabited by pastoralists as a result of the increased population pressure. The effective use of the limited resources by both agriculture and pasturage is crucial. A self-sufficient supply of food is basically difficult because of the harsh natural environment, including unreliable rainfall. Nevertheless, increased food production is required. Many people, mainly men, seek employment outside their village during the dry season. Cooperation and competition between pastoralists simultaneously takes place. Farmers are engaged in the raising of "domestic animals" (sometimes entrusted to pastoralists). <p>(Important Points)</p> <ul style="list-style-type: none"> Reduction of work burden on women when men are absent Consideration of competition between pastoralists and farmers regarding resources 	<ul style="list-style-type: none"> When women play the main role in project implementation due to the absence of men working away from home, assistance to reduce the long working hours (water fetching, firewood collection and farming) is important. For short-distance pasturage (raising of domestic animals), the management of common pasture land by people is important. Land ownership must be clearly established for the creation of a people's organisation to manage common pasture land. Consideration of farmland is required when trees to produce fuelwood are planted. The complicated topography with much sloping land (particularly in East Africa) enables the cultivation of diverse crops. However, careful attention is required in regard to the promotion of agriculture involving machinery and/or work animals. Natural environment improvement measures, including soil erosion prevention measures after farmland expansion, are also essential. Natural resources management must be implemented together with income generation activities. The people's contribution should vary depending on specific activities (higher contribution for activities with an economic return and lower contribution for activities with a strong public character). Agricultural extension can be achieved through repetitive practices on farmland in addition to theoretical learning at a training centre. Study visits to other areas to exchange opinions are also effective. Techniques of which the benefits are clear to people are also effective. Sufficient time should be spent to train such professionals as veterinary assistants, midwives and teachers for literacy education. Regular follow-up is also required. To reflect the needs of farmers of different levels on agricultural research, farmers must be organised. Efforts should start in a small area as a pilot project, followed by a gradual increase of the target area based on the pilot project results while keeping the constraints posed by the available number of extension workers in mind. In the case of a participatory project, the involvement of such related organisations as the government or agricultural research institutes, etc. at the beginning is important. Measures to deal with frequent changes of officials due to transfer or job-hopping must be in place. For smooth project progress, part of the project cost should be borne by people to make them recognise that "the project is their project". In regard to the management of participatory-type educational and health projects (by NGOs), the following problems are pointed out: (1) low participation rate due to volunteer nature (no financial reward), (2) long distance to school or clinic because of dispersed dwelling sites, (3) impossibility to meet (excessive) expectations of people due to limited project budget and (4) frequent changes of the educational policies of the government. When the maintenance of a facility by the administration is required after its completion, a site should be selected inside a village but not on the boundary to avoid conflict regarding facility maintenance between neighbouring villages.
			4. Agriculture with Pasturage	4-2. Crops for Self- Consumption (Cash and/or Commodity Crops + Domestic Animals/ Grazing Animals)	<ul style="list-style-type: none"> Unreliable rainfall (drought) Shortage of water for animals and farming during dry season Soil erosion due to land clearance (gullies) Decline of soil fertility Fragmentation of farmland Shortage of fuelwood (sorghum stems and cow dung are also used) Shortage of feeding grass and crop residuals during dry season 	<ul style="list-style-type: none"> Organisations tend to be established under administrative guidance in villages formed by settlement although traditional mutual help organisations are weak (women's groups and youth groups, etc.) Strong bonds based on blood relationships Mutual help for farming work (work sharing; lending of work animals and agricultural machinery/tools or entrusted work) 	<ul style="list-style-type: none"> Low adult literacy rate Poor health due to slow implementation of disease prevention or control measures Heavy work burden on women Difficulty to secure workers during peak season Teacher shortage (in terms of both quality and quantity) 	<ul style="list-style-type: none"> Difficult access to safe drinking water Warehouses to store grains Shortage of work animals and agricultural machinery/tools Shortage of health care facilities, equipment and drugs suitable for local needs Shortage of primary schools Rural roads which become impassable by vehicles during rainy season 	<ul style="list-style-type: none"> Sale proceeds from cash crops Borrowing from friends and relatives Remittance by those working away from home Domestic animals as assets (cows, goats and sheep, etc.) 	<ul style="list-style-type: none"> Maintenance and improvement of livelihood (cultivation of cash/commodity crops; secured quality and production volume) Maintenance of livelihood (crops for self-consumption) Fulfilment of BHN (literacy education and health care) Natural environment improvement measures (restoration/conservation of vegetation) Effective use of resources for both agriculture and pasturage Non-agricultural income WID 	<ul style="list-style-type: none"> Improvement of rural roads Soil degradation prevention measures Improvement of soil fertility Expansion of cultivated land Improvement of agricultural productivity Effective use of rainwater (water harvesting) Training on marketing and other matters Securing of inputs (loans by public corporations and extension workers, etc.) Agricultural research and extension (selection of species/varieties, effective use of inputs and improvement of cultivation techniques) Effective use of rainwater (water harvesting) Improvement of soil fertility Primary education and adult literacy education Consolidation of grassroots health care facilities Supply of safe drinking water (shallow wells/bore holes and guidance of boiling and filtering) Soil erosion control measures (grooves along the contour lines to slow down the speed of flow) Improved ovens Enclosure of waste land R & D on and dissemination of feed crops (excellent feed crops) Planting (nursing and distribution of multi-purpose trees) Biogas Generation of non-agricultural income (promotion of processed agricultural products and handicrafts) Planting (fuelwood) Reduction of work load on women (wells, threshing machines and improved ovens, etc.) Fostering of women's groups (economic activities and nutrition improvement)

Rainfall/ Water Resources	Livelihood		Analysis of Present Situation/Availability of Five Capitals					Development Tasks	Development Programmes	By Actor (Background and Important Points)	Lessons Learned
	Primary Category (2)	Secondary Category (3)	Natural Capital	Social Capital	Human Capital	Physical Capital	Financial Capital				
800 mm +		5-1. Crops for Self-Consumption (including Valley Side Fields)	<ul style="list-style-type: none"> Shortage of farmland due to population increase Unreliable rainfall (drought) Soil erosion on sloping land Depletion of forests 	<ul style="list-style-type: none"> Difficulty for new settlers to own land Joint work (work sharing) Mutual help between friends and relatives Assistance by youth groups for households headed by old people 	<ul style="list-style-type: none"> Teacher shortage (in terms of both quality and quantity) Low literacy rate Worsening nutritional conditions during drought 	<ul style="list-style-type: none"> Difficult access to safe drinking water Shortage of health care facilities Shortage of storage facilities Shortage of primary schools 	<ul style="list-style-type: none"> Borrowing from friends and relatives 	<ul style="list-style-type: none"> Improvement of livelihood (agriculture) Non-agricultural income Fulfillment of BHN (education and nutrition) Natural environment improvement measures (forest conservation and measures to control cutting for fuelwood) Maintenance of livelihood (raising of domestic animals) WID 	<ul style="list-style-type: none"> Improvement of land productivity Soil erosion control measures Agricultural research and extension (selection of species/varieties, effective use of inputs and improvement of cultivation techniques) Vocational training Planting (fuelwood) Nutritional improvement Primary education and adult literacy education Supply of safe drinking water (shallow wells/bore holes and guidance on boiling and filtering) Planting (nursing and distribution of multi-purpose trees) Biogas Improved ovens Improvement of breeds Animal hygiene Reduction of work load on women Fostering of women's groups 	<p>(Background)</p> <ul style="list-style-type: none"> A self-sufficient supply of food is basically possible except at the time of drought. Men tend to be engaged in the cultivation of crops with high potential for cash earning. <p>(Important Point)</p> <ul style="list-style-type: none"> Assistance for women who are responsible for the cultivation of crops for self-consumption must take a reduction of the work load of women into consideration. 	<ul style="list-style-type: none"> Sanitary facilities are particularly necessary during the rainy season. Participatory agricultural research and extension require (i) the provision of opportunities for farmers and researchers to exchange opinions and (ii) such incentives as a research evaluation system and promotion opportunities. The extension of agricultural techniques must take the behaviour of farmers of hedging their risk into consideration. The extension of agricultural techniques must take the behaviour of farmers of hedging their risk into consideration. The scope of an agricultural extension project should be within the capabilities of the field extension workers. Assistance which meets the needs of people and which can be realised with the labour which can be provided should be selected. The management of natural resources should be implemented together with activities which produce short-term economic benefits. Should a crop with high potential for cash earning be introduced, reduction of the environmental load must be taken into proper consideration. <p>Assistance for the improved productivity of commodity crops should examine the profitability.</p> <ul style="list-style-type: none"> Women who are essentially responsible for agricultural production often find it difficult to participate in agricultural training (too busy or opposed by husband). Agricultural extension activities should be conducted in the field, combining subjects of strong interest for women (for example, nutrition for infants) instead of seminar-style lectures. <p>(Subject site of rural community survey) Godo Ber Village, Guba Lafta District, North Wollo County, Amhara Province, Ethiopia</p>
	5. Agriculture (+ Domestic Animals)	5-2. Crops for Self-Consumption (+ Cash and/or Commodity Crops) (Suburban Type)	<ul style="list-style-type: none"> Shortage of farmland due to population increase Soil erosion on sloping land Depletion of forests Low yield of local cash crop varieties Raising of small animals (goats, ducks and chickens) Self-sufficient supply of food (sale of wild fruits and cash crops can compensate for poor grain harvest due to extraordinary weather) 	<ul style="list-style-type: none"> Joint farming work by women Agricultural extension system (income generation activities, such as fish culture and processing of sunflower oil) 	<ul style="list-style-type: none"> Poor health due to slow implementation of disease prevention/control measures Teacher shortage (both quality and quantity) 	<ul style="list-style-type: none"> Shortage of agricultural tools (hoes and spades, etc.) Difficult access to improved varieties (seeds) (high prices) Transportation by unlicensed taxis Shortage of storage facilities Primary schools and clinics in villages (not sufficient) 	<ul style="list-style-type: none"> Borrowing from friends and relatives Sale proceeds from cash crops grown all year round (bananas) 	<ul style="list-style-type: none"> Natural environment improvement measures (forest conservation and measures to control cutting for fuelwood) Fulfillment of BHN (diverse education and hygiene) Promotion of livelihood (cash/commodity crops) Grouping of farmers WID 	<ul style="list-style-type: none"> Soil erosion control measures Planting (nursing and distribution of multi-purpose trees) Improved ovens Supply of safe drinking water (shallow wells/boreholes and guidance on boiling and filtering) Adult literacy education and vocational training Securing of inputs (loans by public corporations and extension workers, etc.) Promotion of cultivation of excellent commodity crops Promotion of cultivation of variety of cash crops Development of market-related infrastructure (rural roads, warehouses and information network, etc.) Agricultural research and extension Improvement of land productivity Creation of farmers' organisations for commercialisation (including the introduction of such machinery as threshing machines and rice polishing machines, etc.) Improvement of agricultural techniques Microfinance Training tours (visits to farmers' organisations in other areas) Training on marketing and other matters Reduction of work load on women (wells, threshing machines and improved ovens, etc.) Fostering of women's groups (economic activities and nutrition improvement) Securing of inputs (loans by public corporations and extension workers, etc.) Improvement of agricultural techniques Small-scale processing of agricultural products (introduction of oil presses, etc.) Fish ponds (fish culture at reservoirs) Wood processing Introduction of restrictions on tree felling Planting Soil erosion control measures for farmland on sloping land Improved ovens Reduction of work load on women (wells, threshing machines and improved ovens, etc.) Fostering of women's groups (economic activities and nutrition improvement) Creation of farmers' organisations for commercialisation (including introduction of such machinery as threshing machines and rice polishing machines, etc.) Microfinance Training on marketing and other matters Training tours (visits to farmers' organisations in other areas) Improvement of agricultural techniques 	<p>(Background)</p> <ul style="list-style-type: none"> This represents an area where people have many livelihood options because of the rich natural resources. As people can live without the cooperation of others, there is a strong tendency to individualism, making the organisation of people difficult (they will immediately withdraw if the activities are not to their benefit). However, a farmers' organisation is essential for the efficient marketing of agricultural products. <p>(Important Point)</p> <ul style="list-style-type: none"> For the purpose of organising people, the presence of such clear incentives as an economic return for every participant is essential to make people understand the benefits of participation. 	<ul style="list-style-type: none"> One idea here is to provide assistance for the processing of agricultural products, possibly with the involvement of private enterprises, together with assistance to improve the quality of agricultural products. There are examples of maximising the use of limited farmland while reducing the environmental load: (1) improvement of mixed cultivation techniques (bananas and rootstock plants), (2) use of multi-purpose species which can be used for windbreak forests and feed crops for domestic animals, (3) raising of small animals (requiring little feed), (4) composting and (5) development of biogas and pedal pumps which can be purchased by farmers. Selection of technologies which meet the needs of residents and which can be used by the available labour. Women who are essentially responsible for agricultural production often find it difficult to participate in agricultural training (too busy or opposed by husband). Agricultural extension activities should be conducted in the field, combining subjects of strong interest for women (for example, nutrition for infants) instead of seminar-style lectures.
		5-3. Crops for Self-Consumption (+ Cash and/or Commodity Crops) + Forest	<ul style="list-style-type: none"> Rich forest resources at present but trend of decline or degradation is observed Rich river water and groundwater Rich fuelwood (from nearby forest land) Sufficient common pasture land (day-return pasturage) 	<ul style="list-style-type: none"> Mutual help between friends and relatives (food and money) Joint farming work by women Lowest level organisation of local administration Agricultural extension system 	<ul style="list-style-type: none"> Insufficient farming skills of farmers Shortage of agricultural workers Relatively good nutritional conditions 	<ul style="list-style-type: none"> Plenty of wells and reservoirs Irregular haulage services by individual truck owners Primary schools Crop storage facilities (crop bank) Shortage of work animals, tools for work animals and agricultural tools Unpaved roads Absence of clinics or drugs; long distance to nearest clinic; few homes with toilet facilities 	<ul style="list-style-type: none"> Borrowing from friends and relatives Cash income from sale of charcoal and firewood Work in nearby city Crop bank 	<ul style="list-style-type: none"> Improvement of livelihood (increased added value of agricultural products) Natural environment improvement measures WID Establishment of farmers' groups 	<ul style="list-style-type: none"> Securing of inputs (loans by public corporations and extension workers, etc.) Improvement of agricultural techniques Small-scale processing of agricultural products (introduction of oil presses, etc.) Fish ponds (fish culture at reservoirs) Wood processing Introduction of restrictions on tree felling Planting Soil erosion control measures for farmland on sloping land Improved ovens Reduction of work load on women (wells, threshing machines and improved ovens, etc.) Fostering of women's groups (economic activities and nutrition improvement) Creation of farmers' organisations for commercialisation (including introduction of such machinery as threshing machines and rice polishing machines, etc.) Microfinance Training on marketing and other matters Training tours (visits to farmers' organisations in other areas) Improvement of agricultural techniques 	<p>(Background)</p> <ul style="list-style-type: none"> This represents an area where people have many livelihood options because of the rich natural resources. As people can live without the cooperation of others, there is a strong tendency to individualism, making the organisation of people difficult (they will immediately withdraw if the activities are not to their benefit). <p>(Important Points)</p> <ul style="list-style-type: none"> For the purpose of organising people, the presence of such clear incentives as an economic return for every participant is essential to make people understand the benefits of participation. Assistance to reduce the work load on women who carry a heavy burden is necessary when the numbers of men and women are unbalanced. 	<ul style="list-style-type: none"> In an area where daily life is not difficult to sustain, people have many options to satisfy their needs. The customs and habits of people must, however, be taken into careful consideration in such a case (there are cases where even if a well is constructed in the village to reduce the burden of water fetching on women, they prefer to travel to a distant watering site at the foot of a mountain rather than using the new well so that they can chat with others). Improvement of access to credit must be accompanied by strict examination of the intended purpose of credit application. Credit should only be given when the purpose and repayment capability are verified. When a village lacks income generation activities, a demonstrative economic activity (such as fish culture) should firstly be conducted with the participation of outstanding farmers using the project funds to verify its viability. When other farmers begin to show strong interest, creating a funding demand, a financial scheme could be introduced. The national policy of "forest conservation" may be incompatible with the field practices adopted by local public bodies which face financial difficulties as a result of decentralisation. Active efforts should be made to coordinate the opinions of local people, local government officials and aid organisations. <p>(Subject site of rural community survey) Pindaganga Village, Amatomga District, Gondola County, Manica Province, Mozambique</p>

Types of Livelihood Difficult to Classify Based on Rainfall (Can Exist in Areas With Different Levels of Rainfall)	Livelihood		Analysis of Present Situation/Availability of Five Capitals					Development Tasks	Development Programmes	By Actor	Lessons Learned	
	Primary Category (2)	Secondary Category (3)	Natural Capital	Social Capital	Human Capital	Physical Capital	Financial Capital					
450mm + (5)	6. Commodity Crops	Commodity Crops + Crops for Self-Consumption (Crops Vary Depending on Rainfall and Temperature)						Improvement of livelihood (commodity crops)	<ul style="list-style-type: none"> Securing of inputs (loans by public corporations and extension workers, etc.) Improvement of varieties of commodity crops Improvement of land productivity Promotion of cultivation of excellent commodity crops Development of market-related infrastructure (rural roads, warehouses and information network, etc.) Agricultural research and extension 		<ul style="list-style-type: none"> In countries where many agribusiness-related enterprises exist in rural areas, the promotion of sustainable economic activities in village communities is important. Partial payment by farmers of the technical cost ensures the continued use of the technologies introduced. While technologies/techniques are extended to groups, clear determination of the responsibility for agricultural equipment/tools and repayment is necessary. 	
Fulfilment of BHN								<ul style="list-style-type: none"> Supply of safe drinking water (shallow wells/bore holes and guidance on boiling and filtering) Diverse education Adult literacy education 				
Grouping of farmers								<ul style="list-style-type: none"> Creation of farmers' organisations for commercialisation (including introduction of such machinery as threshing machines and rice polishing machines, etc.) Improvement of agricultural techniques Microfinance Training on marketing and other matters Training tours (visits to farmers' organisations in other areas) 				
Natural environment improvement								<ul style="list-style-type: none"> Soil erosion control measures Development of stable water resources 				
WID								<ul style="list-style-type: none"> Fostering of women's groups Reduction of work load of women 				
Any Rainfall/Water Resources (Rivers, Lakes and Groundwater, etc.)	7. Irrigation	7-1. Crops for Self-Consumption						Improvement of livelihood (secured food supply)	<ul style="list-style-type: none"> Development of small-scale irrigation facilities Promotion of lowland development 		<ul style="list-style-type: none"> A participatory approach should be employed even for the creation of small-scale irrigation associations. Consideration of the establishment of the optimal method of using irrigation facilities by farmers and pastoralists is necessary. The water charge collection rate can be increased if low cost (gravity method, etc.) and simple technologies are selected in areas with relatively good conditions (presence of surface water, topography allowing a gravity water supply system and relatively affluent) In the case of flood recession-type agriculture, salt damage may occur due to the incursion of salt water in areas near the sea. Sea walls are required in these areas. 	
								Development of stable water resources	<ul style="list-style-type: none"> Measures to combat depletion of groundwater (storage of surface water after rain and others) Salt damage control measures 			
								WID	<ul style="list-style-type: none"> Fostering of women's groups Reduction of work load of women 			
								Fulfilment of BHN	<ul style="list-style-type: none"> Waterborne diseases control measures Adult literacy education Supply of safe drinking water (shallow wells/bore holes and guidance on boiling and filtering) 			
								Grouping of farmers	<ul style="list-style-type: none"> Improvement of capability to adequately operate and maintain irrigation facilities 			
			7-2. Crops for Self-Consumption + (Cash and/or Commodity Crops)						Maintenance of livelihood (irrigation facilities)	<ul style="list-style-type: none"> Adequate operation and maintenance of irrigation facilities (pump repair technicians) Creation of farmers' organisations/irrigation associations Guidance on farming to pay the cost of water use 		<ul style="list-style-type: none"> As irrigation using individual pumps faces maintenance problems in many cases, water distribution should, in principle, rely on the gravity system. Irrigation associations should be established using the participatory approach. Continuous measuring of the water consumption and the introduction of a realistic water charge are important. In areas where the conventional grain purchase system of a public corporation has collapsed following market liberalisation, there is strong willingness to cultivate vegetables which have a high profitability. However, vegetables cannot be stored for a long time unlike grains and they lack "collateral" value unless there is a system for stable purchase by vegetable processing enterprises. As a result, there is a tendency for banks not to provide loans for the purchase of inputs for vegetable cultivation. In rice growing areas, a price gap may occur depending on the polishing level. Cooperation for post-harvest activities is required to ensure sale at a better price. The introduction of agricultural machinery in areas of extensive farming could lead to project suspension due to a lack of spare parts and other reasons. The introduction of agricultural inputs along with the development of an irrigation system must be carefully conducted. The construction of irrigation facilities in areas used by pastoralists could lead to conflict between farmers and pastoralists over water and farmland. Settled pastoralists may be unable to adapt to irrigated farming. Careful attention should be paid to the background of local residents in the target area prior to project implementation. In the case of flood recession-type agriculture, salt damage may occur due to the incursion of salt water in areas near the sea. Sea walls are required in these areas The development of a drainage system is required to ensure reliable transport and good hygiene. (Subject sites of rural study) Kamaka Village, Mopti Province, Mali Thiago Village, Rishard Toll Province, Senegal
									Improvement of livelihood (cash/commodity crops)	<ul style="list-style-type: none"> Promotion of cultivation of excellent crops Diffusion of farming practices with good cost-benefit performance Securing of inputs (loans by public corporations and extension workers, etc.) 		
									Fulfilment of BHN	<ul style="list-style-type: none"> Waterborne diseases control measures Adult literacy education 		
									Grouping of farmers	<ul style="list-style-type: none"> Creation of farmers' organisations for commercialisation (including introduction of such machinery as threshing machines and rice polishing machines, etc.) Improvement of agricultural techniques Microfinance Training on marketing and other matters Training tours (visits to farmers' organisations in other areas) 		
									Creation of supplementary role of agriculture to fishery	<ul style="list-style-type: none"> Use of (recycling type) agricultural and fishery resources 		
Rivers and Lakes (Sea)	8. Fishery + Crops for Self-Consumption	8-1. Freshwater Fishery + Crops for Self-Consumption						Promotion of livelihood (fishery)	<ul style="list-style-type: none"> Water pollution prevention Measures to combat decline of aquatic resources Transfer of fish culture techniques Transfer of fish culture techniques Use of fish as an alternative source of protein 		<ul style="list-style-type: none"> The development of a market could have indirect positive as well as negative impacts, requiring careful consideration from a broad viewpoint. One possible negative impact is the elimination of small women traders and/or women serving meals at stalls around fish markets. There is concern in regard to the spread of HIV/AIDS in fishing villages in Africa. HIV/AIDS education activities must be implemented together with assistance for fishery. 	
		8-2. Coastal Fishery + Crops for Self-Consumption						Promotion of livelihood (fishery)	<ul style="list-style-type: none"> Protection of marine resources Protection of fishing grounds (mangrove forests and coral reefs, etc.) Improvement of fishing gear and methods Use of fish as an alternative source of protein 			

(1) This table is compiled based on the findings of case studies conducted in various African countries and should be used as a reference for conducting studies in Africa. The implementation periods of development programmes may be short, medium or long and their optimal combination depends on the specific target area.

(2) Although livelihoods are classified based on rainfall, rainfall is not an absolute value and its threshold value changes depending on the actual situation of each country.

(3) Livelihoods are classified based on the degree of dependence.

(4) The types of cash and commodity crops vary depending on the country, region, rainfall and elevation (temperature).

(5) The minimum level of rainfall during the plant growth period to maintain the quality of a commodity crop is indicated (example of cotton).

Source: International Development Center of Japan Study Team

CHAPTER 4

ANALYSIS OF ACCESS TO "FIVE CAPITALS"

CHAPTER 4 ANALYSIS OF ACCESS TO "FIVE CAPITALS"

< Targets of Chapter 4 >

- Presentation of the underlying ideas of the analysis of access to capitals (actor analysis)
- Presentation of the underlying ideas of capital fluctuation

In Chapter 3, development tasks are identified by specifying the type of livelihood based on the extent of the "availability" of the five capitals.

For rural community analysis, it is equally necessary to establish the situation of "access" to capitals, i.e. the viewpoint regarding who can or cannot use the five capitals and how much. This knowledge of access to capitals enables further clarification of the development tasks which are much more suitable for a target village.

Access to the five capitals can be analysed in two ways. One way is actor¹ analysis to study any differences in access depending on individual persons or groups. The other way is "fluctuation" analysis to study how the availability of each capital fluctuates to affect the available quantity of usable capital.

4.1 Actor Analysis

(1) Basic Concept of Actors

In order to determine the situation of access to each capital of local residents, a clear understanding of both (i) capital(s) which can be used by all villagers under almost the same conditions and (ii) capital(s) which can only be used by specific types of villagers is essential. For example, rainwater is natural capital which can be almost equally enjoyed by all villagers while an action "to store rainwater" requires something (physical capital) which may be beyond the means of all households in a village. Similarly, it can be easily assumed that there are large gaps between individual villages in terms of the frequency of use of pasture land (natural capital) and the area of use between the case where the entire pasture land in a village is common land and the case where pasture land is compartmented for specific groups and households. Another example is that even if a village has a primary school, only boys are customarily encouraged to attend.

As observed above, the "existence" of capitals in a village is entirely a different matter from the actual "use" of such capitals by villagers. If there is a type of capital which can only be used by a specific type of villagers, it is necessary to separate those who can use the capital from those who cannot use it. These two groups of villagers constitute different actors on whom development impacts in different ways when they are directly or indirectly involved in development. Using the above-mentioned examples, households which can use rainwater from the rainy season during the dry season and those which cannot, households which can use a large area of pasture land and those which cannot and boys and girls of school age must be recognised as constituting different actors. The differences between actors must, therefore, be taken into careful consideration in the preparation of a development plan.

(2) Actor Analysis from the Viewpoint of the Standard of Living

A typical outcome of different access to each capital is a difference in terms of the standard of living. As a study on the existence and usability of each capital does not clearly illustrate the reality of people's lives, it is essential to analyse how people combine different capitals in order to live to obtain a clear picture. Although there are many aspects to life, there are generally three components as listed below.

Box 4.1 Main Components of Life

- ① Obtaining of food (including drinking water)
- ② Fulfilment of BHN other than food
- ③ Earning of income to produce a surplus

It can be said that people distribute the capitals in their possession to these components in order to live. These three components naturally have priority ranking. In a situation where it is extremely difficult to obtain food, all

¹ Actors are those people having different interests.

capitals must be thrown in to obtain food, leaving no room to improve the home or to send the children to school even if a strong desire to do so exists. A surplus to fulfil BHN other than food can only emerge once sufficient food for survival is obtained, thus releasing extra time for the sale of surplus food or for involvement in work other than food production. Any idea of investing in economic activities to earn extra income generally occurs, albeit personal differences, when BHN are met to a certain extent. Given the fact that the components of life are gradually added in accordance with their priority, analysis of which component of the three mainly receives capital input by people in a target village enables inference of "the standard of living" in the target village. The six levels of living described in Box 4-2 can be assumed here.

Box 4.2 Standard of Living in a Village

- Level 1: a self-sustaining food supply based on the available capitals in the village is impossible
- Level 2: a self-sustaining food supply based on the available capitals in the village is possible
- Level 3: surplus food can be generated with the available capitals in the village (generation of cash income)
- Level 4: generated income can be invested for the maintenance and improvement of the standard of living
- Level 5: generated income can be invested for the improvement of the productivity and profitability of the livelihoods
- Level 6: Re-investment can continue with the available capitals in the village

When the same type of livelihood is followed in a single village, all villagers may have a similar standard of living or may have several different qualities of life. In the case of the latter, groups of villagers at different levels are recognised as constituting different actors.

(3) Other Types of Actor Analysis

There are other viewpoints from which actors are analysed.

① Village with multiple livelihoods

Examples

- Mixed existence of "pasturage with agriculture" and "agriculture + (domestic animals)" in a new settlement area
- Mixed existence of "crops for self-consumption" type households and "crops for self-consumption + (cash and/or commodity crops) type households in the same "agriculture + domestic animals" area

② Distribution situation of specific capital within a village

Examples

- Uneven distribution of land (natural capital) with the existence of households of large landowners and landless households
- Clear distinction between informal money lenders and borrowers (uneven presence of financial capital)

③ Uneven distribution of specific capital

Examples

- Distant location of water supply facilities and/or school, etc. for some villagers, making access difficult
- Necessity for daily trips for villagers living in high places to fetch water from a river or lowland in a village spreading over a sloping area

④ Social and cultural factors

Examples

- Society where the division of work between men and women and a gender gap are highly noticeable
- Existence of historical ethnic conflict or an oppressor-oppressed relationship between different ethnic groups
- Mixed existence of traditional and new religions

As described above, the different classification of actors is possible even within the same village by changing the point of view and it is not unusual for the same person to be classified as more than one actor. Such a

possibility illustrates the need for a rural study to understand who (which groups of villagers) can be classified as more than one actor.

4.2 Fluctuation Analysis

One key word which characterises Africa is "fluctuation" in various aspects. There is no guarantee that a certain level of rainfall in a target village during the rainy season this year means a similar level of rainfall during the rainy season next year. At the study stage, the formulation of a development plan which incorporates "fluctuations" is necessary by checking the possibility of the fluctuation of the following items.

Table 3 Study Items for "Fluctuations" by Type of Capital

Natural Capital	Timing and duration of the rainy season; frequency and scale of natural disasters; planned large-scale construction work in a nearby area
Social Capital	Impacts of changes of the political and administrative systems on the village level leadership; organizations introduced under government policies
Human Capital	Population inflow and outflow; frequency of the outbreak of diseases
Physical Capital	Resistance to natural disasters; breakdown rate; level of development of the repair system
Financial Capital	Economic situation in places for work away from home; increase or decrease of the opportunities for work away from home
External Factors Affecting All Capitals	Civil war; macroeconomy; various government policies; activities of NGOs

"Fluctuation" in terms of the availability of each capital necessarily means a change of the access to various capitals by each actor. This "fluctuation" of access often manifests itself in the form of limited access by weak actors. A typical example is that when the availability of food considerably declines due to drought or other reasons, the priority of food distribution is given to "men" rather than "women" in certain villages. Such a prospect illustrates the need for an in-depth study.

CHAPTER 5

ESTABLISHMENT OF DEVELOPMENT TARGETS FROM THE VIEWPOINT OF ACCESS TO CAPITALS

CHAPTER 5 ESTABLISHMENT OF DEVELOPMENT TARGETS FROM THE VIEWPOINT OF ACCESS TO CAPITALS

< Targets of Chapter 5 >

- Presentation of underlying ideas for the selection of development targets based on the results of the “actor” and “fluctuation” analyses

Because the development tasks suggested by different livelihoods are truly diverse, it is necessary to narrow down the priority tasks. A method to establish suitable development targets for a target village based on the results of the “actor” and “fluctuation” analyses is described in this Chapter as one viewpoint for such narrowing down.

5.1 Priority Ranking Based on the Standard of Living

Understanding of the standard of living in the village in question (see Box 4.2) is a useful guideline to narrow down the priority development tasks to establish development targets.

Assuming that all villagers constitute the targets of development, understanding of the average standard of living in the village is essential so that a target(s) corresponding to the said standard can be established. For example, whichever livelihood is associated with the target village, if the standard of living in the village is classified as “Level 1: a self-sustaining food supply based on the available capitals in the village is impossible”, “the securing of food” must be given top priority.

The principles for rural development can be described as follows using the concept of “the standard of living”.

Box 5.1 Meaning of Development for Villages

- ① To raise the standard of living in a village by one level (or several levels in some cases)
- ② To at least maintain the existing standard of living
- ③ To raise the standard of living of actors whose level is below average in the village to the average level

The establishment of the target level to be reached by development is one yardstick for a development plan to determine how far the limitless needs of villagers should be met.

5.2 Establishment of Development Targets

(1) All Villagers or Specific Actors

Introduction of the concept of actors for rural community analysis clarifies that there are two types of needs in a target village, i.e. the needs of the entire village (common needs of most villagers) and the needs of specific actors. In general, the former are related to capitals which are difficult for individual villagers to obtain. For example, even if villagers can individually acquire financial capital, there are still needs for the construction of boreholes and health care facilities, etc. and for road improvement in the village. Meanwhile, the needs of specific actors tend to diversify in accordance with a higher standard of living.

Based on the above, there are three options to establish the targets of a village development plan.

- ① Fulfilment of the common needs of all villagers is considered to be the priority task and the targets are all villagers.
- ② The targets are actors in the most disadvantageous position in the target village.

Example 1

The results of the classification of actors from different viewpoints indicate actors whose access to capital(s) is restricted from more than one viewpoint.

Table 4 Case of “Female Household Heads” and “Landless Households”

		Classification of Actors from Viewpoint of Land Ownership			
		Large	Medium	Small	Landless
Classification of Actors from Viewpoint of Gender	Male Household Head				
	Female Household Head				Target

Example 2

Generally inferior actors based on the comparison of actors identified from different viewpoints in terms of access to the five capitals (preparation of a comparison table, such as Table 5, to find actors with low total scores)

Table 5 Comparison of Access to “Five Capitals” by Actor

	Natural	Social	Human	Physical	Financial	Total Score
Actor A	2	1	1	1	1	6
Actor B	3	1	2	1	2	9
Actor C	2	1	2	1	2	8
Actor D	1	1	1	3	1	7

Note: Higher figures mean a higher level of possession of the capital concerned. However, as the size of capital of different capitals cannot be compared, 1 for natural capital, for example, does not mean the same degree of possession as 1 for human capital.

- ③ The targets are actors identified by a specific policy.

(Example 1)

There can be the case where actors who most exploit the natural capital (for example, farmers engaged in commercial farming compared to those producing for self-consumption) become the target of a development plan designed to change the business practices of the said actors if it is concluded that the most serious problem faced by the village is environmental deterioration.

(Example 2)

There can be the case where only farmers willing to introduce crops for export become the targets of assistance when rural development is conducted under a policy of promoting export crops.

(2) Maximisation of the Benefiting Population

In regard to the question of whose needs require prioritisation, facilitators (aid organizations and field workers, etc.) should provide the necessary advice, if required, regardless of the nature of the selected actors so that the population benefiting from development is maximised. If assistance for specific actors can directly or indirectly benefit other actors, the selection of such actors as the targets is an appropriate choice by villagers. What must be avoided is a situation where assistance for specific actors worsens the conditions for other actors.

For example, even if “women” who are burdened with excessively heavy labour are not selected as the direct targets, “the needs of women” can be met to a certain extent by means of constructing “a borehole” to meet the common need of all villagers or by means of introducing measures to eliminate the need for men to work away from home.

5.3 Establishment of Targets from the Viewpoint of Time Series Analysis

As already described, one characteristic of Africa is “fluctuation” from various aspects. It is not uncommon for the response to an emergency situation to become an urgent task for rural development following the occurrence

of an unforeseen event, such as a drought or another type of natural disaster or ethnic conflict. In most cases, therefore, it is essential to establish a series of development targets, ranging from urgent/short-term targets to medium-term targets and long-term targets in order of priority.

The adoption of time series analysis makes it possible to give each development target a priority rank. For example, a development plan may envisage the implementation of infectious diseases control measures targeting children as an urgent/short-term target while providing for the improvement of the health environment for “all villagers” as a medium-term target.

Even if the targets are established, there is always a possibility of unexpected “fluctuations”. What is required at all stages from initial planning to implementation is the patience to review the development targets in response to “fluctuations”.

5.4 Other Examination Items

Development targets are finalised by further considering the following points in addition to a proper understanding of Africa’s characteristics.

- ① Development does not mean the ultimate improvement of the standard of living of all villagers to Level 6 (reinvestment can continue with the capitals available in a village). Whether part(s) of the existing capitals are lost due to efforts to improve the level must be carefully checked. Is it preferable for villagers to see an improvement of the standard of living even if it means the loss of some capitals?
- ② Is there any promising means for side jobs in addition to the main livelihood? If so, is it more effective to provide assistance for a productivity increase of such side jobs?
- ③ When villagers work away from home, is it more effective to provide assistance for their work away from home?
- ④ If there is no prospect for the target village to move up the ladder from Level 1 (a self-sustaining food supply based on the available capitals in the village is impossible), it is possible to examine the option of migration?
- ⑤ When there is more than one livelihood in the same village, will the planning of a development strategy targeting one type of livelihood cause any negative impacts on the other types of livelihoods?
- ⑥ If there is only a minor chance of improvement of the existing type of livelihood, is conversion to another type of livelihood possible rather than simply maintaining the existing livelihood in order to improve the standard of living?

An example of rural development practices is given below, starting with rural community analysis from the viewpoint of the “five capitals” to the establishment of development targets suitable for the reality of a target village based on the study results in FY 2000.

An Example of Rural Community Survey: Alphabougou Village in Segou Province, Mali

1. Village Profile

Nine families with some 130 members live in a small village surrounded by baobab trees. The village is said to originate from the 18th Century when a man called “Alpha”, an ancestor of the present village, settled in the area. As suggested by the village’s name which means “the house of Alpha”, the entire village can be described as consisting of one extended family. While the traditional religion existed up to some 60 years ago, the present villagers are all Muslims.

The village has mean annual rainfall of 300 – 500 mm and the main staple is millet which is cultivated using rainwater. Rice bought in the market is eaten on several occasions during the year. The leaves of the baobab are the vegetable equivalent. Each household compound has a circular column-shaped food storage and a house, both of which are made of mud. It is said that these storages used to be made of grass until several years ago. They are currently made of mud because of the difficulty of obtaining grass in nearby areas. They are, therefore, vulnerable to rain and the poor ventilation causes a problem of insect outbreaks.

The amount of millet produced by the villagers is not sufficient to meet the demand, making it necessary to earn cash to buy food and daily necessities. The available income sources are the sale of wood and charcoal and work in Bamako (the capital), Niono (a town some 100 km away in an irrigated rice cultivation area) or the Ivory Coast. During the rainy season (June to August), all family members are engaged in the cultivation of millet and some family members have side jobs during the dry season. Because of the moderate felling restrictions, not only villagers but also outsiders have been freely felling trees. As a result, a depletion of trees has been acutely felt in recent years.

Most households have domestic animals (goats, sheep and cattle). However, the villagers who belong to the Bambara tribe are not engaged in pasturage and entrust the Fulani, known as pastoralists in the area, to graze their animals.

- 2. Livelihood:** Agriculture with pasturage – crops for self-consumption + (grazing animals/domestic animals) type
- 3. Actor Categories:** As all villagers have a strong sense of community, there are no specific actor categories which must be recognised as groups subject to different development impacts.
- 4. Standard of Living:** Level 1 – a self-sustaining food supply based on the available capitals in the village is impossible.
- 5. Option for Development Targets to be Assumed:** entire villagers
- 6. Option for Development Targets to be Assumed:** Out of the relevant development tasks listed in Table 2 – Development Tasks and Development Programmes by Type of Livelihood: Development Menu, the highest priority may be given to “food security”, followed by the gradual adoption of the “fulfilment of BHN” and other tasks as targets.

CHAPTER 6

DEVELOPMENT PROJECT PLANNING METHOD

CHAPTER 6 DEVELOPMENT PROJECT PLANNING METHOD

< Targets of Chapter 6 >

- Factors for the planning of individual projects addressing development tasks (important points)
- Introduction of examples of development projects

Chapter 3 describes the process leading to the formulation of a development programme to achieve a specific development task(s). The important points for the planning of a concrete development project following finalisation of the development tasks are explained in this Chapter with reference to the internal and external factors of a target village.

6.1 Important Points for the Planning of Development Projects

6.1.1 Selection of Inputs Based on the Available Capitals in a Village and the Results

In the case of several methods to achieve the same development task, the concrete method is determined based on the availability of usable capitals in a village.

- ① What is the most effective way of achieving the task by selecting the capital to be increased (use of existing capital)?
- ② Which capital can be input in the most efficient manner to increase the capital which is the intended result of such input (external input)?

The following processes are generally followed to determine the intended result and the necessary inputs to achieve the result.

- ① What result should be assumed to achieve the development task?
- ② What inputs are required to achieve the intended result?
- ③ Among the different inputs, which input is the capital possessed in abundance by the target village (or target actors)?
- ④ What is the most efficient way of making the external input of which capital(s) in order to supplement (or use) the existing capital(s) to achieve the intended result (is it possible to achieve the result quickly and at low cost)?

Even if external input in the form of a development project is made, the implementation body at “the village level” is often people living in the target village, particularly in the case of rural development. Accordingly, it is crucial to select a method which can be implemented by people living in the target village in order to enhance the prospect of project continuity.

Box 6.1 Methods to Achieve the Task of “Securing Food”

(The underlined indicate the selection of different results.)

- Harvesting of agricultural products (natural capital) with such inputs as village land and rainfall (natural capital), labour of villagers (human capital) and irrigation facilities (physical capital)
- Earning of enough income (financial capital) to start self-employed businesses or to purchase food with such inputs as low interest loans (financial capital) and vocational training (human capital)

6.1.2 External Factors

It is necessary to take note of the following factors for the planning of a development project in addition to the availability of capitals in a village.

(1) Cooperation Principles of Aid Organizations and Amount of External Inputs

In general, an aid organization inputs three elements, i.e. manpower, goods and money (hereinafter referred to as “external inputs”), and deals with a development task using the existing capitals in a village. There is a growing tendency for aid organizations not to unilaterally decide the nature of the inputs with such a decision being made through joint planning and implementation processes with the local residents who are the project beneficiaries.

Nevertheless, there are such constraints as the principles of the aid organization (regarding the project purpose and criteria for target planning, etc.), the amount of feasible inputs and the type of cooperation (loan or grant aid, etc.) and it is often the case that not all of the needs of local residents are met. For example, when an aid organization is planning to implement “a project to improve the natural environment”, the request by local residents for “a school or medical facilities” which does not directly suit the project purpose cannot be answered. In such a case, many different responses are possible, including rejection of the request, the introduction of other aid organization which may be able to respond to the request or the adoption of measures to respond to the request within the scope of the project purpose.

(2) Examination of Implementation Method

As part of the planning of a development project, the concrete implementation method should be examined (or tried in some cases) based on the present village situation (existing capitals). Basically, it is desirable to opt for a feasible method of using the existing capitals in the target village and then to consider the necessary external inputs.

For the planning of a development project, including the implementation method, a development study accompanied by a verification/pilot study, the scheme used by JICA in recent years, is highly effective. The verification efforts of a planned development project are expected to help consideration of whether or not the project and its implementation method are appropriate for the situation of capital availability in the target village. As a result, the planning of a finalised development project which is better suited to the current situation becomes possible.

Box 6.2 Maintenance of Livelihood (Raising of Domestic Animals)

For one Ethiopian village of which the livelihood was classified as “agriculture (+ domestic animals)”, the maintenance and improvement of stock raising was decided to be the development task. While there were various options to achieve this task, “animal hygiene” was selected. The background for this decision was the strong need for improved access to animal hygiene. The existing social capital that “agricultural extension workers had been sent to all villages and the organizational structure of the Ministry of Agriculture was properly in place” was also taken into consideration. As a result, agricultural extension workers provided training for those households involved in stock raising to conduct “supplementary veterinary work”, enable the provision of animal hygiene services even in remote mountain areas where the provision of ordinary veterinary services was difficult.

Box 6.3 Different Approaches of Different Villages

This is an example of Senegal which shows the different approaches of different villages to achieving the same development task because of the different capitals available in each village. The task was the restoration of natural resources and different activities were conducted in two neighbouring villages. In the case of the village where women mainly support the livelihood due to the absence of men working away from home except during the rainy season, new project activities would create a new burden on the women. Because of this prospect, measures to reduce the work load of women (introduction of a threshing machine for joint use and improvement of the watering place, etc.) were implemented prior to planting under the project. In the other village where more men are present throughout the year, activities designed to directly prevent soil erosion were conducted despite the involvement of fairly heavy labour.

(3) Review of the Capitals to be Reinforced

Consideration of the possible impacts of the reinforcement of a specific capital by a development project on other capitals is necessary. To be more precise, whether or not the reinforcement of a specific capital decreases other capitals or increases them through the multiplication effect must be carefully analysed together with the possible impacts on the existing livelihoods.

One example of the decrease of other capitals is the occurrence of health problems, such as the outbreak of bloodsucking insects, following the development of irrigation facilities (degradation of human capital). In another case, the promotion of cash crop cultivation may widen the income gap between farmers engaged in such cultivation and people who are not or may generate an economic gap between men and women within the same household (degradation of the financial capital of specific actors). It may also weaken the traditional mutual help system in a village (degradation of social capital). An example of the increase of other capitals is literacy and/or hygiene education for women who conduct economic activities in a village. When the literacy rate for women improves, their knowledge of the prevention and control of infant diseases will increase, resulting in a decline of the infant mortality rate (prevention of the degradation of human capital). Other positive effects of improved literacy among women include the diversification and improvement of activities to earn income due to improvement of their negotiating ability (increase of financial capital) and improved access to such physical capital as the rural water supply system and threshing machines, etc., all of which contribute to alleviating the work burden on women.

Box 6.4 Conflict Between Farmers and Pastoralists

The Office du Niger Project under which irrigation facilities serving 60,000 ha in the catchment area of Niger River, a major river running through a semi-arid area, has enabled the cultivation of rice by as many as 400,000 new settlers. Meanwhile, the conversion of land hitherto exclusively used for pasturage has led to conflict between pastoralists and farmers as the excessive use of pasture land and water has resulted in deterioration of the soil's fertility for the growth of grass and also in soil degradation.

(4) Selection of Different Capitals Based on Time Series Consideration

There are wide-ranging projects, from those designed to reinforce specific capitals in a short period of time as an emergency response to famine or a natural disaster to those designed to consolidate specific capitals over a long period of time, including human resources development projects. The target capitals, i.e. intended activities, of a project vary depending on the assumed project implementation period.

6.2 Examples of Development Projects

The important points to be considered in the planning of a development project have been described so far. In order to assist further understanding, this section explains how the internal and external factors of a target village affect the planning and implementation of projects using concrete examples (refer to the four projects belonging to four different types of livelihoods described later).

6.2.1 Planning and Implementation in Relation to Capital Availability Situation

In general, the scope of usable capitals is more limited for villages with harsh natural conditions, i.e. poor natural capital, reducing the available livelihood options. Under such circumstances, villagers tend to maintain their livelihoods using the available capitals to the maximum. For example, the mutual help of villagers is essential in areas with a harsh natural environment and the traditional mutual help system (social capital) is well developed in such areas. It is also often the case that villagers jointly conduct any necessary activities under the strong leadership of the clan head or group of elders in which authority is bestowed. Such a leader(s) generally has strong power and significantly affects the decision-making by villagers.

One example of skilful project implementation using the strong social capital (mutual help system) and human capital (strong leadership) in such a village is a rainfed nature resources management project in an arid country. Villages with unreliable as well as low annual rainfall of less than 400 mm have a strong demand for water harvesting, dikes and anti-erosion bunds to collect water which is essential to maintain their livelihood of rainfed agriculture. When it was decided to construct them under the project, several groups (touiza) of men of a similar age jointly worked for the construction free of charge. In addition, many different groups of villagers paid part of the project cost. The active involvement of villagers in this project may be explained by their shared perception that the very maintenance of their livelihood would be difficult unless they participated in the project.

The actual results of various studies indicate that coordination of the opinions of villagers becomes increasingly difficult in the case of villages enjoying better natural conditions because of the availability of many livelihood options. In these villages, cooperation with others is not necessarily required for villagers to live their lives. The mutual help system is not as strong as that observed in villages with harsh natural conditions and shows less variety. The strong leaning towards individualism means that villagers readily opt out of a group established to achieve a specific purpose if such a group is judged not to bring about sufficient short-term economic benefit for individual members.

6.2.2 Introduction of Four Projects

In order to help understanding the Guidelines, the examples of four projects under which the levels of the available capitals in the target villages were assumed by means of a field study are further explained in this section.

(1) A Rehabilitation of Forest, Grazing and Agricultural Land Project

The biggest problems (capital shortage) of the target villages are food shortage and severe soil erosion (insufficient natural capital). The available capitals in the target villages to deal with these problems are a well-established administrative system (social capital) and agricultural extension system (human capital), both of which have been extended to the villages, and gullies as well as bald mountains (natural capital) which are not currently used but which can be rehabilitated. Consultations between a donor and villagers have led to the selection and implementation of a natural environment improvement project. People's groups have been established using the village administrative system and the supplied food is used as an incentive for them to provide labour for the rehabilitation of the natural environment. As a result, further soil erosion is being prevented, the soil productivity is improving and the opportunity to earn income through planting work has been created. The health conditions of the villagers have also improved.

(2) A Rainfed Natural Resources Management Project

The biggest problems (capital shortage) of the target villages are food shortage and water shortage (insufficient natural capital). The available capitals in the target villages to deal with these problems are favourable topography for rainwater collection (natural capital), strong social capital and strong leadership (human capital). A donor has discussed the situation with villagers and work is in progress to erect fencing using the traditional mutual help system to prevent animals from invading dikes and cultivated fields for the purpose of maintaining the production volume.

As the subject villages are located in a remote area, village shops which are run by residents' groups have been opened to sell miscellaneous daily necessities which were previously hard to obtain in order to reduce the travelling time of the villagers. Moreover, a food bank has also been created using the traditional mutual help system to store food so that members can help each other at the time of a food shortage.

(3) An Oasis Development Project

This is a natural resources management project for oasis-based villages situated at the front-line of the battle against desertification. In areas where spring water or groundwater, the presence of which is a precondition for the existence of an oasis, can be found, landowner households are selected to lead oasis development activities. The selected oases must not experience any internal conflict and must have a strong mutual help system (social capital). The members of these households have a high literacy rate and the means to obtain money (cultivation of date palms and remittance from other family members working away from home, etc.) to pay part of the project cost. Various activities are in progress under the project using such social, human and financial capitals.

Rural resources management over a wide area, including the preservation of groundwater which is the lifeline for oases, is difficult for individual oasis to undertake and must involve multiple oases. Under this circumstance, each oasis forms a basic unit for activities and collaboration between the groups and the administrative body controlling multiple villages is still a pending task.

(4) A Participatory Rural Development Project

Compared to the other three projects, the target village enjoys better natural conditions and is basically self-sufficient in terms of food production. However, this village faces the task of improving the lives of its people who are both physically and mentally exhausted due to long civil war. Many aid organizations have moved into this village, causing the contradictory sentiment of “dependence on and the mistrust of aid” and making the implementation of this project difficult.

While the project commenced with activities focusing on the socially and economically weak who have less livelihoods opportunities, its objectives were found to be difficult to achieve. For example, goats were selected for the raising of small animals to boost the income of those households headed by women who were not adequately supported. However, the insufficient follow-up system, including an adequate response to sick goats, meant the death of the goats, resulting in the suspension of this activity. Similarly, a crop bank aimed at securing the food supply for households headed by women or old people showed a low repayment ratio during the period when food was loaned without interest due to the moral hazard originating from “the habit of receiving food free of charge”. This situation led to the introduction of a repayment system, including interest, to regain the health of the bank’s operation midway through the project implementation period. The new system is established by well-experienced management teams (human capital) operates adequately even after the end of the project.

CHAPTER 7

IMPORTANT POINTS FOR THE IMPLEMENTATION OF RURAL DEVELOPMENT COOPERATION

CHAPTER 7 IMPORTANT POINTS FOR THE IMPLEMENTATION OF RURAL DEVELOPMENT COOPERATION

< Targets of Chapter 7 >

- **Important points for the implementation of rural development cooperation for donors and aid organizations**
- **Important points for the implementation of rural development cooperation with consideration of the diverse activities and environments of villages**

7.1 Present Situation and Important Points for Rural Development Cooperation

7.1.1 Selection Criteria for Rural Development Project Sites

The judgement criteria for rural development project sites differ depending on who takes the initiative for a project. Although initiators are not discussed in the Guidelines, the selection criteria and important points viewed by aid organizations are discussed, taking the rural development cooperation trends in Africa into consideration.

(1) Availability of “Five Capitals”

For rural development in Africa, project sites tend to be selected based on such criteria as good natural conditions, absence of conflict in a village, presence of leadership, prospects of replicating the experiences to other areas and good evaluation by other donors which are already providing aid. When these criteria are followed, there is a good chance for the successful implementation of a new project. At the same time, however, the implementation of many projects at the same site could increase the sense of dependence on outsiders.

Meanwhile, there are cases where cooperation based on the cost benefit principle is not feasible because of the small return (result) to the invested capital. An area with unfavourable conditions for agricultural production where the cultivation of crops for self-consumption is the main activity is one such example. When cooperation is planned for an area with unfavourable conditions, it must be recognised in advance that the size of return for the invested capital tends to be small.

(2) Selective Implementation of Cooperation

The increased participation of people in a project tends to lead to selective cooperation for highly motivated people (areas). Given the restrictions posed by the size of the aid funds, selective cooperation for motivated people with a view to gradually spreading the positive results to other areas should prove more effective than attempting to simultaneously raise the base line throughout the target area.

(3) Consideration of Project Purposes and Locality

The selection method of a target area differs depending on the project purposes and locality. For example, when the construction of a primary school is planned in an area where people’s lives are closely linked to a clan, i.e. the traditional organization in Africa, rather than in the administrative area, a school catchment area based on the clan area instead of the normal administrative area may enable the provision of services for local people who otherwise will not be covered. Expansion of the service area has actually been witnessed in concrete cases.¹

Even if development cooperation is in progress for a specific village, the creation of a mechanism to involve many villages beyond village boundaries is required in the case of, for example, natural resources management where the subject site tends to spread over more than one village.²

¹ “Rural Organization for Better AgropastoralistProject” conducted by a local NGO in Ethiopia.

² For example, for effective natural resources management over a wide area, such as the recharge of groundwater, it is important for a project to target multiple villages. In turn, this makes the facilitation of good linkage between the traditional village organization and the administrative organization important.

7.1.2 Implementation System

Rural development in Africa is undergoing a profound change from conventional development led by aid organizations to development led by recipient countries or local people. There are many factors behind this change, including budgetary constraints and aid fatigue on the part of aid organizations, the progress of coordination led by the EU between European aid organizations, the fragile administrative ability of the governments of recipient countries and growing recognition among aid organizations that “sustainable development is difficult without the understanding and participation of local people”.

This section describes three types of cooperation attempted by rural development projects in Africa and the important points for the adoption of one type or another.

(1) Cooperation through Recipients’ Administrative Organization Related Organization(s)

In a country in which the administrative organizations, from the central government to the lowest level, are functioning to a certain extent, the implementation of cooperation involving such organizations (Ministry of Agriculture and local governments, etc. of the country in question) and other related organizations (research institutions and others) from the initial project planning stage is possible. The inclusion of the lowest administrative organizations in the project implementation process enhances the prospect of continuity after the departure of the aid organization from the recipient country.

< Important Points >

1) Enhancement of Implementation Capability and Budgetary Appropriation

Government functions are being reduced in many African countries in the drive to achieve “small government” following the implementation of a structural adjustment policy under the guidance of the World Bank. While decentralisation is also in progress, there are serious shortages of human resources and funds on the part of local governments which often act as the direct counterparts for G-G based rural development.

In response, efforts are being made to incorporate the development of government staff (capacity building) in projects (see Box 7.1 Training of Government Staff and Budgetary Measures in Recipient Countries). Enhancement of the planning capacity of the central and local governments of a recipient country and of the representatives of local people, if necessary, enables the building of the ownership of activities. Joint work involving experts dispatched to the relevant departments and counterpart staff facilitates the transfer of technology (and skills), making it possible to expect some continuity of a project after its completion. The provision of funds to support project-related activities in the government budget of a recipient country is important to involve the government of a recipient country in a project so that a system is established to finance the current expenses, including the salaries of government staff engaged in a project and the cost of fuel for transportation. Every country is currently trying to establish such a system and this is one important approach to be carefully considered for cooperation efforts in Africa in the coming years.

Box 7.1 Training of Government Staff and Budgetary Measures in Recipient Countries

“The Public and Private Institution Capacity Building Project” (1994 – 1999) implemented by the GTZ in Manica Province in Mozambique is an example of project funding (to finance such current expenses as the salaries of government staff and the cost of fuel, etc.) being accounted for in the annual government budget plan of the recipient country while trying to enhance the project planning as well as implementation capabilities of local government staff, i.e. counterparts, to ensure the smooth progress of the project. As the project itself is included in the annual government plan of the recipient country, individual counterparts are engaged in project-related activities as their normal work assignment.

In this particular case, 20% and 80% of the project-related cost were borne by the Government of Mozambique and the GTZ respectively. Planned activities corresponding to 20% of the project funding were decided by representatives of the GTZ, the provincial government, the Ministry of Agriculture and local people and the actual funds were accounted for in the government budget. Various extension activities were conducted by government staff and GTZ experts working in pairs (Mozambique Agricultural and Rural Reconstruction Programme: MARRP).

2) Separate Project Account

When a project is implemented in tandem with a local government, the project budget is, in principle, set up in a separate account. In the case of “a project to provide veterinary services in remote areas”, the sales revenue of drugs to be used to continue the project was paid into the account of a local agricultural bureau without any distinction from other expense items, hampering the continuity of activities. When an exclusive project account was set up together with a detailed explanation of the project-related activities to various sections of the agricultural bureau to obtain their understanding, it became possible to secure reliable funding for activities.

3) Involvement of Related Organizations at the Onset of a Project

When an existing organization(s) of a recipient country is used to implement a project, it is necessary to have a mechanism whereby related organizations are involved in the project from the beginning. For example, in the case of a demand driven agricultural research and extension project, opportunities for all people involved (farmers and representatives of the agricultural college, agricultural research institute and Ministry of Agriculture, etc.) to regularly meet were created and funded as part of the project cost. As a result, people who would not normally have a contact point were able to effectively exchange opinions. The key point for the continuity of these meetings is whether or not a mechanism can be created to finance such meetings based on the own funding sources of the participants instead of the present arrangement under which the meeting cost is paid as part of the project cost.

4) Mentality of Staff of Related Organizations

When related organizations are involved in the project implementation process, the status of these organizations may change from public to private as a result of privatisation. If the management efficiency improves after privatisation, such incentives as a salary increase are possible to enhance the work morale of the staff. However, ineffective privatisation may result in an increased work load at the same salary due to the reduction of employees, thus leading to poor morale of the staff which could become a constraining factor for project implementation.

(2) Cooperation Through a Project Management Unit (PMU)

This form of cooperation is opted for when the government of a recipient country cannot implement a project by itself because of a shortage of human resources and/or funds or to prevent the improper use (embezzlement) of aid funds or corruption. An aid organization establishes a project management unit (PMU) and provides funds and resources through this PMU for direct project implementation. A PMU is usually run by experts dispatched

by the aid organization, local experts paid by the aid organization or a NGO. The crucial requirements for the successful functioning of a PMU are (i) the presence of persons who have a good understanding of the local situation, who have the necessary knowledge and who are able to stay for a long time and (ii) ample funds to cover the project management cost, including recurrent expenses. Depending on the scale of PMU activities, there is a risk that a PMU will act as a substitute for the local government in the project area, weakening the function of such government. It is, therefore, important to narrow the priority targets for PMU activities and to establish a system to achieve the targets.

Box 7.2 An Idea of PMU Based on the JICA Scheme

- An expert is engaged in a project for 5 to 10 years with regular holidays for rest.
- The priority targets of activities are established. Efforts are made to achieve these targets first. If there is still room for additional work, other targets are introduced.
- Local staff members, including consultant(s), are hired for a long period of time using the mini project-type technical cooperation scheme. Short-term experts specialising in certain fields are dispatched to meet the needs of local people (there are cases where a flexible response by the fiscal year-based Japanese scheme may be impossible).
- Local experts are given the power to decide budgeting to a certain extent.
- In the case of a project that a Japanese expert is seconded, it is important to have a support system provided by Japanese embassies and JICA representative offices.

< Important Points >

1) Implementation of Regular Monitoring to Prevent Improper Use of Funds

When a project is to be continually implemented over a long period of time, the establishment of a system for regular monitoring is essential to prevent the improper use of the funds. For example, such a system enables internal monitoring (by local people, local project staff and local experts, etc.) and external monitoring (by the government of the recipient country and aid organization) every year or every two years during the project implementation period so that the aid organization can suspend or end the cooperation at any time depending on the monitoring results.

2) Partial Project Funding by Recipient Country

The partial funding of a project by a recipient country enhances the sense of ownership which is a factor for the successful implementation of a project. While a recipient country finds it easier to bear the partial cost of a project which directly leads to increased production or income, it finds it difficult to financially support a project which takes a long time to produce tangible results or which does not directly have any economic benefit. The application of different financial contribution rates for recipient countries depending on the specific character of a project is, therefore, important.

3) Use of Local Staff and Experts as PMU Staff

The employment of local experts using project funds is effective to provide cooperation which is appropriate for the local situation. While the use of overseas experts or experts from related government offices or advanced areas of the country in the subject field is also effective, there may be a case where their communication with local people is less than ideal because of the language, customs and other barriers. The long-term employment of local experts as full-time staff is quite effective to provide a precise response to the needs of local people and also to root new technologies/techniques/skills.

4) Use of NGOs as Facilitators

NGOs (international and domestic) play a significant role in the running of PMUs in Africa. Even in areas with scarce resources, NGOs play an important role in rural development, providing their own technical cooperation and cooperation to strengthen organizations at the grassroots level. The abilities of NGOs considerably vary from one NGO to another and some NGOs which do not represent local people operate

without any linkage with the government policies of a recipient country. Careful handling, including the application of strict selection criteria, has been becoming commonplace in recent years in regard to the use of NGOs for G-G based cooperation. Although NGOs provide grassroots level cooperation in villages, they cannot permanently stay in these villages. In view of the recent emphasis on “cooperation led by local people, the establishment of a system under which NGOs act as facilitators while development and activities are led by such people’ organizations as agricultural cooperatives and associations of private enterprises, etc. which are locally established is necessary.

5) Dispatch of Right Experts to the Right Place

There are cases where the transfer of technology closely related to local needs can be conducted by employing experts based on the characteristics of a project regardless of their nationality.

(3) People’s Organisations

While the function of governments is constrained by limited budgets and human resources in terms of project implementation, the importance of people’s organisations as actual project implementation bodies is increasing. There are different ways of organising people as described below. Only the key points are listed here as a detailed description of cooperation using people’s organisations is given in “7.2 Important Points for the Implementation of Rural Development Cooperation With Consideration of Diverse Activities and Environment of Villages”.

Assistance is provided either through an existing administrative organisation to organise people or directly to a people’s organisation. The latter is further divided into two types: (i) an aid organisation provides support for a people’ organisation through a PMU and (ii) an aid organisation remains a facilitator and a people’ organisation takes the initiative.

The target people can be selected on the basis of either the administrative district or such traditional organisation as a clan depending on the purpose of organising people.

< Important Points >

- Is there any reliable leadership on the part of people and/or aid organisation?
- Will the planned activities create an excessive burden or threaten the daily lives of people?
- Are the rights of individual people to the benefits of the activities clearly defined while providing training on common interests such as joint marketing and improvement of the natural environment, etc. which are common activities of the village?
- Is a minor target selected first with a view to moving to a major target after confirmation of the abilities of people?
- Are there opportunities for people to exchange knowledge and experience (leading to subsequent self-reliant activities by people)?
- Is there careful consideration of the establishment of a trusted relationship between the aid organisation, which is an intruder from outside, and people?

7.2 Important Points for Implementation of Rural Development Cooperation with Consideration of Diverse Activities and Environment of Villages

In this section, based on the lessons learned from existing cases of rural development projects, the important points for the implementation of rural development cooperation are put in order with due consideration of the diverse activities and environment of villages, which is the basic principle adopted by the Guidelines.

7.2.1 Factors Assisting Participatory Rural Development

(1) Ownership Building

Respect for the initiative of people to build ownership is an important factor to ensure project continuity as discussed in 7.3-(1). However, it may be the case that people are unable to act because of their unfamiliarity with project planning and implementation when told that their initiative will be respected. In such a case, some kind of external assistance is necessary. A case of WFP's Project Ethiopia 2488 provided us with good lesson in this regard. It is a long project with appropriate changes in its approach. At the commencement stage, it adopted top-down planning and implementation style, which made people consider that "the project belonged to certain people". Based on this experience, the bottom-up approach was adopted to make the project reflect the needs of people. As this change allowed people to analyse the current situation and to conduct project planning and implementation, there was a growing sense among people that the project belonged to them. As a result, people have continued their activities even after the end of the project and the positive effects have been extended to other areas.

In the case of Project Ethiopia 2488 for example, the project coordinator of the WFP, played a central role in organising people. Firstly, interested persons in the target villages were invited to a meeting to identify problems and to discuss what they could do themselves. Those problems for which the WFP could provide assistance were clarified and consent to such assistance was sought from the people. A body consisting of people's representatives (some 10 members selected by people) was then established in each village to handle all activities under the project.

The key to the successful functioning of this approach was the establishment of a system whereby people could receive expert advice during the process of formulating measures to solve their problems. The agricultural extension workers responsible for the target villages played a bridging role between experts of the provincial agricultural bureau (specialising in farming, agricultural civil engineering and water and soil conservation, etc.) and people and the required experts were dispatched to the villages at the expense of the WFP. During this process, people learned the knowledge and skills required for project planning and implementation.³

There is also a history of farmers in Japan analysing the current situation and formulating and implementing projects on their own initiative. To be more precise, such people's organisations as "agricultural cooperatives" and "land improvement units" were important players in rural development projects in Japan which were jointly implemented by the Meiji government. It marked the departure point for Japan's modernisation process. As there has been significant government support in Japan's past and it cannot be directly applied to Africa, however, the experience is described in Box 7.3 for reference.

³ Meanwhile, there are many cases where a system for people to formulate a project entirely by themselves is lacking unlike the case in question. A shortage of agricultural extension workers is one example. One way of dealing with this situation is for a donor or aid organization to propose several projects (alternatives) and for people to make the final selection.

Box 7.3 Farmers' Organisations in Japan

The most representative farmers' organisations in Japan are "agricultural cooperatives" and "land improvement units". Agricultural cooperatives were originally industrial cooperatives which were established from 1900 onwards following the German example and were democratically reorganized as agricultural cooperatives in 1947. There are three tiers, i.e. national, prefectural and municipal, and the membership throughout Japan totals as many as several million. Two types of agricultural cooperatives exist, i.e. general agricultural cooperatives (marketing, purchasing, mutual aid, credit and welfare) and specialist cooperatives (sericulture, stock raising, dairy farming, poultry farming, pasture land management, horticulture, land development and agricultural broadcasting). Land improvement units were born in 1949 as a result of the merger of farmland readjustment cooperatives (since 1909) and water utilisation cooperatives (since 1908) and played a significant role in the implementation and management of irrigation, drainage, forest clearance, land reclamation, land development and disaster rehabilitation projects. These agricultural production units are managed by the central government, prefectural government or an association depending on their size. For the commencement of any project, it is necessary for the planned beneficiaries (at least 15 farming households) to formulate an original idea and to make an application to the prefectural governor concerned with the consent of at least two-thirds of the planned beneficiaries. Following approval by the governor, a feasibility study and project planning are conducted by either the central government or prefectural government concerned. However, the organisation established by the benefiting households (land improvement unit as a legal person based on the territorial principle) must, in principle, pay part of the construction cost and conduct the management of the facilities after their completion.

The Land Improvement Law was revised in June, 2001. The main revisions were: (i) maintenance of the application principle and enforcement by a two-thirds majority in favour to harmonise between the public character and profitability of a project, (ii) the wording "consideration of harmony with the environment" was added to Article 1 – Basic Principles and (iii) the wording "hearing of the opinions of municipalities (Article 5)" was changed to "consultation between the project planner and municipalities" to establish linkage with areas of progressive mixed dwellings of farming households and ordinary households. These revisions were made to make it easier for the central government and others to provide assistance for the maintenance and renewal of land improvement facilities which were increasingly becoming malfunctional.

Cost sharing is also an effective method of making people recognise that project-related activities serve their own interests (ownership building). The payment of part of the project cost means the loss of funds if a project fails. As a result, people are much more serious than they would be if "participating" in activities arranged for them.⁴ A flexible self-contribution rate depending on the nature of an activity is desirable. For example, the application of a lower rate for activities aimed at improving public goods, such as conservation of the natural environment, than such activities as income generation is important to consolidate personal goods.

Box 7.4 Problems of Cost Sharing

- Facilitates the trend of opting for short-term projects directly linked to production
- Requires time and labour to recover the invested funds
- Difficult to coordinate with other projects in neighbouring areas (people find it difficult to accept a cost sharing scheme if a project in a neighbouring village is fully funded by a donor or aid organisation)

(2) Regular Follow-Up

The successors of a project should be selected from among villagers and should be trained during the project implementation period in preparation for continued activities in the post-project period. What is important here is to build up the abilities of selected villages by means of providing training in an advanced farming area in

⁴ In the case of projects for which field interviews were conducted, the final beneficiaries often bore 15 – 20% of the total project cost (by means of cash payment and/or labour). The self-contribution rate varied depending on whether activities served personal interests or public interests (the rate was higher for the former).

order to enhance the willingness to participate in a project. Even if a project coordinator who is an outsider in a target village is domestically appointed, his/her language and religion may differ from those of the villagers unless he/she grew up in the project area. One simple way of solving this complication is the appointment of a person from the project area, if possible. It must also be noted that project coordination could be a lengthy process if such appointment is found to be impossible.

(3) Cooperation with Consideration of the Risk Hedge Instinct and Feasible Labour Supply Volume of People

Under a harsh and unreliable natural environment, people hedge their risks on their own initiative. For example, when a pest-resistant variety is introduced under a project, people do not trust the new variety (even if experiments have been conducted in a nearby field) until its performance has been confirmed by their own eyes. Accordingly, they tend to plant the new pest-resistant variety and the less pest-resistant conventional variety at the same time just in case the new variety fails. When full consideration is given to this risk hedge instinct of people to make a project reflect local needs, people will show more initiative in implementing the project by themselves.

People tend to become involved in project-related activities by weighing the balance between the urgency of their needs and their feasible labour supply volume. In one village in Mozambique, for example, as there is a high ratio of men working away from home at any time of the year, mainly women are involved in project-related activities. In reflection of the strong need for rock terracing to prevent soil erosion on sloping land, women are actively engaged in this hard as well as unpaid work. In contrast, the construction of maize drying facilities and storage facilities was less popular as the results were not believed to be rewarding enough for hard labour involving women.

7.2.2 Factors Impeding Participatory Rural Development

(1) Long Process, Long Wait for Obtaining Tangible Results

Participatory rural development often faces the discontent of people as the lengthy process of listening to their opinions on the selection of the target villages as well as project implementation details tends to result in the slow start of concrete activities. When a project commences without full consent to alleviate such discontent, the scope of activities may well be beyond the tolerance of people with a project ending without having fully achieved its targets. The critical issue here is to carefully commence the necessary activities by properly analysing the funding, labour supply and management capabilities while respecting the ideas of people.⁵

(2) Difficulty of Introducing Cost Sharing Aimed at Participation in Areas With High Dependence on Aid

People of villages receiving such emergency aid as food aid are accustomed to free aid and, therefore, have a strong reluctance to contribute to the project cost or to provide free labour. Their resistance becomes stronger with even less enthusiasm to participate if neighbouring villages receive payment for labour and/or free equipment, etc. under different projects.

In such a case, it is important to obtain the understanding of people that it is worth them sharing the cost even if the process of achieving understanding takes a long time.

(3) Spread of Technologies Irrelevant to Everyday Customs

Technologies which clearly benefit people spread very quickly. In contrast, however, a technology which is unsuitable vis-à-vis the existing customs of a target village fails to spread no matter how effective it may be. One example is a village where efforts were made to introduce a technology to use dried cow dung as fuel for the effective use of this resource in the future. These efforts failed, however, as there was no urgent necessity to create an alternative source of energy because of the rich forest resources around the village. The reluctance of

⁵ There is a case that many activities commenced at the same time in response to complaints by people that nothing had happened after repeated visits by aid organization representatives. As a result, some activities were short of the funds required for cost sharing and labour to sustain such activities.

people to use cow dung as fuel was also a contributory factor for failure. This example illustrates the importance of paying proper attention to the everyday customs of the people of a target village.

(4) Factors for Low Participation Rate for Participatory Education and Health Projects

A low level of people participation is recorded for some health care facility or primary school construction projects of NGOs and it is pointed out that the responsible factors are (i) the volunteer (free labour) nature of participation, (ii) little advantage of participation because of the physical distance of a new school or clinic from the homes of the anticipated participants, (iii) impossibility of meeting all expectations of the people due to budgetary constraints and (iv) repeated changes of the government's educational policy.

Activities under NGO projects are often conducted by local staff who are volunteers. The sustainability of these activities may suffer, however, unless there is a system to pay staff a certain amount. In the case of the development of physical capital, such as medical care facilities and schools, in agricultural areas with the pasturage type livelihood, expansion of the scope of the beneficiaries from the viewpoint of the access of people to these facilities is difficult. What is required is to combine the development of physical capital with cooperation for human capital (for example, the training of personnel working at these key facilities) to stimulate the willingness of people to participate.

7.3 Maintenance and Continuation of Activities in the Post-Project Period

The suspension of activities after the recall of personnel and the termination of funding by a donor or aid organisation on completion of a project is often observed. As there are many causes of such suspension, there is no single measure to ensure the continuation of activities in the post-project period. Several important points are explained here based on the lessons learned from past examples of cooperation. What is common for all projects is the need to conduct activities with their continuation in the post-project period in mind at the project implementation stage.

(1) Consideration to Provide Motivation for People to Continue Activities

A project should be implemented by the people themselves. Accordingly, it is important to start with an activity of which the continuation has some advantages for people even though this may be stating the obvious. When an activity with excellent profitability and unmistakable economic advantages is implemented with an agreed return distribution method for the participants, there is a strong likelihood that the participants will continue the same activity in the post-project period. At the same time, it is important to provide selective cooperation for an area (people) with a strong commitment to a project right from the beginning.

Continuous maintenance is likely to be conducted by people for which selective cooperation is provided in the case of projects involving irrigation facilities, a village water supply system and rural roads, etc., all of which constitute a lifeline for people and strongly require proper maintenance. In these cases, however, it is essential for people to establish an agricultural cooperative, an irrigation association or another suitable organisation to ensure the functioning of the collective operation and maintenance system. As the establishment of a people' organisation is a time-consuming process, one effective method is to use an existing people' organisation which is actually functioning.

(2) Building of Mechanism to Facilitate Active Involvement of Administrative Organisation of the Recipient Country

The government of a recipient country often cannot bear such current expenses as the fuel cost and staff wages, etc. required for project implementation as it generally lacks sufficient funds and the reality is that donors and/or aid organisation bear the cost of project implementation. The constant contribution of aid organisations to cover the current expenses of projects, however, strengthens the mentality of dependence on the part of the officials and people of recipient countries. This situation frequently leads to the termination of project-inspired activities following the departure of an aid organisation as government officials and people fail to recognise that these activities are for their own benefit.

One way of improving the sustainability of activities in the post-project period is the real involvement of the government (particularly local government) of the recipient country. The manner of involvement may vary from

one project to another. For example, in the case of a public goods with a strong public character, such as an educational or health care project, the legitimacy of the government's involvement can be recognised relatively easily and approval for the inclusion of the current expenses (to finance activities) of a project in the government budget is not particularly difficult. Because of the financial difficulties faced by the government, the services provided by the government cannot be described as sufficient. It is, therefore, necessary to examine a system under which villagers can continue activities after the end of a project (partial financial contribution by villagers to cover the project cost or other arrangements).

There are arguments for and against government involvement when agriculture is the subject. Agricultural products themselves do not constitute public goods and it cannot be said that there is a strong necessity for direct government involvement. There are countries in which the level of government services is being reduced in such areas as agricultural production, sale of goods for agricultural inputs, purchase of agricultural products, agricultural extension and agricultural credit, etc., paving the way for the take-over of these services by the private sector. Meanwhile, from the viewpoint of poverty reduction, concern regarding an escalation of poverty has been expressed as the provision of these services by the private sector may leave people in remote areas and those who cannot afford the cost of private services behind.

Under these circumstances, it could be difficult to pursue the government of a recipient country to provide budgetary measures in advance as discussed in 7.1.2-(2) although this is one option. If the current expenses of a project (salaries for government staff and fuel cost, etc.) are included in the annual government budget of a recipient country, activities at the same or lower intensity will continue in the post-project period. Needless to say, post-project activities must be taken into careful consideration as a project nears its end.

It is also an idea to create a mechanism to reserve funds which can be used to pay the current expenses of a project at the project implementation body in a recipient country.⁶ Local governments, which are often expected to be the direct counterparts, tend to suffer from a more severe shortage of both human resources and funds than the central government. The share of the government of a recipient country in the project funding should gradually be increased while maintaining the transparency of the process of reserving funds by making it clear to the staff of all government offices that the reserved funds are to finance the current expenses of a project.

(3) Training of Leaders or Development of Organisation

The training of leaders of local project implementation bodies and in villages is important to ensure the continuation of activities. Among the projects on which a case study has been conducted, those with continued activities mainly have local experts who have continued to be involved for a long period of time. These experts frequently visit the field to monitor activities and train villagers as project cooperators to establish a system for the daily everyday monitoring of activities. For future cooperation, such as Japanese project-type technical cooperation, the establishment of a system to hire local or foreign experts among the project staff should prove to be effective so that their detailed knowledge of the local conditions and local experience can be utilised to monitor project-related activities when Japanese experts are absent.

7.4 Other Important Points

(1) Agricultural Extension Projects

1) Importance of Practical Education in the Field

Agricultural extension can only be achieved through the repeated practice of new techniques by farmers in their own fields in addition to lectures at a training centre. Study visits by farmers to exchange opinions with farmers in other areas is also effective. It is usually men who attend agricultural training. Factors contributing to the low attendance by women include opposition by the husband and the difficulty of generating sufficient time for attendance. Given the fact that many women are very busy, particularly in regard to the cultivation of crops for self-consumption, the promotion of women's participation in training

⁶ There is an attempt to create reserve funds at a project implementation body in a recipient country through the project activities.

is necessary. It may be an idea to conduct types of training which are of interest to women⁷ together with extension activities in the field which take the busy daily schedule of women into proper consideration.

2) Selection Method of Target People

For agricultural extension projects, one effective method is extension through specified individual farmers (outstanding farmers). New techniques are tried by these individual farmers for demonstration purposes. If they prove successful, they are extended to other farmers. At this time, if the people trained as technical leaders are not accepted by the villagers at large, the villagers will not visit the leaders to learn the new techniques with the result that the new techniques will fail to spread. This prospect illustrates the importance of selecting those people which have the skill to teach others and who are basically chosen by people as technical leaders.

3) Improvement of Abilities of Agricultural Extension Workers

The effects of agricultural improvement and extension projects can be extended to other areas by employing a sufficient number of extension workers who travel around farming fields to convey the positive results of agricultural research. The availability of a sufficient number of extension workers, improvement of their abilities and the development of an environment to make their work easier are essential for efficient training at farming fields.

4) Appropriate Agricultural Extension for Needs of Farmers

It is important for agricultural extension activities to focus on individual farmers as basic units rather than on villages. In view of the cost benefit, size of needs and extension effects, a realistic response is to focus on a farmers' group. Here, the provision of assistance for the improvement or expansion of an existing activity should prove more efficient than trying to organize a new group of farmers. The key issue here is to begin with a small-scale experiment, followed by the gradual expansion of the scope of the activity based on the experiment results. The constraints posed by the number of available extension workers should also be kept in mind.

(2) Examination of Cooperation Techniques With Due Consideration of Gender Issues (see also 8.2 Rural Development in Africa and Gender)

Development projects often have different impacts on men and women. For example, women are treated less favourable than men in terms of access to institutional credit, extension services and technologies. Land and livestock, etc. often belong to men which is a constraining factor for the implementation of development projects by women. As a result, even though the implementation of a development project may increase the household income, the distribution of income favours men within the same household despite an increased burden on women. Development project planning and implementation must, therefore, take the likely impacts on men and women into careful consideration to minimise any negative impacts.

⁷ For example, guidance on nutrition can be combined with guidance on farming work.

Box 7.5 Agricultural Extension Work in Japan

The Meiji Government introduced policies to modernise Japan in 1867 and urged prefectural governments to establish agricultural experiment stations with a view to developing agricultural techniques suitable for the locality. The results of such development were passed on to farmers via agricultural improvement and extension centres. Although efforts to learn advanced technologies in foreign countries were made, only technologies which were suitable for Japan were adopted. One example is the decision not to introduce large agricultural machinery commonly used in the West because of its unsuitability for small farmland in Japan. Foreign experts were hired at high salaries on a short-term basis (1 – 3 years) rather than on long-term contracts and conscious efforts were made to acquire their expertise as quickly as possible.

Later, Japanese agriculture in the second half of the 20th Century reduced its share in the GDP as in the case of other advanced countries because of industrial development. Comparison between 1961 when the Basic Law on Food, Agriculture and Rural Areas was enacted and 1999 shows a rapid decline of the GDP share of agriculture, forestry and fisheries from 11% to 3%. The share of the rural population also declined from 50% immediately after the Second World War to 5% in 1995. In the meantime, correction of the income gap between agriculture and industry, which was the main target of the said law, was almost achieved. This can mainly be attributed to (i) the increase of part-time farming households, accounting for 84% of the agricultural population, and (ii) the general government policies to protect mainly rice-producing farmers. Japan's food supply self-sufficiency rate (based on the calorific value) showed a sharp decline from 79% in the 1960's to 42% in 1997 as feed crops to support the increased production of meat, reflecting a dietary change, had to be almost entirely imported.

CHAPTER 8

SPECIFIC TASKS

CHAPTER 8 SPECIFIC TASKS

8.1 Implementation Principles for Rural Development in Africa

From last year to this year, rural community surveys and case studies on aid projects, both lasting 2 to 5 days in each village, were conducted in Mali, Senegal and Mauritania in West Africa, Uganda and Ethiopia in East Africa and Mozambique in Southern Africa. The implementation principles for cooperation for rural development in Africa have been compiled and are described below mainly based on the knowledge and lessons learned from the surveys and studies.

< Basic Principles >

- Long-term and continuous involvement and narrowing down of the target area and aid activities
- Participatory ownership building, including proposal and cost sharing
- Development of people's organizations as the key to successful rural development
- Active involvement of the government and a realistic response to the actual conditions as essential requirements of sustainable rural development
- Necessity for experts on Africa, including on policy issues

(1) Rural Development in Africa

Rural development in Africa aims at achieving such purposes as a stable supply of food, alleviation of poverty, increase of income, fulfilment of BHN and conservation of the natural environment, etc. It is a multi-sector approach which incorporates diverse programmes, including guidance on cultivation techniques, health and hygiene, rural roads and micro-credit, etc., to achieve the said purposes. There are many actors, ranging from people with different economic backgrounds and traditional leaders to many types of cooperatives, women's groups, youth groups, government officials and NGOs. This involvement of many actors in rural development makes coordination of the interests of different actors essential.

In recent years, the World Bank has been questioning the feasibility of the difficult coordination between assistance for multiple sectors associated with rural development and related government organizations. Because of its support for the sector wide approach, the World Bank does not appear to have committed itself to rural development as strongly as before while recognising its necessary. However, the alleviation of poverty in villages at the micro-level does not appear to be achievable with assistance for agricultural production alone. A wide-ranging response, including measures to support landless people and women who carry the burden of farming, is required. As such, what is crucial is assistance for multiple sectors, including education and health. While the level of agricultural production, which is the source of income and food, in rural development is determined by the area of cultivation, it is also significantly affected by personal experience, ability and physical strength, etc. To be more precise, rural development is the culmination of farming, which is a personal activity reflecting the abilities and efforts of individual farmers, and various types of assistance. The latter include such common properties as rural water supply, irrigation facilities and rural roads, assistance of a public character for natural environment improvement measures, health and education, assistance for cultivation techniques to stabilise and diversify agricultural production, assistance for the development of cooperatives and assistance for women's groups and youth groups of which the economic base is weak. In order to properly respond to the difficulties of rural development originating from the complicated entanglement of the public and private sectors, the differences between public and private activities must be taken into proper consideration while respecting the ideas of people.

One of the tasks faced by efforts to develop rural areas in Africa is improvement of the efficiency of aid projects. The reality of aid for Africa compared to that for Asia is that the results vis-à-vis the inputs are less favourable, presumably because of the harsh natural conditions, low standard of education, fragile administrative capability and unstable domestic politics. A long time is often required in Africa for positive results to emerge which is possibly a reflection of the poor efficiency of aid projects. As a result, the Netherlands, for example, is now concentrating its assistance for agriculture in areas which are suitable for farming due to a high annual rainfall level.

(2) Sector Approach

Unlike the health, education and other sectors in which a concrete response can be made within the sector, “rural development” targets areas with different characters and requires diverse programmes which do not necessarily fall within the agricultural sector as indicated by the availability of the five capitals. Accordingly, application of the sector approach to rural development is difficult. Possibly because of such difficulty and the ceiling for the total budget of the Ministry of Agriculture, coordination work for the PROAGRI (National Programme for Agrarian Development), an agricultural sector programme in Mozambique, is in progress to exclude “rural development” from the project scope. The policy of the World Bank of separating irrigation projects from health, education and rural road programmes in order to avoid the complicated as well as difficult coordination with related government organizations may well be related to such a move. There is a risk that any project of which the objective or field is not included in the medium-term plan (3 – 5 years) formulated by each African country will not be approved. The intensity of this risk varies from one country to another. Although some countries believe that their medium-term plan can accommodate new projects as it is reviewed every year, there is no doubt of the importance of coordination between donors and aid organizations. It appears that the specialisation of each donor or aid organization in certain fields or regions will progress. It is, therefore, essential for Japan to determine its own basic aid principles and to actively express its opinions while carefully observing the future development of such specialisation.

(3) Duration of Cooperation

The required duration of cooperation has been an issue which has been much debated in regard to aid for not only rural development but also aid for other fields in Africa. To conclude first, 10 – 20 years appear to be required for cooperation to firmly root even though the actual period depends on the character of a specific programme. This does not necessarily mean that the same framework for cooperation is maintained throughout the cooperation period. In the case of a development study, for example, the composition and duration of involvement of the study team members significantly vary depending on the master plan formulation stage, the verification study stage or the monitoring stage. The gradual employment of local staff should be attempted from the viewpoint of the continuity and efficiency of the study.

In view of the need for cooperation over a long period of time, it is more realistic to focus on a specific area or activity rather than trying to provide assistance for all areas or activities without exception. Even though continuous assistance for an area or activity which has already received assistance is more important than providing assistance for a new area or activity, there should not be an automatic commitment in this regard in order to maintain a sense of tension for all involved. Moreover, full attention should be paid to the tendency for the output to input ratio in Africa to be lower than that in Asia because of the harsher natural conditions.

(4) Ownership

The normative idea regarding a sound civil society consisting of the private sector and the government appears to form the background for the debate on ownership in Western countries (particularly at the World Bank). There may be an intention to foster such a civil society through the ownership of all aspects of social activities.

The debate on ownership is a debate within the context of the people’s contribution to and the continuity of a project through participation. It is crucial to distinguish between the different backgrounds when discussing ownership. Ownership is expected to enable a project to fully respond to the requests, intentions and abilities of people through their participation from the planning stage. A donor or aid organization plays the role of a facilitator with local technologies and materials being fully utilised.

Meanwhile, when people view the question of ownership, what they want is the development of infrastructure and cash injection to improve their standard of living regardless of whether the facilitator is the government or a donor. People will make efforts to maximise their benefits. In this sense, ownership building is both a time-consuming as well as labour-consuming process and is not necessarily something about which people are enthusiastic. Careful attention must, therefore, be paid to this aspect and the ownership building of a programme truly required by people should be attempted taking the need to establish programme continuity into consideration.

Participatory rural development led by the initiative of people is required for ownership building. Even if there is no clear answer as to how to build ownership, the important key appears to be cost sharing as discussed in 7.2.1-(1). A request to people to share the cost will facilitate serious examination of the selection of needs and the sustainability of a project on the part of people.

(5) Development of People' and Administrative Organizations

One major key to rural development is the development of such organizations as agricultural cooperatives, irrigation associations, finance unions and women's groups, etc. Sustainable rural development requires the development of administrative organizations. However, the reality is that techniques to develop such organizations are still at the stage of trial and error. The crucial elements for the development of an organization are social norms and incentives for members and difficulties in developing an organization originate from these elements. The process of developing an organization is also considerably affected by the difference between such social capital as a traditional organization and the availability of other capitals. The reform of "customary practices" nurtured over a long period of time under an existing administration organization is even more difficult.

In the midst of the trial and error of the development of an organization, one promising method (idea) is "an organization which learns by itself" or "the empowerment of an organization". In this case, an organization solves its own problems by itself and, in this sense, the idea is similar to the participatory approach. As this method (idea) is not a pattern-type where the answer exists in advance but is a process-type with judgements made in relating to changes of the situation, it can be described as a methodology rather than a method.

(6) Roles of Central and Local Governments

For a rural development project utilising the verification study and other schemes, one extremely efficient project implementation method is direct dialogue with people or people's organizations together with the use of a local NGO and consultants. Most aid agencies of Western countries use this method and this method appears to be appropriate from the viewpoint of efficiently conducting rural development.

The involvement of related government organizations is essential to maintain sustainability in the post-assistance period although it is a fact that coordination with and response to the expectations of related government organizations could become impediments. From the viewpoint of efficiency, direct dialogue with people and the use of a local NGO are essential. At the same time, it is necessary to promote the participation of some related government organizations. There are two types of participation for these organizations: (i) indirect participation through representation in the steering committee and attendance at seminars and (ii) direct participation in the verification study, etc. The former is commonly observed in the case of development studies. Prior arrangements based on the reality of the target area is required for the latter.

There are cases where a project is not smoothly managed because of the head-hunting of counterparts, failure to secure the necessary budget for project implementation or other reasons. In order to avoid such a situation, the responsibilities and roles of related government organizations must be clearly defined together with proper coordination of the incentives for government organizations in advance.

One realistic method is to ensure the full-scale involvement of related government organizations at the extension stage of accumulated rural development techniques. For example, within the framework of "small government" following the trend of structural adjustment led by the World Bank, central governments are facing increasing emphasis on their role as a policy-making and coordinating organization while local governments and local NGOs are expected to play the role of an implementation organization. There appears to be a strong case for examining the possibility of implementing rural development projects based on the selection of proposals put forward by local governments and local NGOs. Needless to say, the accumulated rural development know-how must be fully utilised for these projects with the Ministry of Agriculture or Ministry of Rural Development acting as a window for the acceptance of foreign aid.

In Africa, it has been almost 10 years since the commencement of full-scale decentralisation programmes. It cannot be honestly said that all of these programmes have born fruit because of the fragile financial and human resources of local governments and local governments have been finding it difficult to fully perform their role of a local project implementation organization. Assistance for local governments acting as implementation

organizations is as important as assistance for the central government acting as a policy-making organization. Although the actual situation varies from one country to another, the general picture is that a reduction of manpower is in progress at local governments, who are regarded as project implementation organizations, because of the impacts of the move towards “small government” which is favoured by the structural adjustment drive. In order to effectively respond to this situation, it is important for a local government related to a specific project to be involved in the process of rural development.

(7) Creation of Human Network in Africa

It is not unusual to find experts in Africa such as Scandinavian, Dutch and German who have specialised in one country for more than 10 years. Meanwhile, universities in the US send their staff to Africa as experts and accept government officials of recipient countries as overseas students. The above illustrate the conscious efforts of donors to create a multi-layered human network over time.

Japan also has a history of dispatching experts and JOCV (Japan Overseas Cooperation Volunteers) members to Africa for more than 20 years. Unfortunately, however, the accumulation of human resources relating to Japanese aid for Africa cannot be described as being sufficient and there are several likely reasons for this as listed below.

- 1) Small number of experts dispatched to assist policy-making
- 2) Insufficient creation of a multi-layered relationship with students from developing countries who often spend more than one year for study in Europe or the US (the teacher-student relationship contributes to cooperation for developing countries)
- 3) Insufficient accumulation of human resources and understanding of local languages and society, etc. unlike many European countries which have had access to the local situation since the colonial age
- 4) Insufficient number of available experts and consultants who have been continually involved in East Africa or West Africa for a long period of time

Close personal relationships can obviously facilitate good communication. The creation of a human network through ODA is more important in Africa where the involvement of the private sector is less intense than in the case of Asia. Cooperation for Africa must always be provided with important human relationship in mind and various aid schemes should be skilfully used to make cooperation truly effective.

8.2 Rural Development in Africa and Gender

Rural life in Africa is characterised by its diversity as indicated by the existence of many types of livelihoods. In this section, the necessity to consider and emphasise gender in rural development in Africa is described together with the key points.

Traditionally, a “household” consisting of adult men and women and their children forms the basic unit in Africa for food production to sustain the family members. With the infiltration of the money economy to rural communities throughout the continent, the necessity to earn cash has rapidly increased, transforming this unit. Under the harsh living conditions characterised by scarce as well as unreliable rainfall, land with difficult access and food production which lags behind the rapid population increase, etc., those households which cannot produce sufficient cash crops to earn cash in addition to crops for self-consumption face the necessity to earn cash from non-farming income sources, including daily employment and work away from home. The new situation does not only mean a change of the traditional household members, i.e. an increase of households of which the adult men are often absent, but also the new demand for women to play the role of men instead of being simply a source of family labour involved in agricultural production (production activities or economic activities). In other words, women are finding themselves more involved, particularly in the “decision-making” role, in their household or village, including the management of family (household) income, attendance at meetings of agricultural cooperatives as the representative of their household and attendance at village meetings to voice their opinions.

8.2.1 Agricultural Development and Women

(1) Cultivation of Cash/Commodity Crops and Crops for Self-Consumption

In Africa, 30 – 80%¹ of the crops for self-consumption are cultivated by women. Many aid projects in the agricultural sector aim at improving the productivity or production volume of commodity crops or at developing an irrigation system for cash crop cultivation, for which men mainly have the decision-making power, from the viewpoint of establishing self-reliance and/or sustainability. The cultivation of crops for self-consumption which is mainly conducted by women tends to be under-estimated as an aid theme in inverse proportion to the increasing necessity for the cultivation of commodity/cash crops. While commodity crop production, such as irrigated rice production, employs labourers because of the temporary need for large labour input, most women lack the cash to employ labourers. Moreover, women tend to have fewer opportunities to receive a loan for the purchase of fertiliser, agrochemicals and/or agricultural machinery/tools than men and there are cases where women are essentially removed from the scope of aid projects without any conscious decision to do so.

(2) Access to and Control of Agricultural Capital

1) Land Ownership

Women are equally engaged in the cultivation of commodity/cash crops and crops for self-consumption with men and have limited access (power to use land) to farmland. In many African countries, however, the control of land (power regarding the management, sale and use of land) by women is much more limited than that by men or is simply not allowed. In many sub-Saharan countries, women do not have inheritance rights and unmarried women are simply expected to provide family labour for land owned by the father or brother while married women similarly work on land belonging to the husband or father-in-law.

2) Loans

In many cases, land or a bank deposit is required as collateral for a loan. As women generally do not control land in many African countries or regions as described in 1) above, they find it more difficult to receive a loan compared to men. Even if they do own land, their land tends to be smaller than that owned by men, resulting in a smaller loan. Women also face the restriction that a loan will not be made for the cultivation of crops for self-consumption and their potential ability in regard to agricultural production is under-estimated despite their high repayment performance level.

3) Training

Although women are responsible for up to 80%² of the total food production in Africa, the participants of agricultural training tend to be men. This is because households, as training units, rather than individuals tend to be invited to participate in training. In villages with traditional gender-based discrimination, the recruitment of training participants by means of the conventional information conveyance route may lead to the unintended exclusion of women from training. Unless training is provided for those using new skills in their daily farming activities, the result could be a decline of the productivity.

4) Advice by Agricultural Extension Workers

Only 11%³ of the agricultural extension workers in Africa are women. The atmosphere of reluctance on the part of female farmers to contact male extension workers to receive technical guidance or information because of the lingering discipline of the traditional rural society limits the opportunities for women to obtain expert advice or information compared to men. Moreover, male extension workers may not fully understand problems specific to female farmers and, therefore, may be unable to provide an adequate response.

¹ International Food and Agricultural Association, "World Food Security and Rural Women: Present Situation and Future Prospects", 2001, p. 10.

² Ibid, p. 29.

³ Ibid, p. 51.

5) Markets

Because of the smaller range of social activities of women than men, women find it difficult to have access to distant markets despite a better chance of sale and have no option but to use nearby markets where the purchase prices of their products are low. Women tend to lack the negotiating skills required for the trade of products because of their much fewer opportunities to contact unspecified people outside their household and may be forced to accept a less favourable marketing outcome of their products compared to men.

(3) Educational Level and Social Ability

In most parts of Africa, the educational level of women is lower than that of men. As the literacy rate among women tends to be substantially lower than that of men, the introduction of new technologies/skills which should be gender neutral could generate a gap between households headed by men and those headed by women depending on the actual guidance/extension method used as women may be unable to fully understand the appropriate use of the new technologies/skills or the maintenance method of new machinery even if they receive the same information as men.

8.2.2 Development of Rural Society and Women

(1) Empowerment

Social development in rural Africa where most of the indices, including those for water supply, health and education, are extremely low is a precondition to guarantee basic human rights as well as economic growth. At the same time, people can learn various lessons by experiencing success and failure through the planning and implementation of social development projects. In Africa, the implementation process of social development itself constitutes a continual cycle for empowerment whereby people belonging to target groups understand their own problems, make their own decisions, implement a project at their own risk and apply the lessons learned to the next project. Women in particular have often been unintentionally excluded from the empowerment process of social development both historically and culturally even though they are important players in rural life. It is often the case that they only play a limited secondary role to men in social development as simple family labour without the opportunity to become aware of their potential and for their abilities to blossom with confidence.

(2) Efficiency of Social Development of Rural Society

There have been many reports indicating that (i) the number of children is in inverse proportion to the educational level of women, (ii) the repayment rate for small loans is higher for women than men and (iii) the income of women tends to be used more for family welfare than men's income. Women are engaged in not only production activities (economic activities) but also reproduction activities (such as housework, childbirth and child rearing which are required to sustain production activities) and play a central role in local activities. Nutritional security for family members, raising of the next generation and the survival of a stable, local community should not be lightly thought of. Women are facing an increasing burden to perform these three roles with the outflow of men from villages to seek employment away from home.

Should investment in women achieve direct effects within the immediate circle (such as the family), the empowerment of women will constitute an important path for the efficient development of rural society in Africa where all of the social development indices are extremely low.

8.2.3 Necessity to Consider Gender in Rural Development and Important Points

Necessity to Consider Gender

Gender issues relate to differences between men and women originating from historical, cultural and social characteristics (hereinafter referred to generally as "social differences"). The reason for the need to consider differences based particularly on gender in development aid is that one-half of the total population faces gradual or unintentional discrimination because of gender. The same half may face additional discrimination caused by

social differences in terms of religion, race/ethnicity, physical features and level of wealth in addition to gender. The number of the “socially weak” based on gender is well above the number of weak based on any other social difference. In short, a lack of consideration of gender in development aid could consciously or unconsciously exclude approximately half of the target population from the benefits of aid.

Actual gender issues vary depending on the country, region and culture, etc. Even in the same country, understanding of gender may change from one historical period to another. Understanding of gender is also considerably influenced by such external intervention as foreign aid. The introduction of new technologies by means of development aid essentially aims at achieving social development in a target area through technological and social changes. Even if a technology itself is neutral from the viewpoint of gender, it can still be a disadvantage or unfairness for either sex unless it is introduced to equally benefit both sexes by its selection by both men and women in a target area to meet their needs. As a result, a new technology can worsen the existing gender balance in a target area.

The question of gender is also deeply related to the social and religious sense of values in a target area which have been formed over a long period of time. Accordingly, there are many occasions where people do not perceive a disadvantage or unfairness caused by gender as a problem and simply accept it as something “natural” or “unavoidable”. It is not unusual for the beneficiaries of aid or even donors to be less interested in or unaware of the impacts of a newly introduced technology on gender as they believe that a reduction of the level of poverty in terms of the economy through the introduction of new technologies/techniques under their development aid programmes to be more urgent.

8.2.4 Key Points for Gender Consideration in Rural Development in Africa

- (1) Do not consider only “a household” the basic unit for rural development
As traditional “households” are collapsing in Africa, appropriate targeting by a project cannot be achieved if a household is only regarded as the unit for aid input. Special attention should be paid to the different needs and interests within a family, particularly differences based on gender, and priority ranking regarding what input should be made to who and how should be determined based on the actor analysis results.
- (2) Do not assume that a technology is gender neutral
It must be properly recognised that a new technology which is not essential advantageous or disadvantageous for either sex can have the impact of destroying the existing gender balance in a target area depending on how it is introduced. The method of introducing a new technology should, therefore, be carefully decided after examination of the possible impacts of technology introduced on both sexes in advance.
- (3) Understand that gender consideration is not a zero-sum game
Gender consideration in rural development does not mean a fight for a larger share (fight to establish vested rights) of the pie but the process of enlarging the pie itself. The government, donor and beneficiaries must understand that gender consideration aims at increasing the efficiency of development in accordance with proper targeting and accurate understanding of the needs.
- (4) Pay attention to the impacts caused by a rapid change and its speed
Any hasty attempt to bring about a rapid change of the existing gender balance in a target area by means of rural development could cause an antagonistic reaction, resulting in social unfairness for either sex due to collapse of the gender balance. It is essential for gender consideration in rural development to progress at a speed at which people can digest the necessary changes.
- (5) Place gender as a main component in addition to the WID approach
A special component targeting only women is added to some rural development projects in addition to the original project purpose or activities. Although such a component may be necessary, it is more important to consider gender in each activity by clearly including gender equality in the project objectives apart from adopting the WID approach.
- (6) Obtain sex-oriented data from fixed points throughout the project period
To assess the impacts of gender consideration in a rural development project, it is necessary to obtain and analyse data on the same indices for each sex for comparison purposes. In this analysis, it must be

remembered that the impacts of a project on households headed by men and those headed by women may be quite different. In general, households headed by women are less flexible to changes than households headed by men. This weakness which is not obvious from data obtained at the same time should be clarified by means of obtaining and analysing sex-oriented data from fixed points at different times.

8.3 Irrigated Farming in Africa: Example in Ghana

The important points for the implementation of irrigated farming in Africa are described in this section based on the relevant basic policies of the World Bank and some projects in Japan.

8.3.1 Basic Policies of the World Bank

The basic policies of the World Bank regarding irrigated farming in Africa are listed below.⁴

- Priority to be given to the repair or improvement of irrigation facilities or the completion of incomplete facilities
- Improved water management capability in the field
- Legal and institutional assistance to facilitate water management and smooth participation and operation by users
- Promotion of cost sharing by the users of irrigation facilities
- Assistance for the planning of agricultural services (agricultural inputs, markets and distribution) to support the smooth operation and maintenance of irrigation facilities

The World Bank also recommends the following measures to improve irrigated farming projects in Africa.

- Formulation of more realistic and simpler projects
- Clarification of the project purposes

8.3.2 Lessons from Japanese Projects

A case study⁵ on a development study (1995 – 1997), grant aid cooperation (1999 – 2000) and project-type technical cooperation (1997 – 2002) implemented by Japan International Cooperation Agency (JICA) in the field of irrigated farming in Ghana was conducted in June, 2001 and the problems found by this study are listed below.

- Insufficient explanation to people as well as insufficient building of consent
- Insufficient efforts to create a long-lasting irrigation association or farmers' association
- Insufficient examination of viable farming practices, method of using agricultural machinery, method of improving the planting system and plan to provide agricultural finance (micro-credit), etc. in a concrete manner
- Insufficient awareness of and response to such preconditions as the deployment of personnel and the provision of procurement funds by the government of the recipient country or counterpart organization

The following measures (pending tasks) may prove decisive in solving these problems.

- A sense of ownership should be built on the part of people so that they regard a project as something which belongs to them rather than something which is imposed on them. To be more precise,

⁴ William I. Jones, "The World Bank and Irrigation: A World Bank Operations Evaluation Study", July, 1995

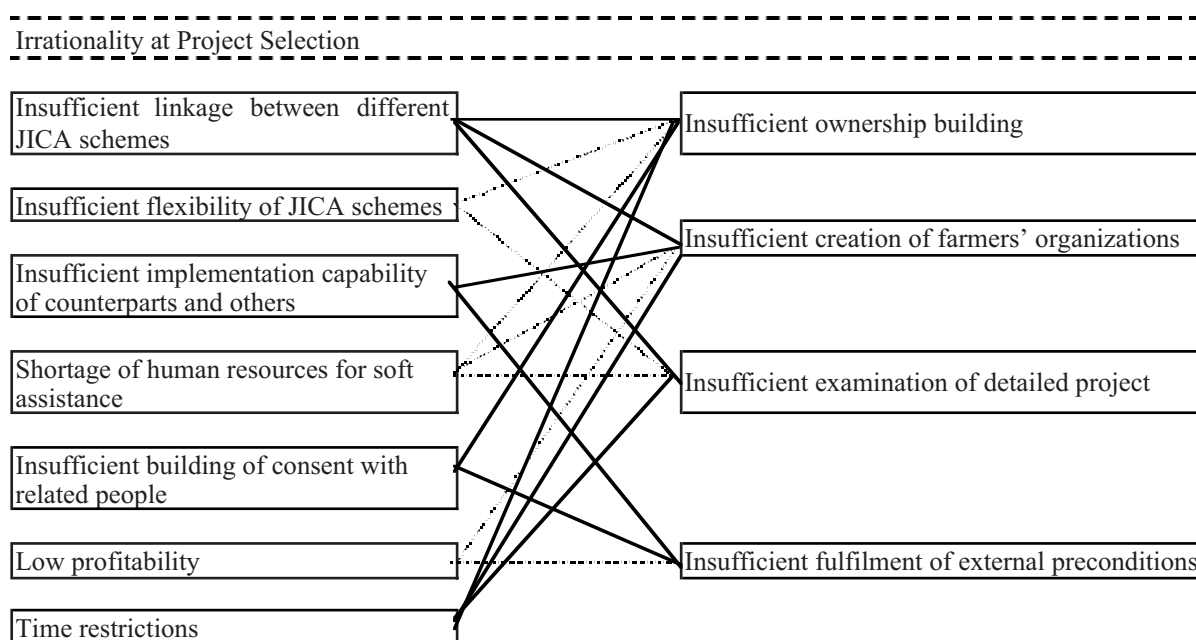
⁵ A case study investigates the causes of problems through detailed analysis of individual cases. For generalisation, the study of other cases is required. See JICA research paper "Development Study on Irrigated Farming Development Project in Ghana", September, 2001 for detailed analysis.

participation right from the planning stage is crucial together with real involvement (including cost sharing⁶).

- An irrigation association or farmers’ organization should firstly be established using the development study as well as verification study schemes⁷, followed by the application of other schemes in view of a long-term commitment (more than five years). When the profitability of irrigated farming is low, the maintenance of a farmers’ group is difficult.
- It is important to conduct the “analysis of problems” in a development study so that a concrete development plan (master plan) reflecting the analysis results can be formulated. A master plan narrows down the target area(s) for irrigation while a feasibility study incorporating a development study, etc. conducts a detailed examination to enable a realistic and detailed review of the implementation plan.
- While the project contents are finalised based on the premise that they are implemented by the counterpart (external precondition), they are not fully implemented in many projects. Appropriate measures to improve this situation should be examined by directly confronting the reality.

The background of the afore-mentioned four problems of irrigated farming is illustrated below based on the above arguments.

Fig. 4 Problems of Irrigated Farming and Their Background



⁶ While the most common cost sharing method is the provision of labour, partial payment of the equipment procurement cost is also conducted.

⁷ A verification study involves the actual implementation of a small-scale pilot action plan. Such implementation enables examination of the planned project in a concrete and detailed manner, greatly contributing to the establishment of a farmers’ organization, etc.

8.4 Important Points for the Cooperation for the Prevention of Desertification

Desertification poses a serious problem for some livelihoods (primary category) classified in Chapter 3, namely “1. Water Harvesting Agriculture”, “2. Pasturage”, “3. Pasturage with Agriculture” and “4. Agriculture with Pasturage”. Although the factors causing desertification vary from one region to another, this section describes the general definition, causative factors and impacts of desertification with the proposal of cooperation measures to prevent the progress of desertification.

(1) Present Situation of Desertification

The definition of desertification is currently shifting its emphasis from “the phenomenon of soil degradation leading to a decline of soil productivity” to “reference to the impacts of human activities on the environment”.

< Typical Definitions of Desertification >

1) UN Conference on Desertification (UNCOD, 1977)

Desertification means a decline or destruction of the biological productive capacity of land, ultimately leading to the state of desert. Desertification is the manifestation of the wider deterioration of the ecosystem and means a decrease or destruction of the biological productive capacity (production of plants and animals) which is used for multiple purposes, caused by an increase of production to support the growing human population.

2) Global Soil Degradation Evaluation Conference (1990)

Desertification or soil degradation means the devastation of land caused by inappropriate human activities and observed in arid, semi-arid and dry semi-moist areas.

3) UN Conference on Environment and Development (1992); International Convention to Combat Desertification: Agenda 21 (1994)

Desertification means the degradation of land caused by various factors, including climate change and human activities, in arid, semi-arid and dry semi-moist areas.

(2) Factors of Desertification

1) Climate

The intermittent occurrences of drought since the late 1960's have accelerated desertification, particularly in and around the Sahel Region.

2) Social Changes

- Population increase (increased cultivated land to meet the increasing demand for food, excessive use of forest resources and excessive grazing animals)
- Spread of cash crop cultivation and increased cultivation of commodity crops cause a decline in the production volume of crops for self-consumption, hence, decrease the resistance to drought
- Increasing gap between urban and rural areas: slow development of storage facilities for surplus crops, roads for the transportation of agricultural products and market development, etc. in rural areas

3) Unstable Public Peace and Politics

These instabilities obstruct efforts to prevent/mitigate desertification and to deal with a food crisis.

4) Collapse of Traditional Wisdom to Maintain Livelihood and Mutual Help System

Traditional use of a sustainable ecosystem which is capable of dealing with a poor harvest or food shortage has become difficult.

(3) Impacts of Desertification

1) Destructive Impacts on Vegetation and Ecosystem

- Loss of biological diversity, loss of top soil and soil, devastation of the vegetation and loss/destruction of the habitats for flora and fauna
- Damage by exotic diseases and pests and loss of genetic resources following famine relief and other activities

2) Impacts on People's Lives

- Declined production volume by unit area of agricultural and livestock products due to the degradation of land; food shortage
- Food shortage, increased poverty and collapse of the production base due to a decrease of food production

3) Impacts on Women Labour

- Increased burden on women due to an increased planting area and declined access to water and firewood
- Adverse impacts on children's health due to a decrease of the time spent on childcare

4) Impacts on Grazing animals

- Decrease of pasture land and shortage of grass due to the expansion of farmland
- Frequent conflicts between those engaged in Grazing animals and farmers

5) Impacts of Migration from Rural Areas to Urban Areas

- Mass migration from rural areas to urban areas due to a weakened food production base, hunger and poverty, etc.
- Problems of hygiene and housing in urban areas due to a population concentration in urban areas

(4) Desertification Prevention Measures

The main desertification prevention measures are listed below. A similar list can be found in Table 2 – Development Tasks and Development Programmes by Types of Livelihoods.

1) Livelihood with Relatively High Importance of Pasturage in Arid Areas

- Accumulation of surface water
Topography capable of efficiently accumulating surface water is artificially created so that vegetation can flourish in that area (for example, the concentration of resources in one-fifth of the area while abandoning four-fifths of the area).
- Selection of herbaceous species adaptable to local conditions
Useful species which can be used as feed crops and which can grow in a poor environment are selected.
- Creation of a windbreak zone
The presence of a windbreak zone alone is fairly effective to prevent sand migration. A windbreak tree zone is appropriate for preventing the loss of the top soil.
- Effective use of surface water

2) Livelihood Combining Pasturage and Agriculture in Semi-Arid Areas

- Creation and maintenance of soil with high water retentiveness and productivity
Composting using animal waste and crop residuals and introduction of green fertiliser (leguminous herbaceous plants)
- Effective use of surface water
Introduction of water harvesting facilities
- Use of agropastoral techniques
Utilisation of animal waste and crop residuals
- Use of agroforestry
Introduction of leguminous woody plants (such trees as acacia which can be expected to fixate nitrogen)
- Guidance on methods to use resources
Effective use of firewood resources (cutting techniques to keep trees alive and use of improved ovens)
- Establishment of a local resources recycling-type community
Conscious efforts to use local resources within the area
- Wind erosion prevention measures
Preservation of the soil through tree planting and the creation of hedges (prevention of top soil loss)

3) Livelihood with Relatively High Importance of Agriculture Currently Not Suffering from Severe Damage Due to Desertification

- Maintenance, management and increase of forest resources (new planting and post-cutting planting) and cutting of adequate volume
Natural resources management in parallel with income generation activities; application of agroforestry using woody plants producing fruits and nuts for cash income or eucalyptus and other species which are fast growing and which can be used for multiple purposes
- Role as a feed supply base
Examination of the possible role as a feed supply based or pasturing base using the rich vegetation
- Maintenance of soil fertility
Realisation of a stable supply of grain throughout the country

(5) Important Points for Implementation of Cooperation for Prevention of Desertification

1) Implementation of Desertification Prevention Measures While Maintaining Local Life

The prevention of desertification is a long-term commitment and, therefore, local people must form the main body of activities. In general, these people recognise “desertification” as a decrease or depletion of the essential natural resources to sustain their livelihoods in the form of the depletion of vegetation, lowering of the groundwater table (drying up of groundwater), decline of rainfall (large fluctuation), change of the crop yield and decrease of the number of wild animals, etc. They seldom see it as “the global environmental problem” perceived by donors. Tomorrow’s food is more important than greening of the desert for people who lack the additional means for involvement in the prevention of desertification while sacrificing their own living. This suggests a low likelihood of success for any project which tries to suppress the plundering of natural resources, which is the cause of desertification, under the slogan of preventing desertification. Should the proposed project contents be designed to lessen the burden on people and not to change the current lifestyle of people through project implementation, they will be accepted by people without problems, contributing to the prevention of desertification. What is crucial for

any project is the incorporation of the intentions of people in a project as much as possible together with consideration of “improving the living standard of people” to actually benefit people.

2) Introduction of Appropriate Technologies Acceptable by Local People

Understanding of technologies which can be adapted to the characteristics of a target area, referring to successful pilot project examples, etc., is very important in view of the introduction of appropriate technologies which are acceptable to local people. Meanwhile, there is a problem that the positive results of individual desertification prevention projects remain confined to the relevant project areas, failing to spread to other areas. It is desirable for appropriate technologies, the validity of which has been concretely verified, to be put together to serve areas with suitable characteristics. The recruitment of local staff and Western experts, etc. with extensive knowledge of appropriate technologies in specific areas is one way of ensuring the efficient implementation of a project.

3) Maximum Use of Natural Forces Without Expecting Quick Results

It is important not to seek quick results from inputs while using locally available natural capital⁸ to the maximum.

(6) International Response to the Prevention and Control of Desertification

- Measures to combat drought and famine
- Environmental conservation and development by means of planting and erosion control
- Research and provision of an information service regarding the climate and environment
- Development and extension of farming and grazing animals techniques designed to control desertification or to improve the resistance to desertification
- Prevention of poverty caused by desertification and increase of the production volume and income

8.5 Desertification Viewed from Grazing Animals

Battles are taking place in semi-arid areas over natural resources which are scarce due to the harsh natural environment. In particular, the main industrial activities in these areas, such as pasturage and agro-pasturage, consume natural resources (grass and tree leaves and stems) to feed animals and the need to maintain the livelihoods of those humans engaged in these industrial activities further accelerates the consumption of natural resources (especially fuelwood). As livestock and humans require different natural resources for their consumption, conflict over natural resources does not take place. Nevertheless, both do consume local natural resources. As long as their consumption of natural resources takes place within the limit of reproduction, no depletion of the resources should occur. However, the present situation indicates that the level of consumption has reached the stage where reproduction is almost impossible as a result of the ever increasing demand for resources caused by the recent rapid increase of both the human and animal population in arid areas.

Loss of the vegetation covering the land surface, originating from a decline of natural resources, causes soil degradation, ultimately leading to desertification to make the lives of both humans and animals impossible. Once desertification occurs, the affected land requires a long time to restore its vegetation. Meanwhile, humans and animals need to eat every day and abandon the land to move elsewhere because of the difficulty of maintaining their lives on desertified land.

(1) Excessive Grazing Animals

Excessive grazing is the state where the production capacity of the natural resources of pasture is exceeded by the demand for natural resources for grazing animals. This state of excessive grazing is commonly understood to be

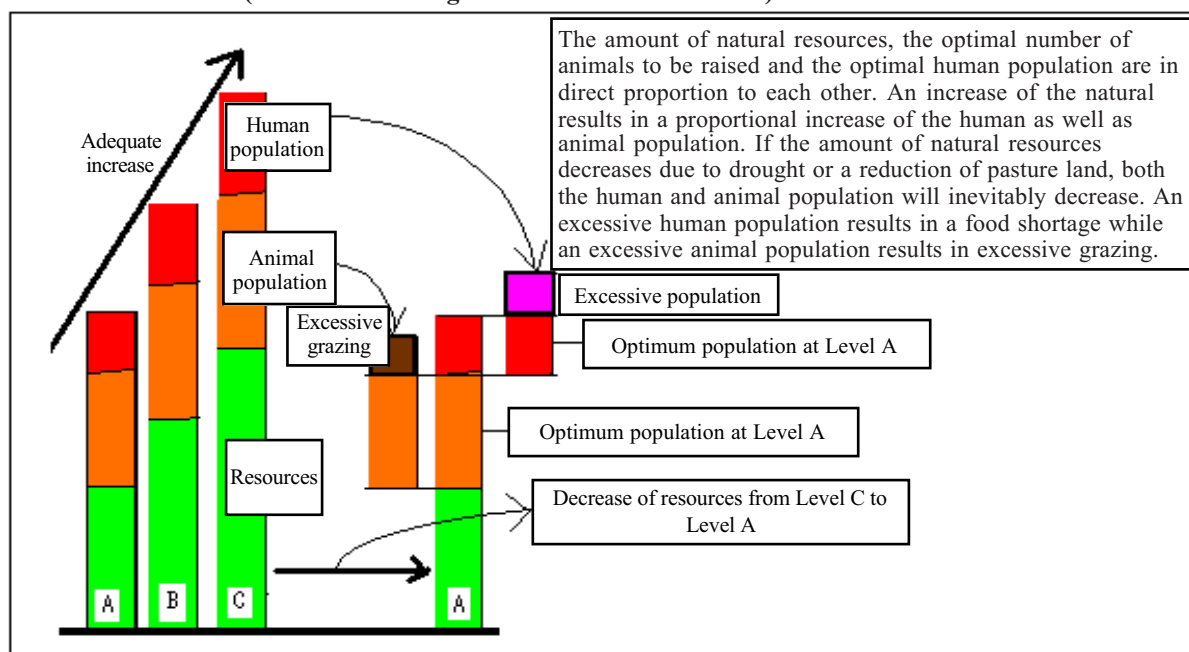
⁸ Cooperation using the existing natural capital as much as possible enhances the sustainability of cooperation. The relevant activities include agroforestry involving acacia which can fixate nitrogen in the soil, the efficient use of energy through the wide use of improved ovens, composting using animal waste and crop residuals, green fertiliser using local leguminous herbaceous plants and water harvesting for the effective use of surface water.

the result of the increased size of pasturing stock but can occur with a low density of one animal per ha if the vegetation is sparse. In contrast, excessive grazing does not occur with even 100 animals per ha if the vegetation is dense. This relationship is shown in Fig. 5. When the amount of resources supplied by pasture land falls below the amount of consumption by grazing animals, the situation is considered to one of excessive grazing. Given the natural condition of low rainfall, the production potential for natural resources in semi-arid areas is extremely limited. The size of grazing animals using the local vegetation is naturally determined by the land's available amount of natural resources. The reasons for excessive grazing can be classified into three types: (i) increased head (absolute increase) type, (ii) decreased pasture land (relative increase) type and (iii) combined type. As described earlier, an increase or levelling of the size of pasturing stock and a decrease of common pasture land are simultaneously taking place at present and the excessive grazing on most pasture land can be classified as the combined type.

Excessive grazing reduces the amount of natural resources and plant diversity of pasture land. A decrease of the grass and shrubs due to excessive grazing lowers the water retention of the soil and plants do not grow in soil which has lost its water retention. This loss makes the soil liable to erosion by wind and water, resulting in loss of the top soil which provides the bed for plant growth. Loss of the top soil makes plant growth impossible. An unimaginably long period of time is required for the natural restoration of the top soil once it has been lost.

Domestic animals require basic energy input to maintain their lives and additional energy for production. The absorbed energy is first consumed to maintain life and any surplus energy is used as productive energy. Insufficient energy intake due to excessive grazing causes insufficient growth and impedes reproduction, etc. while a shortage of productive energy results in a decline or loss of milk or meat production.

Fig. 5 Relationship Between Resources, Population and Grazing/Stock Raising (Excessive Grazing and Excessive Cultivation)



(2) Excessive Cultivation: Expansion of Agropasturage

When people engaged in agropasturage move onto commonly owned pasture land (resources shown in Fig. 5), they firstly clear part of the pasture land to create farmland. The natural vegetation on such farmland is cleared by humans as weeds. The crops to be cultivated in semi-arid areas require human care as their adaptability to survive in the new environment is low. The crop residuals after harvesting are used to feed grazing or domestic animals.

As the expansion of farmland onto semi-arid pasture land with a low moisture content results in a low resistance to drought, the crops suffer from considerable damage due to drought, the scale of which is regarded as being minor by the grazing animals industry. Such drought could ultimately lead to the abandonment of the farmland.

As a long time is required for abandoned farmland to restore its natural vegetation, soil erosion by wind and water as in the case of excessive grazing can occur in the meantime.

(3) Solution to Problems

When grazing animals and human lives which depend on grazing animals are considered to be the main issues, the highest priority is to secure natural resources as natural capital. As the future expansion of the usable land is difficult due to the harsh natural conditions, it is important to maintain the present human and animal populations (no increase) without causing any negative impacts on the living and natural environments. This can be achieved in two ways: (i) increase of the available resources and (ii) effective use of resources. In addition, measures should be introduced to remove the current negative impacts on the natural environment by reversing the process of excessive grazing leading to the degradation of the soil and further to desertification.

- Increase of available resources: research and development of feed crops with a high nutritional value to achieve a qualitative improvement
- Same level of production with a lower demand for resources: increased production through the improvement of animal breeds

Using these two methods, possible solutions to the problems faced by semi-arid areas where natural capital is the main capital include reduction of the resources consumption, decrease of the animal population in possession while maintaining the present production volume, improvement of the water retention based on the reproduction of resources and prevention of animal death due to diseases (loss of resources as the amount of resources consumed by the animals is lost prior to its use by humans).

Solutions to Problems Relating to Grazing Animals

- Reliable water supply
Storage of surface water after rain is required (plants grow with a steady supply of water and the retention of water by the soil)
- Feed crops
Seeding of selected plants which have a high nutritional value for animals
- Improvement of animal breeds
Creation of breeds which offer a higher production volume of milk or meat with a smaller nutritional intake
- Animal hygiene
Removal of factors causing the death of animals or hindering a productivity increase

8.6 Food Security and Rural Development: FAO's Special Programme for Food Security (SPFS)

(1) Food Security in Africa

One of the most important tasks for rural development is to ensure that "everyone can obtain the necessary amount of food when ever required to live a healthy life". The amount of grain consumption and meat consumption by African people is approximately one-fifth and one-tenth respectively of people in advanced countries. One-third of African people are said to suffer from chronic malnutrition. The underlying factors include failure to achieve the necessary scale of agricultural production to support the high population growth rate, limited availability of suitable land for agriculture, unstable weather typified by frequent droughts and floods, exhaustion of the domestic economy due to civil war and inability to achieve the timely delivery of food to regions in need because of the absence of domestic infrastructure. As a result, domestic production cannot meet the food demand, creating a vulnerable structure of dependence on food aid by donors. Against this background, "food security and rural development" has been identified as one of the seven priority fields planned

at the preparatory meetings for the TICAD III (the third Tokyo International Conference on African Development) to be held in 2003.⁹

(2) Special Programme for Food Security (SPFS)

The Food and Agricultural Organization (FAO) of the United Nations has been implementing the Special Programme for Food Security (SPFS) in many African countries to tackle the problem of food security. The SPFS emphasises an increase and the stabilisation of food production, an increase of rural income and the creation of local employment opportunities, etc. for the purposes of improving food security at both the national and personal levels and reducing poverty. It targets low income countries suffering from a food shortage and has so far been implemented in 46 countries throughout the world, many of which are African countries.

The SPFS aims at urgently improving the productivity of food production to reduce annual fluctuations, taking “the viewpoint of farmers” into consideration. For this reason, the SPFS has been promoting a participatory approach to spread agricultural improvement technologies regarding the intensification, water management and diversification of agriculture through cooperation with farmers and the governments of recipient countries. The implementation process consists of two phases. In the first phase (pilot project), a verification study is conducted for a specific area to identify the necessary technologies/techniques and methods to increase agricultural production (improvement of productivity) and to increase the rural income. In the second phase, efforts are made to achieve the same positive results produced in the first phase taking the macroscopic government policies relating to the agricultural development strategy, sustainable use of natural resources, food security programme and agricultural investment programme, etc. into full consideration.

At present, most recipient countries are still at the first phase stage and only a small number of countries have moved to the second phase. There are two reasons for this. The first is that as the methods to solve problems vary depending on the meteorological and social conditions even within the same country, as suggested by the Guidelines, many projects are implemented to suit the different conditions of specific sites in a wide area. The second is that while relatively well-off, innovative farmers tend to be the targets at the early stage of a project based on the condition that participants are capable of involvement in extension work to other farmers, the achievements are being only gradually extended to those farmers facing a more acute food shortage. As a result, local farmers and extension workers lead the activities, securing food at a relatively low cost and contributing to poverty reduction at the same time.¹⁰

(3) Special Features of the SPFS

A SPFS project basically has a small budget (approximately US\$ 300,000 – 500,000 per project) and is characterised by effective assistance for an increase of food production with small funding. There is also south-south cooperation where experts from another developing country with similar conditions to those of the target area are dispatched for a period of 2 – 3 years to directly provide the necessary technical guidance on increased production for farmers. In the case of the first SPFS project in Senegal (1995 -) for example, many small-scale projects (US\$ 10,000) are being implemented at the grassroots level, contributing to an increase of food production, mainly rice. Under this project, 100 Vietnamese experts (including farmers) have been dispatched under the south-south cooperation scheme to provide guidance on rice cultivation by staying in villages in poor regions in Senegal for several months. Their air fares and living expenses are paid by the FAO and technical cooperation is directly provided to people's organizations in Senegal by these Vietnamese farmers. This method has achieved excellent results and the project is now a model project of the SPFS throughout the world.

(4) Examination of Linkage Between the FAO and the JICA

At present, the JICA is examining the possibility of jointly implementing SPFS projects with the FAO with the planned TICAD III in 2003 in mind. The idea is for all related government offices and the JICA to work

⁹ Draft plan formulated at preparatory meetings: four main themes: (1) review of the TICAD II, (2) New African Initiative (NAI) Programme, (3) South-South cooperation and (4) cooperation through regional organizations; seven priority fields: (1) food security and rural development, (2) infrastructure, (3) private sector, (4) IT, (5) infectious diseases, including AIDS, (6) education and (7) governance.

¹⁰ FAO/DFID, Joint Analytical Study on Application of Sustainable Livelihood Approaches in the FAO Special Programme for Food Security, May, 2001.

together. In the financial aspect, the Human Security Fund, etc. will be used. From the technical cooperation aspect, the JICA will play a central role in (i) the prevention of desertification in semi-arid areas through resident participation and (ii) the spread of rice cultivation, etc. utilising its own experience of technical cooperation for Africa. To be more precise, a pilot project in the first phase will involve the dispatch of a joint JICA-FAO study team¹¹ for project formulation and the provision of on-site technical guidance by JICA experts. The extended second phase will involve cooperation for extension techniques and for the extension of the first phase achievements throughout the country and cooperation by experts on such soft components as agricultural policies and investment programmes, etc. in addition to technical guidance. Moreover, grant aid and project-type technical cooperation may be provided outside the framework of the SPFS to construct the facilities required for the implementation of SPFS projects and accompanying technical projects together with assistance for rural development by Japanese Overseas Cooperation Volunteer teams.

8.7 Important Points for the Implementation of Rural Community Survey

While it is necessary to study the availability of various capitals in villages from a macroscopic viewpoint as well as a microscopic viewpoint, i.e. access by individual villagers to the available capitals, there are, in reality, various constraints for the implementation of the various studies described so far in African villages. In this section, important points for the implementing of rural community survey were summarised.

(1) How to Supplement Shortage of Quantitative Data

Quantitative data based on interviews conducted in the target villages is very valuable in African countries where statistical data is not fully available. When efforts are made to obtain quantitative data, however, it is not unusual for villagers not to even know their exact age or number of family members and the replies of those interviewed are often based on guesswork. This situation makes it necessary for researchers to identify the original measuring “units”, such as bags and containers, used in daily life in the target villages in order to determine the actual capacity of these “units”.

(2) Gathering of Information from Elders and Young People

Elders have extensive knowledge of village history and enjoy strong influence on village affairs. However, it is difficult for researchers to obtain an accurate reply to their questions from those elders who do not belong to the educated generation. Meanwhile, it takes some time to reach young people as their influence in the village or family is not strong. As there are many young people who have received state education, these young people can be important cooperators for a study because of their ability to observe facts both objectively and quantitatively. For a rural study, it is essential to compare information gathered from elders and young people to establish the facts. In other words, contact must be made with at least the family head (father) and his son to ascertain the accuracy of the information on the family.

(3) Study Schedule with Consideration of Local Customs

Local customs must be taken into careful consideration when planning the study schedule. For example, adults find it easier to cooperate with a study on Saturdays and Sundays as the children are not at school and can work in the fields. In areas with a strong Christian influence, Sunday mornings should be excluded from the study schedule because of customary attendance at church. Even if the study schedule is planned based on local customs, there may be such unexpected events as funerals, weddings and religious ceremonies, etc. which will require the suspension or postponement of the study. During the rainy season, the rainfall on a day can significantly determine the actions of farmers on the following day (whether they should cooperate with the study or work in the fields). Moreover, the presence of such social factors as those described in (1) and (2) above which require some time to study could unexpectedly lengthen the duration of a rural study. Researchers must be aware of these eventualities and be prepared to spend some time to complete the study.

¹¹ A joint JICA-FAO study team was dispatched to Ethiopia in November, 2001.

(4) Use of Visual Information

One popular rural study technique is to ask a resident(s) to draw a map of the village, to observe the natural environment and to visit various facilities, which are the common assets of the people, in the village using this map. The verification and supplementation of verbal information with visual information are extremely important. Interviews with individual people should be conducted in their homes where possible and the accuracy of the information provided by those interviewed will be improved by regarding the living environment as assets (farmland and domestic animals, etc.) in a natural manner.

(5) Elimination of Influence on the Study by Accompanying Person

There are few villages which can be visited by a foreign researcher on his/her own for study purposes. In most cases, a researcher visits a village with a letter of introduction from the central and local governments. It is difficult to decline the request of an official of a government organization to accompany a study visit when an approach is made to a village through an administrative organization(s). The attendance of the village head at interviews with individual villagers is equally difficult to decline. The responses given during an interview which is attended by a government official and/or the village head tend to be guarded and predictable. How to deal with the possible involvement of such persons is an important issue which must be carefully examined at the preparatory stage of a study in order to obtain honest replies from the interviewees.

(6) Study Plan Incorporating Surrounding Area

In present-day Africa, there is virtually no village which does not have contact with the outside world and it is now practically impossible to obtain a proper understanding of a target village without simultaneously studying its surrounding area. For example, price information in a target village which is obtained from middlemen who visit the village to purchase farming products is meaningless unless corresponding information on the prices of products sold by farmers in other areas is available. The markets for crops produced by a target village, comparison with nearby villages engaged in similar types of production activities and the situation of employment away from home for villagers are essential items for any rural study. In short, the study plan for a single village must incorporate a study on the surrounding area.

(7) Consideration of Experience of Past Studies

Even in Africa, there are few villages which have never experienced some type of study. While it may be a natural reaction on the part of those villages which have been the subject of a study by a NGO or others in the past to complain if no aid was forthcoming in the aftermath of such a study, it can easily be imagined that these villages will not prove very cooperative for a new study or demand financial reward in exchange for their cooperation. Even in the case of villages which have no past experience of a study, they will have obtained some information from neighbouring villages. Consequently, they tend to excessively exaggerate the study outcome, i.e. aid. In the worst case, there is a risk of villages fabricating the information/data required by researchers. It is, therefore, time to examine a way of eliminating such biased views towards studies as part of the study technique.

(8) Importance of Paraphrasing Questions

When an interview is planned under a different cultural background, coupled with a number of biases as described above, it is not easy to obtain responses which are believed to reflect the truth. One effective way is to ask the same question from different angles or to paraphrase the same question. Each question should preferably be concise and concrete. For example, the question "Is there any period during which there is a food supply shortage?" is not sufficient if the purpose of the question is to determine whether or not the household of the person interviewed can produce enough food for self-consumption. The reality will only gradually emerge if related questions are asked in succession. Typical additional questions in this context are those regarding (i) the possibility of the supply of crops which can substitute the normal main diet, (ii) the duration of storage after harvesting in the storage on the household premises and (iii) the sale of domestic animals to purchase food for own consumption.

Definition of Certain Terms Used in The Guidelines

- Rural development** : Generally describes development in non-urban areas where agriculture, forestry and / or fisheries is the main type of livelihood and forms the central core of general human development which includes not only economic development but also social development featuring health and education.
- Rural area** : Means “rural” as compared with “urban areas” and is used almost as a synonym for “village”. It is regarded as immaterial whether agriculture, forestry or fisheries provide the main type of livelihood.
- Village** : Used to emphasise the nuance of a variety of livelihoods in rural areas. It is an emphatic term for a rural community.
- Capital** : Indicates a tangible or intangible resource, asset or ability possessed by a village and is used as a general term for all elements affecting the daily lives of villagers. It is not necessarily the same as “capital” used in economics.
- Actor** : Category of people who will presumably receive different impacts from others by development when directly or indirectly involved in development activities in a village. The term “actor” is used almost as a synonym for “stakeholder” and has the nuance of an active player.
- Commodity crops** : Crops which were introduced during the colonial period and of which the cultivation for export is encouraged by the government policy. The actual crops differ depending on the country, rainfall and temperature, etc. The relevant crops are peanuts, cotton, coffee, tea and sisal, etc.
- Cash crops** : Crops which are mainly cultivated for the domestic market. Vegetables and fruits, etc. fall in this category. Maize and beans which are mainly cultivated for self-consumption are included because some are cultivated for outside sale.
- Domestic animals** : Animals raised with the area of a dwelling.
- Grazing animals** : Animals raised by pastoralists through grazing.
- Development programme** : An activity required to achieve a development target is called “a development project” in the Guidelines and a collection of development projects is called “a development programme”.
- Development project** : An activity designed to achieve a development target through either the consolidation of those capitals which are insufficiently available in a village or the input of human, physical and financial capitals to make more effective use of the existing capitals in a village.

APPENDIX

Rural Community Survey Sample Questionnaire

Rural Community Survey Sample Questionnaire¹

1. Social profile

- 1.1 Name of the village
- 1.2 Total population (DA office data): female Male
- 1.3 Number of households
- 1.4 Major ethnic groups
- 1.5 Major religion (% proportion)

2. Agricultural practices

- 2.1 Major crops grown (highland, lowland)
- 2.2 Estimate of yield (q/ha) of major crops
- 2.3 Describe the typical cropping calendar
- 2.4 Draw cropping calendar on a separate sheet (flip chart)
- 2.5 What are the major animals kept?
- 2.6 What is the herd composition (%)?
- 2.7 What are the major constraints for crop production (low soil fertility, land shortage, erratic rainfall, lack of oxen, etc)? Put in the order of importance.
- 2.8 How do you cop with the top three most important problems?
- 2.9 Discuss the extension system whether it is beneficial to you or not.

3. Socio-economic characteristics

- 3.1 What is the average land holding/household in the area?
- 3.2 What are the major soil types and describe in terms of quality (thick, thin, eroded and infertile etc)?
- 3.3 What is average ownership of:
 - a) cattle herd
 - b) draught oxen
- 3.4 What is the % proportion of farmers who own any livestock at all?
- 3.5 What is the % proportion of landless people in the community?
- 3.6 What are the local indicators of wealth?
- 3.7 Define, rich, medium and poor using the local indicators of wealth?
- 3.8 What is the proportion (%) of rich, medium, and poor in the community?

4. Other livelihood strategies outside agriculture

- 4.1 What are the non-farm activities for men?
- 4.2 What are the non-farm activities for women?
- 4.3 What is the pattern of temporary or permanent migration? Explain why people migrate and where they go?

5. Infrastructures and social services

- 5.1 How far is the nearest clinic or health station?
- 5.2 How far is the nearest primary school from the community?
- 5.3 How far is the nearest senior secondary school?
- 5.4 How far is the largest weekly market from the community?
- 5.5 How far are the major commercial towns?
- 5.6 Describe the availability of transportation facilities (road networks, public bus, etc)
- 5.7 Availability of water points (clean drinking water) and irrigation facilities?

¹ This questionnaire was used for the rural community survey in Ethiopia conducted by International Development Center of Japan in October to November 2000.

6. Peasant institutions

- 6.1 What are the formal (government) institutions? Describe their roles?
- 6.2 List the informal social support networks (institutions)? Describe their roles?
- 6.3 Who makes decisions with respect to land administration, family dispute (divorce), conflict resolution, etc?

7. Financial systems

- 7.1 What are the formal institutions that lend money to the farmers? Describe as to how the system works?
- 7.2 What are the informal lending systems?
- 7.3 What are the major sources of income to farmers? Indicate % of crop surplus that is sold every year?

PRA tools to be used

1. Resource map (step 1)

Purpose: To identify the economic and social features and infrastructures of the community for further discussion and analysis.

Things to be marked in: roads, rivers, schools, churches, mosques, markets, PA office, water sources/points, health posts, input stores, etc. Distinguish areas with soil type and plant cover, if possible.

Participants: Community members take a lead responsibility in mapping their community. Find people who know the area very well.

2. Transect walk (step 2)

Purpose: To explore spatial differences in land use, vegetation, soil type, trees, infrastructure, water availability, and so on. To identify main natural and agricultural zones and sketch distinguishing features.

Factors to be sketched in the transect: Crops, soil types, livestock species, production problems (soil erosion, crop pests, disease, etc).

Participants: Community members who are knowledgeable of the area. They will decide which route to take for the transect walk. When walking, observe and discuss with the community members about problems and opportunities.

3. Semi-structured interview and group discussion (step 3)

This will be guided by the checklist outlined above as initial points of discussion to obtain community level information. The questions to be put to a group of key informants or individuals. Key informants need to be purposefully selected by community leaders and they will be the major source of information for the PRA. They can include farmers, development agents of the woreda office of agriculture, or schoolteachers.

4. Seasonal calendar (in the middle of the interview)

Purpose: To show the main agricultural activities and to identify the months of peak labour period. It summarises the rainfall pattern and cropping sequence.

5. Institutional mapping and matrix ranking (final exercise)

Purpose: To assess institutional arrangements at community level. The roles and relative importance of the institutions for the different livelihood activities can be assessed through matrix ranking of the institutions.

- Steps:**
- a) List down all formal and informal institutions in the community.
 - b) Describe all contributions that the community give/make to the institution.
 - c) Describe all the benefit that the community get from the institutions.
 - d) Matrix ranking of institutions in terms of importance, effectiveness, accessibility, etc.

An example of matrix ranking of institutions

(Rank 1-5; where 1= good; 5=bad)

Institution	Importance	Accessibility	Effectiveness	Total