

A farmer planting seeds (a method where seeds are planted a specific distance apart) in the lower Moshi irrigated area (Technical Cooperation for Supporting Service Delivery Systems of Irrigated Agriculture in Tanzania)



# Rural Development

Poverty Reduction/Agricultural, Rural Development/Fisheries

## Overview of the Rural Development Field

The world's population rapidly increased in the latter half of the 20th century, and it exceeds six billion today. According to one forecast, it will reach nine billion by 2050. A major concern is that various problems, such as food shortages and environmental deterioration due to heavy consumption of resources on a global scale, will become more serious in relation to the increase in population. Since the population increase is especially notable in developing countries, appropriate development in these countries is essential in order to stabilize people's living situations worldwide.

Most people in developing countries live in rural areas, and their living situations are deteriorating due to problems such as overcultivation, overgrazing, deforestation, subsequent depletion of water resources, decrease of agricultural productivity caused by many factors such as soil erosion, and insufficient social services such as health and basic education. Additionally, the disparities in the living standards between urban areas and rural areas generate problems such as a population influx into the urban areas and slum formation.

To bring about affluent living situations, it is necessary to promote comprehensive agricultural and rural development focusing on the lives of residents in rural areas. This should be associated with proper attention to harmony with the environment and the relationship with the urban areas so that limited

resources in rural areas can be continuously utilized.

At the same time, issues surrounding rural development have grown more diverse in recent years. Problems such as the avian influenza, for example, not only cause direct economic and health damage for farmers in the affected area, but also may affect other people within the country as well as in surrounding countries. It is thus necessary to tackle certain issues region-wide, involving all neighboring countries concerned.

Agricultural and rural development also gains attention in post-conflict rural reconstruction. Activities such as stable food supply, and the promotion of settlement of refugees and ex-combatants. Rural development responds to the recent trends of poverty reduction, peacebuilding, and human security.

In addition, the price of food has rapidly increased throughout the world in recent years. This has a particularly strong impact on those suffering from poverty in developing countries, thus emergency response via international frameworks and medium- to long-term assistance for establishing stable agricultural production are needed.

In this way, the role expected of the rural development sector is growing increasingly larger. JICA addresses these issues in the three fields of poverty reduction, agricultural and rural development, and fisheries.

## Poverty Reduction

### Overview

The number of people in the world that live on less than one dollar each day reduced from 1.25 billion in 1990 to 980 million in 2004. Nevertheless, one out of every five people in developing countries still suffers from poverty.

Poverty reduction is a primary global common objective and advocated in the MDGs. The term "poverty reduction" means not simply increasing income levels but rather creating conditions that lead all the people to healthy and creative lives with sufficient food, shelter, and clothing. It also means being free from unfair treatment by government and/or society, and being able to participate in society with freedom and dignity.

Poverty has many dimensions. There are vicious cycles of poverty in which people are unable to receive adequate education, and thus with lack of knowledge and skills, they can only find jobs with low wages. "DAC Guidelines on Poverty Reduction" published in 2001 by the Organization for Economic Cooperation and Development (OECD) defines poverty as an insufficiency in economic, human, political, social, and protective capabilities. Therefore, it is internationally recognized that poverty reduction requires a comprehensive approach that will develop the capabilities of people in these five areas.

It is also important to note the fact that lack of capabilities among the poor is not the primary cause of poverty; environments and social structures that are disadvantageous to the poor

(structures in which factors such as vested interests and discrimination create socially vulnerable people) interactively make the people fall into poverty. To reduce poverty, it is important for the poor to be able to demonstrate their potential capabilities by changing the environments that surround them and by breaking the vicious cycle of poverty.

### JICA's Efforts

#### Definition of Poverty and Goals in Support for Poverty Reduction

JICA defines poverty as a condition in which people are deprived of their opportunities to demonstrate potential capabilities required to lead a basic human life and are being left out of society and the development processes. JICA has two overall goals in its support for poverty reduction—enhancement of the potential capabilities of the poor, and improvement of the social structures and systems that surround the poor. To achieve this, JICA has also identified the following four strategic development goals aimed at reinforcing people's economic, human, political, social, and protective capabilities (since the measures to reinforce political and social capabilities have many aspects in common, they are addressed as a single strategy). Furthermore, JICA has set the fifth strategic development goal aiming at formulating and implementing development policy that creates favorable environments where people can improve their potential capabilities:

- (1) Improving income (economic capabilities)
- (2) Improving basic living capabilities (human capabilities)
- (3) Overcoming vulnerability (protective capabilities)
- (4) Realizing political and social participation (political and

social capabilities)

- (5) Formulating and implementing development policy for poverty reduction

The structures and other factors leading to poverty and the actual conditions in which the poor live are diverse and complex, depending on countries and regions. Accordingly, after sufficiently understanding poverty factors and situations on a country-by-country and region-by-region basis, JICA addresses the issue by effectively utilizing the unique features of its aid schemes and by combining various individual projects so that they give rise to synergy as a whole.

#### Target Levels of Poverty Reduction Assistance and Multi-layer Cooperation Approach

JICA provides poverty reduction support at three levels: (1) policy and system support at a national level (macro level), (2) support through local communities (mezzo level), and (3) direct aid to the poor (micro level). Through these channels, and as shown in Figure 3-8, JICA effectively carries out assistance for capacity building of the poor, as well as for improving social structures, policies and systems that surround the poor by coordinating the assistance at the multiple levels of macro, mezzo, and micro (multi-layer approach). Figure 3-9 provides examples of projects that effectively utilize the multi-layer approach.

Moreover, issues related to the poor are complicated and widespread, and therefore, livelihoods of the poor are multi-dimensional. As this is the case, it is important to assess the poverty from multi-sectoral aspects and to carefully consider concrete measures to tackle these issues (the multi-sector approach).

Figure 3-8 Multi-Layer Approach to Poverty Reduction

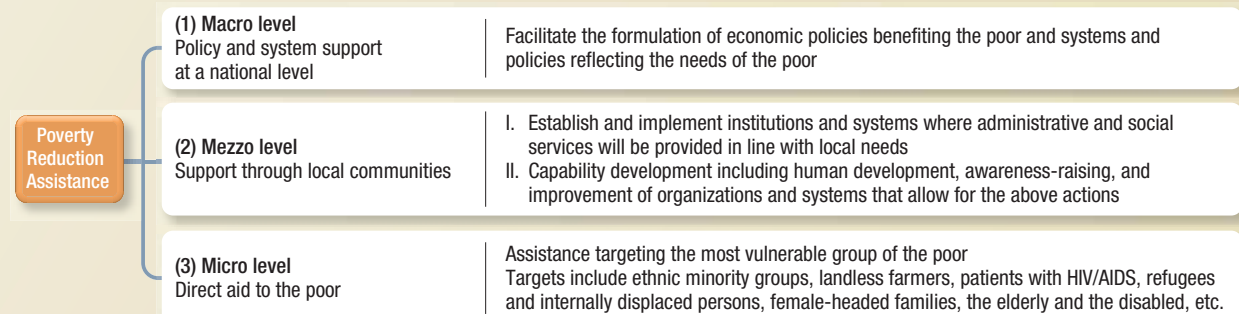
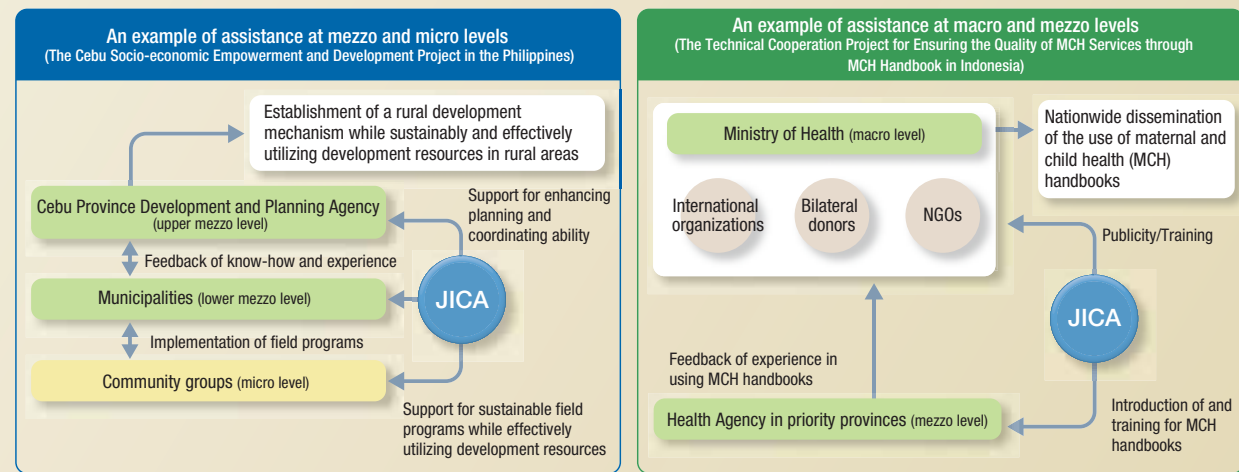


Figure 3-9 Examples of Cooperation Projects with Consideration Given to the Linkage of Different Levels



# Agricultural and Rural Development

## Overview

In many developing countries, over half of the population is engaged in the agricultural sector, and a large share of the rural population lives in poverty. Because agriculture represents the core of the national economy in many of these countries, assistance for agricultural and rural development plays an important role in addressing such key development issues as food security, poverty reduction, and economic development.

The stable provision of food (food security) to citizens is a fundamental condition of economic and political stability. In many developing countries, food shortages are impairing health and creating famine. In some cases large numbers of refugees flood into neighboring countries, disturbing the order of the international community and potentially leading to regional conflicts. The price of basic foodcrops has significantly risen throughout the world, particularly in recent years due to the rise of crude oil prices, increasing demand for crops for bio-fuel, and for emerging countries, and speculative buying. Meanwhile, these issues are becoming increasingly serious. In food-importing countries, the stable domestic production and food supply are extremely important economically for reducing the outflow of foreign currency. Furthermore, stable food supply in developing countries is important from the standpoint of Japan's own food security.

## JICA's Efforts

The two main challenges in agricultural and rural development are stable food production and supply (food security) and poverty reduction (rural development). Since these two tasks are intimately related, in order to implement effective cooperation, it is essential to understand their relationship and connect them when implementing projects. Specifically, there is a challenge to achieve food security from the macro (national) to micro (rural) levels on the one hand, and a challenge of various rural development issues at micro levels on the other.

Thus the objectives of assistance for agricultural and rural development are stable food supply for both the rural and urban populations, poverty reduction in rural areas, and national and regional economic development. In abstract terms, the ultimate goal is the eradication of famine and poverty. Sustainable agricultural production is the basis for a stable food supply and

poverty reduction in rural areas.

In order to achieve these objectives, JICA has identified the following three development strategies.

### (1) Sustainable agricultural production

It is extremely important to realize sustainable agricultural production for eradicating hunger and enhancing the means of economic activities in rural areas as well as economic development in developing countries. It is also a precondition for providing a stable food supply to all regions including urban areas, as well as an important factor for building rural communities with vitality.

As an approach for sustainable agricultural development, it is important to precisely understand the situation of the agricultural sector of the country at the macro level, and formulate and implement agricultural policies appropriate for the situation. It is also important to expand agricultural production and increase productivity. In seeking acquisition of foreign currency and economic development by means of export promotion, it is necessary to strengthen activities related to export promotion such as improvement of the export system and enhancement of competitiveness.

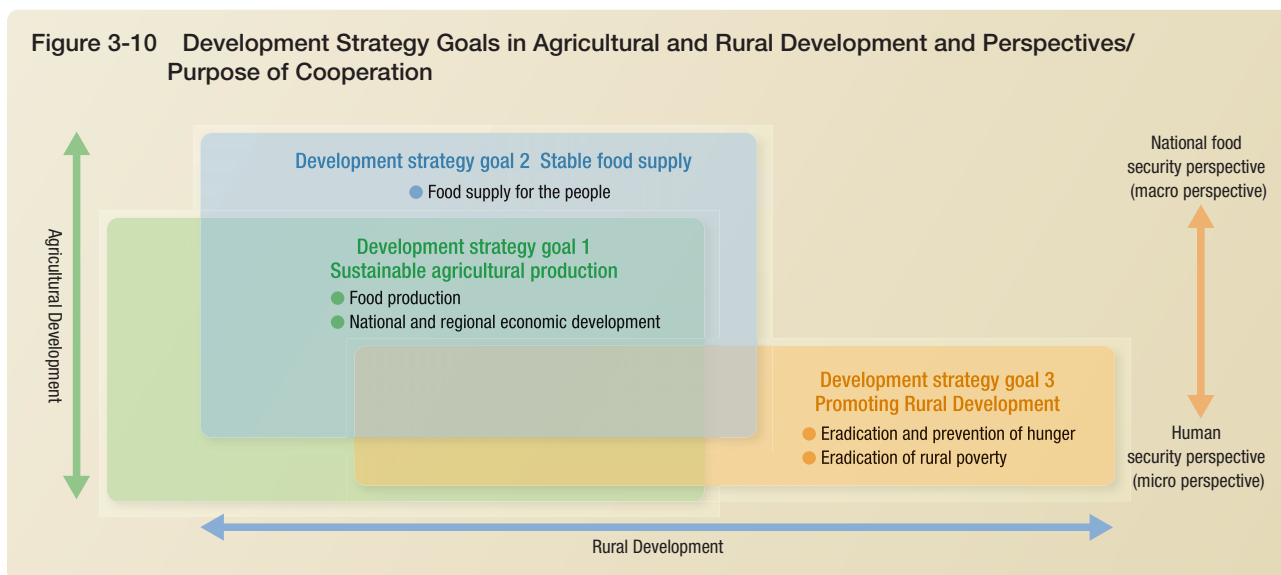
Also, consideration for the environment is essential for long-term agricultural production. Additionally, in order to secure sustainable development of the overall agricultural sector for the future, human resource development is necessary through education in agriculture and agricultural science at the high school, university, and graduate school levels.

### (2) Stable food supply

To supply a sufficient amount of food to all citizens stably is one of the important objectives of agricultural and rural development. A large part of the population in rural areas is engaged in agriculture and is a supplier of domestic food especially for the urban areas with the greater concentration of population. At the same time, they are consumers of domestically distributed agricultural products.

Stable food supply is possible only when a sufficient supply is secured at the macro level and fair distribution is in place at the micro level. To secure the food supply at the macro level, it is necessary for a government to evaluate the living conditions of the people and agricultural production potentials first, and then

Figure 3-10 Development Strategy Goals in Agricultural and Rural Development and Perspectives/  
Purpose of Cooperation



to formulate a strategy on how to secure food for its citizens. In the case that the required food cannot be secured within the country, it is necessary to develop a system to supplement the shortage with imports from other countries. On the other hand, to achieve fair distribution at the micro level, development of an efficient domestic distribution system is essential, which involves distribution over different regions.

### (3) Promoting Rural Development

Since the adoption of the MDGs, activities for poverty reduction in developing countries have gathered more attention than ever. Specially rural areas are recognized as a main target of development because lives of rural people are destabilized by many factors including low prices of agricultural products, deterioration of environment due to progressing desertification, and increased dependence on urban areas as seen in labor migration.

To eradicate rural hunger and poverty and promote rural

development, various measures are necessary, such as improving agricultural productivity, promoting the use and sale of agricultural products, promoting diversified economic activities including handicraft production and small business, and developing rural infrastructure represented by community roads and secured drinking water. It is also important to empower rural residents through organizing citizen groups and improving health and education standards.

The relation of the above three development strategies is summarized in Figure 3-10. In other words, agricultural development is aimed mainly at development strategy goal 2 with the basis of development strategy goal 1, and rural development is aimed at development strategy goal 3 while including development strategy goal 1.

Furthermore, agricultural and rural development, which requires consideration of various factors such as history, culture, natural environment, and ethnicity in the area, must be addressed in line with the situation of the target area.

## Agricultural Development Project in Kambia District, Sierra Leone

*Case Study*

Sierra Leone was blessed with mineral resources such as diamonds, gold, and bauxite, and production of cocoa and coffee was thriving and abundant. However, 10 years of continuing civil war have caused numerous farmers to become refugees and internally displaced persons, and human development indicators are currently shifting to the lowest among 177 countries. Amidst this backdrop, as an effort to stabilize food production in the civil war reconstruction period, JICA began the Agricultural Development Project in 2006 planned for three years in Kambia District, northern Sierra Leone.

Kambia District was once a major producer of rice, but this is no longer the case today. Therefore, this project aims to increase rice production through improving the quality of a series of agricultural tasks, including plowing, raising seedlings, weeding, fertilizing, and post-harvest treatment.

If a technology is not chosen in light of local circumstances, however superior it may be, it will not successfully spread to farmers. For this project, a farmer's field was utilized to implement a pilot project to verify

the appropriateness of the proposed technology, and an average income increase of 0.5 t/ha has been confirmed thus far.



One of the pilot project sites, two months before harvest

## Fisheries

### Overview

Fishery resources are an important source of animal protein for human beings. According to statistics published by the Food and Agriculture Organization of the UN (FAO), fishing and aquaculture supplied 106 million tons of fishery products in 2004 and 107 million tons of fishery products in 2007 (estimated figure) for eating. This averages to approximately 16.6 kilograms per capita, marking the highest consumption ever. The percentage of protein consumption from fish accounted for among the protein consumption from all animal proteins worldwide increased to its highest ever at 16.0% in 1996, and then decreased to 15.5% in 2003. However, fishery products in developing countries account for 20% of the intake of necessary animal protein of their populations, making the contribution of fishery products significant. Furthermore, when considering the contribution of self-supplying fisheries that are not recorded, the level of contribution by fishery products may greatly surpass 20%.

Meanwhile, in addition to an increasing world population that is predicted to climb to one and a half times its current number reaching nine billion by 2050, it is also foreseen that the demand

for fishery products such as fish and its products is to increase worldwide due to a shift towards healthy eating spawned by concerns over meat from bovine spongiform encephalopathy (BSE) and the avian influenza as well as an increase in people that are health oriented. Therefore, the price of fishery products is expected to rise and there is concern that competition for fishery products will be prominent in the future.

Amidst this situation, the role carried out by fishery products in developing countries – food supply, provision of employment opportunities, and as a source for acquiring foreign currency – is expected to become increasingly important. In particular, small coastal fisheries, which can be launched relatively easily from a technical point of view and at low cost, have supported many coastal residents who do not own land or have stable income resources. Nevertheless, in many regions an increase in newcomers to coastal areas leads to excessive fishing efforts including more vigorous competition, and the impact from development of coastal and river areas incites depletion of resources such as a reduction in the capacity to reproduce natural resources from loss of mangroves and coral reefs. Furthermore, new fishing equipment and methods, expanded fishing grounds, and promoted

aquaculture has been introduced with the aim of developing new fishery resources and diversifying employment opportunities. However, the recent increase in the price of crude oil and material costs brought on by skyrocketing fuel prices is hindering the expansion and diversification of fishing activities, and there is concern that this will incite another increase in fishing industry pressures at coastal areas.

Fish are widely sold throughout the world. In 2004, 38% of the marine products were handled as various foods and animal feed at international markets. The trade of marine products is an important source for foreign currency revenue for developing countries, and they currently account for 48% of the overall world share for marine product exports. In addition, the content of these transactions is gradually shifting from supplying raw materials to the processing industries of developed countries to include supplying to the market higher priced fresh fish and processed goods with added value.

In consideration of these circumstances, in the fishery industry it is important to ensure the sustainable use of fishery resources and preserve the natural ecosystems that replenish fishery resources as a premise to addressing the issue of poverty in the coastal fishing villages of developing countries, which are considered to be at the lowest level of poverty. Efforts must go beyond the transfer of technologies for securing readily available fishery resources to include resource management for sustainable use, effective use of procured resources, improvement of the lives of all residents that live in fishing villages, and comprehensive fishing village development aimed at ameliorating household incomes.

### JICA's Efforts

Fishery resources in developing countries can be divided into the basic categories of: (1) commercially-based resources aimed at securing foreign currency centered on exporting the high-quality fish by fishing and aquaculture; and (2) resources as a source of animal protein for coastal and rural areas and as a source of food supply for individual households and distribution in surrounding regions. From the perspectives of poverty reduction and human security, JICA has established the following three development strategy goals and conducts cooperation

activities in line with these goals particularly based on the latter category above.

### (1) Fishing village development

Similar to the situation of agricultural and rural development, poverty reduction is a significant issue in the coastal fishing villages of developing countries. There is particular need to improve the income of all residents in fishing villages and improve their lifestyles while ensuring sustainable fishing operations, which are the main source of income in fishing villages. In order to realize these objectives, it is important to aim to vitalize fishing villages overall while comprehensively working to maintain proper levels of fishing efforts and catches, introduce and develop various economic activities other than fishing that could potentially be sources of income, develop basic infrastructure related to living and economic activities, and enhance the health and education environment.

### (2) Stable food supply (effective utilization of fisheries resources)

Fish possess the crucial weakness of easily going bad. In addition, there is a low level of awareness in developing countries regarding maintaining the freshness of fish caught, and as the fish are not being handled properly after they are caught and during the distribution process, it is said that one-third of all fish caught are unable to be used for food. Additionally, a large amount of bycatch can be caught depending on the fishing gear or method, and as the capacity of fishing boats is limited and fish species with high market prices are given priority, in many cases these fish are discarded along with fries and larva of important fish species.

There is a need to develop technologies and infrastructure related to handling fish and increasing the added-value created through processing in order to address these issues. In addition, there have been calls for various regulations and standards for the export of processed goods in recent years, and responding to them is becoming an issue.

Furthermore, women in fishing villages have become important actors in the processing and distribution of fishery products, and a proper response from the perspective of gender consideration is expected.

## Front Line

Cambodia

Agricultural development assistance in Takeo Province via collaboration between the administration, local NGOs, and cooperation volunteers

### New benefits engendered through partnerships

JICA has partnered with local Cambodian NGO the Cambodian Center for Study and Development in Agriculture (CEDAC) in Takeo Province to implement the Project for Improving Livelihood of Small Farmers. The project is promoting the System for Rice Intensification (SRI) to increase harvest amounts, and community finance activities by farmers, and assistance has been provided for forming a farmers' association that emphasizes autonomy for farmers. As a result, administration of the association has been improved and new activities have commenced that include microcredit and the joint sales of organic rice on which pesticides were not used

JICA has widely shared the successful experience attained from this project with CEDAC with Takeo Provincial administrative organizations, and began dispatching Japan Overseas Cooperation Volunteers (JOVC) and field study personnel in 2006 to the Takeo Province Agriculture Bureau aiming for said administrative organizations to become able to implement this type of assistance individually. Currently, the team of JOVC and Agriculture Bureau staff is continuing an investigation on how

to provide assistance to farmer groups while referring to the success of CEDAC. In this way, JICA and JOVC become the bridge between farmers' organizations, local NGOs, and local administrative bodies to continue to bring life to new activities.

(Cambodia Office)



SRI introduced under the instruction of CEDAC allowing farmers to successfully increase rice harvests

### (3) Fisheries resources management

According to FAO forecasts, a quarter of all fishery resources are still underdeveloped and there is room for expanding production. However, this means that the remaining three quarters have been developed to the level that they may lack room for expanding production or that they suffer resource depletion. Fishery resources are renewable resources and, as long as they are caught within a certain limit, can be sustainably used. Fishery resource management is a vital issue in order to utilize these characteristics, control fishing activities, which are the main income source in fishing villages, at a proper level, and ensure their stable use. Since fishery resources exist underwater and are not readily visible it is difficult to recognize the impact of overfishing even if it occurs. Once it has been recognized it is already too late, making it necessary to conduct educational activities to increase

the awareness of resource management in fishery businesses and administrations and to reflect that awareness in their activities. Examples in developed countries also indicate that a long-term response to these efforts is needed.

In addition, as the natural environment that surrounds fishery resources is affected by various land and sea activities, there is need for region-wide and long-term efforts that consider preserving ecosystems through watershed management for both land and sea environments in order to preserve fishery resources. Furthermore, it is necessary for JICA to cooperate with coastal nations and regional fisheries management organizations (RFMOs) in conducting proper management of fishery resources migrating and distributed region-wide including throughout international waters, including for eliminating “illegal, unreported, and unregulated” (IUU) cases.

## Rural Development through Introducing Extensive Inland Water Cultivation Activities in Guinea

Guinea is a country on the western tip of Africa facing the Atlantic Ocean with the same approximate area of Japan's main island of Honshu. The country receives nearly 4,000 mm of rain during its rainy season between June and October and is called Africa's “water tower” as it serves as the source for six international rivers.

The advisor on water cultivation currently dispatched to Guinea's Ministry of Fishery and Aquaculture have been utilizing these natural conditions since 2005 in the inland region to conduct extensive water cultivation activities. Extensive water cultivation has been conducted for a long time by residents of the Niger River's flood plain. They utilize the lakes formed in natural depressions when river water floods during the rainy season to catch the inflow of fish for a certain period. The advisor was able to increase the quantity of catches by two to three times by making improvements on this method.

The method is gathering attention from related persons in other central and western African countries since it departs from the idea of intensive

water cultivation requiring modern technologies to creatively utilize the skills and tools of residents and produces significant results.



A pond where extensive water cultivation was conducted for five months. All Villagers come together for a large harvest festival.

## Front Line

Panama

Community Nutrition Improvement Project in Veraguas Province

### Rural development through a cross-sector approach

#### Villagers working on the village level

The Community Nutrition Improvement Project in Veraguas Province, Panama began in November 2007.

Villagers are hardly aware that poor nutrition stunts the brain's development in addition to physical development. The nutritional situation can only be improved once people practice what they have learned through training sessions on nutrition, health, and agriculture implemented through this project. Therefore, the post-training follow-up is vital. When individuals cannot practice what they learned in the training, it is necessary to more deeply investigate whether the training included the type of knowledge the villagers require or whether it was feasible or not. Accordingly, this project creates a group at the village level, checks with villagers to confirm whether what was taught in the training is being practiced, and if not being practiced, reasons are discussed before training is conducted another time.

#### Working with the various actors involved in the village

Specifically, villagers learn about food and health through cooking and vegetable gardens at school and aim to practice what they have learned at home. Introducing foods such as vegetables that have not been eaten,

and acquiring new diets, eating habits, and sanitation concepts mean a change in behavior. It is not easy to alter ways that are traditionally accepted, however, activities are being conducted by school teachers as well as doctors from the closest hospital to the village, health nurses, dieticians, and agriculture extension workers. Furthermore, Japan Overseas Cooperation Volunteers contribute to the project by creating materials that are easy to understand and based on the everyday lives of villagers. (Panama Office)



Training using materials created by Japan Overseas Cooperation Volunteers. Mothers with children participate as well.