

Learning from Good Practices

Perspectives on Evaluation of Effective Cooperation: Sustainability and Impact

JICA provides cooperation for human resources development and institution building in developing countries as an implementing agency of Japanese official technical assistance. In the context of technical assistance, it is important to help developing countries solve problems and promote development on their own. It is developing countries who should play a leading role in their development. In addition, development is a long process and many efforts are needed to solve even one issue. In fact, external cooperation merely supports a portion of these efforts. Furthermore, there are time limitations for each project. Therefore, it is extremely important for JICA, to improve developing countries' capacity for responding to and solving their problems.

In this respect, two perspectives are crucial for the evaluation of the effectiveness of cooperation: the first, sustainability, looks at whether or not the benefits of cooperation are maintained after the termination of cooperation; and the second, impact, looks at whether or not the benefits generated by the projects have spread through society and reached people to overcome development challenges.

The Reality of Sustainability and Impact in Cooperation

Japan's assistance has traditionally highlighted the improvement of problem-solving capacity in developing countries under the concept of supporting self-help efforts. JICA, based on the same concept, has expended efforts to provide cooperation in which effects are sustained and developed. However, while some projects ended with secured sustainability and great impact after termination, in other projects the effects did not last long enough. And there was a limit to how far the effects reached outside of projects. This is also

shown in the results of horizontal analysis in ex-post evaluations of individual projects (Chapter 2, Part 2 "Synthesis Study of Evaluation [Project-level Ex-post Evaluations]").

Changes in external factors such as economic crises and drastic reforms in administrative structure have been observed in most of the unsuccessful cases where the emergence of sustainability and impact was not satisfactory. Also, many developing countries encounter various problems in technology, organization, and finance. Thus, even if cooperation itself is successful, the reality is that some developing countries face difficulties in sustaining and developing these effects on their own after the termination of cooperation. Nonetheless, a number of projects have aimed to establish a framework at the planning and implementation stages to secure sustainability in terms of technology, organization, and finance, which leads to larger impacts of cooperation, with thorough understanding of issues in developing countries. Such projects have achieved favorable outcomes in terms of sustainability and impact.

Learning from Good Practices

JICA intends to implement effective cooperation so that the effects of cooperation would be sustained, spread through society, and reach as many people as possible even after the termination of cooperation. To this end, projects with excellent outcomes in terms of sustainability and impact were selected based on the evaluation results. The contributing factors are analyzed in this feature section. Successful cases (in other words, the "Good Practices") were selected and analyzed because they offer specific suggestions as to how to implement effective cooperation.

JICA has made efforts to explore and identify the factors contributing to the emergence of the effects of cooperation, by not only evaluating projects individually, but also analyzing them in a cross-sectoral manner. For example, the Annual

Box 1

Sustainability and Impact in Project Evaluation

Sustainability is a perspective for questioning whether or not the effects generated from a project are maintained even after the termination of cooperation (or are expected to be maintained). In evaluation, sustainability is assessed comprehensively from various aspects, including technology, organization, finance,

policies and systems, society, culture, and the environment.

Impact is a perspective for examining long-term, indirect, and synergy effects brought about by the implementation of projects (including unexpected positive and negative effects and influences). Specifically, evaluation of impact is

assessing the effects for attainment of overall goals (problem-solving) and positive and negative synergy effects besides overall goals.

(Source: Revision of JICA Guideline for Project Evaluation: Practical Methods for Project Evaluation)



Evaluation Report 2003 analyzed factors affecting the emergence of effects based on the terminal evaluation results of 63 projects and reported these results along with the lessons learned. In the Annual Evaluation Report 2004 (Chapter 2 of Part 2), situations regarding sustainability and impact of the effects of cooperation and factors affecting these criteria were analyzed comprehensively based on the ex-post evaluation results of 43 projects. The results of this comprehensive analysis show more clearly that the factors affecting the emergence of the effects of cooperation have common characteristics regardless of the country or the sector. Thus, it is necessary to plan and implement projects by considering the above factors, although it is difficult to tailor individual projects that incorporate these factors.

Cases with problems may be beneficial in terms of isolating issues that need to be avoided so that others will not make the same mistakes. However, they do not necessarily present

specific solutions to the problems. What is needed to find solutions are the good practices that successfully dealt with similar situations. Good practices are the actions that have actually been carried out, that is, the tasks with potential to be performed. These are the very reasons why many organizations stress good practices to improve their projects, particularly focusing on good practices within the organization as an organizational “asset.” In light of this perspective, JICA also makes efforts to identify, share, and accumulate good practices.

Analysis of Good Practices in Evaluation Results

—From the Perspectives of Sustainability and Impact—

1. Objectives, Targets and Methods of Analysis*

In this analysis, projects with excellent results in terms of sustainability and impact were selected to find the relevant factors in order to achieve cooperation in which effects are sustained and spread through society to reach as many people as possible even after the termination of cooperation. Specifically, excellent projects in terms of those qualities mentioned above were selected from projects in the same field based on the results of the thematic evaluations conducted in fiscal 2002 and 2003, and factors leading to the sustenance and development of cooperation effects were analyzed in the form of case studies. Then, common factors were extracted and lessons were drawn to secure sustainability and impact. Thematic evaluations and projects targeted herein are listed below. Summaries of the thematic evaluations taken up are included in Part 3 “Thematic Evaluation.”

a. Primary and Secondary Education/Science and Mathematics

Projects for strengthening of science and mathematics education are typical cooperation in the area of primary and secondary education in JICA. In order to draw lessons to improve approaches, 12 projects were analyzed. In this analysis, Strengthening of Mathematics and Science in Secondary Education in Kenya and Strengthening of Continuing School-Based Training Program for Elementary and Secondary Science and Mathematics Teachers in the Philippines were analyzed as cases.

b. Poverty Reduction/Community Development

In order to effectively implement community development for poverty reduction, we analyzed 10 projects with multi-level cooperation approaches to various related parties, including the central government, local governments, local communities, and NGOs. We also examined whether or not the multi-level cooperation approaches were effective. In this

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analysis, the Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs in Indonesia was analyzed as a case.

c. Water and Poverty in Africa

In order to supply safe water continuously to impoverished people in Zimbabwe and Zambia, cooperations were carried out by combining the development of water supply facilities with operation and maintenance, institutionalization of communities' participation and hygiene education. The effectiveness of integrated approaches in these cases was evaluated. This analysis looked at a case in Zambia, a cooperation scheme including three projects: the Water Supply Project in Satellite Area of Lusaka, the Lusaka District Primary Health Care Project, and the George Community Empowerment Program in George Compound.

2. Case Study Analysis

(1) Primary and Secondary Education (Strengthening Science and Mathematics Education)

Science and mathematics education is indispensable for the development of science and technology, which forms the basis of socioeconomic development, and it plays a vital role in addressing issues related to health care and the environment. As science and mathematics are considered important subjects for helping students advance to higher education or find jobs, there is a great demand for science and mathematics education in developing countries. On the other hand, poor facilities, teaching materials, curriculum, and quality of teachers are critical issues in many developing countries, because they cause low academic proficiency among students. What also poses a serious problem is the shortage of teachers with sufficient knowledge and teaching skills. Thus, improving teacher quality is critical for strengthening science and mathematics education. In response, many developing countries undertake training for in-service teachers, and JICA also implements various types of cooperation to create a teacher training system.

The cascade and cluster systems are representative training systems for in-service teachers. In the cascade system, trainers are selected from each region and they are trained at a central training organization. Then they return to each region and provide training for teachers. The cluster system is group training. First, a group of schools, called a cluster, is formed in each region, and teachers from the cluster get together at a school to take training courses. Strengthening of Mathematics and Science in Secondary Education in Kenya used the cascade system; on the other hand, Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers in the

Philippines adopted the cluster system. Though they adopted different systems, both resulted in positive outcomes in terms of sustainability and impact.

Kenya

Strengthening of Mathematics and Science in Secondary Education (SMASSE)

Overview

This cooperation was launched as a five-year project starting in 1998, for the purpose of strengthening science and mathematics education through in-service teacher training and improving the academic proficiency of students. In this project, a cascade training system was established in nine selected pilot districts out of 70 districts across the country (Figure a). The following activities were implemented.

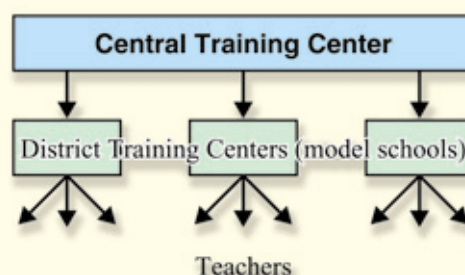
- Survey and analysis of current situations in science and mathematics education in the target districts
- Capacity enhancement of instructors at the Central Training Center
- Development of training programs and teaching materials
- Provision of training for trainers from the pilot districts
- Selection of model schools to provide district-level training, and development and improvement of teaching materials and manuals needed for district-level training
- Provision of training for teachers in each district at model schools
- Monitoring and evaluation on training effects

Effects

As a result of this cooperation, a training system for trainers was successfully established at the Central Training Center, and training was provided annually during the school holiday period in August. More than 140 trainers from the pilot districts were trained at the Central Training Center and they provided, in return, district-level training annually during the school holidays in April. Almost all the science and mathematics teachers in the districts participated in the training program (approximate total participants: 2000).

With the high rate of retention of instructors at the Central Training Center and trainers, the Kenyan side has managed this training proactively at the central and district levels. It shows high sustainability in terms of technical aspects. In

Figure a Cascade System



addition, the government of Kenya developed a policy plan to highlight science and mathematics education, and prepared the budget for the project as its ordinary budget, thus showing their high commitment. At the district level, with the understanding of school principals, teachers' participation in training has been encouraged and most of the training expense has been covered by a fund using a portion of school tuition (SMASSE Fund). These are evidence of a high level of sustainability in terms of policies and finance.

The results of monitoring and evaluation showed that the teachers gained not only knowledge but also teaching methods and improved attitudes towards classes when compared to classes held prior to the training. In addition, it also stated that students in the pilot districts showed a higher rate of class participation and better results on achievement tests than students in other districts, proving that the projects have achieved steady progress toward the goal of improving academic proficiency among students.

Such achievements in the pilot districts attracted a lot of attention even during implementation and many visitors from other regions and neighboring countries in Africa visited the site. The government of Kenya added six other regions to the pilot districts and decided on a nation-wide training system in response to a request from the Kenyan Secondary School Heads Association in 2001. The second phase of the project started in 2003. Eighteen neighboring countries have planned to introduce a similar teacher training system, and intra-regional cooperation is undertaken within the framework of the second phase of the project to support these activities by providing trainers from neighboring countries with training at the Central Training Center in Kenya.

Based on these results, the project achieved high impact in terms of spreading the training system.

■ Contributing Factors

Factors contributing to the favorable outcomes mentioned above would be the various efforts made at the planning and implementing stages of the project.

First, the project spent enough time in preliminary studies and discussions with Kenyan counterparts. Then it formulated the plan after conducting a needs analysis with the Kenyan counterparts. This helped formulate training contents that precisely reflected those needs and establish a training system in line with the reality of the teaching situation. This in turn facilitated the consolidation of the training system. Furthermore, the participation of the Kenyan counterparts from the planning stage enhanced their ownership.

Next, the following efforts were made in order to establish an independent management system with the initiative of the Kenyan counterparts.

- When selecting trainers from each district, the Kenyan counterparts showed clear-cut standards and chose the candidates equally based on performance.



Central training including teaching actual classes has practical curriculum.

- By establishing a collaborative relationship with an organization that supervises recruitment and personnel affairs of teachers, namely, the Teachers Service Commission, staff specializing in the management of the training system was allocated with salaries paid by the Kenyan counterparts. Also, a request was made to avoid transfer of trained trainers.
- As a financial source to secure continuity of the training, the SMASSE Fund was established in each district. Allocating about 1% of the tuition from each student, district-level management of the fund was introduced. The introduction of this scheme required the understanding of the Kenya Secondary School Heads Association, and securing the support from the Association became the key to the nation-wide development in Phase 2.

While the continuity of training is sometimes interrupted after the termination of donor cooperation due to a lack of finances in some partner countries, the SMASSE Fund became a means of securing financial resources without posing additional burdens on the Kenyan counterparts. It has produced a positive outcome in terms of ensuring the ownership of the Kenyan counterparts. In order to gain understanding and support for these efforts and encourage teachers' participation in training, the project held educational seminars targeting school principals and personnel in educational offices in the districts, and also enhanced collaboration with teachers' associations.

In addition, in order to achieve the training results already mentioned, unique indicators were set to measure the quality of classes and the level of understanding among students. Continuous and periodical monitoring and evaluations were also performed. The initial three-step training system from center to district to school clusters was reformed into a two-step system from center to district. This modification reflected the results of the mid-term evaluation, which revealed that more cluster layers diminish the effect. In order to deliver accurate training concepts to end trainees, the perspective of class improvements are simplified into four keywords—activity, student, experiment, and improvisation—and ASEI, the

initial letters of these keywords, was adopted as a slogan.

The project also actively transmitted information on their activities and results through newsletters, a website, events, etc. Such informational activities are considered to be contributing factors to the nation-wide development of the training system as well as to its impact on neighboring countries.

The Philippines Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers (SBTP Project)

■ Overview

JICA carried out Package Cooperation for the Development of Elementary and Secondary Science and Mathematics Education from 1994 for five years as the first full-scale cooperation in science and mathematics education. The Package Cooperation adopted a teacher training system based on the cascade system and activities were carried out to disseminate the science and mathematics education incorporating experiments. This cooperation was successful in strengthening the capacity of the Central Training Center, developing teaching materials, building foundation for central and regional training administration institutions and expanding the concept focusing on experiments in science and mathematics education. However, the training was not solidly grounded at regional levels, due to mismatch between the training developed at the center and the needs of the teaching field. The cost of regional training was also an issue.

In response to requests from the Philippines, which continuously emphasized the strengthening of science and mathematics education, Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers was launched in 2002. Based on the lessons learned from the Package Cooperation, the project aimed to improve the ability of teachers to promote student-centered classes which met the needs of the field. To this end, the cluster system (Figure b) was adopted and its promotion has been supported, in which teachers of the same subjects in one area gather periodically and hold study sessions to examine their teaching methods. Since this training program used

mock lessons at real schools, it is called the school-based training program (SBTP).

For the improvement of the quality of the SBTP, sustained implementation, and its expansion, the following activities were carried out in the project: the development of implementation manuals, on-site guidance in rotation, and the development and establishment of monitoring and evaluation systems. Technical cooperation experts and Japan Overseas Cooperation Volunteers (JOCV) were concertedly involved in these activities which were carried out in cooperation with the regional education offices. Technical cooperation experts supported the operation of training systems and JOCVs provided technical support in a school setting.

■ Effects

The cooperation of this project was scheduled to terminate on April 10, 2005, and it generated some obvious outcomes in terms of sustainability and development of cooperation effects.

The first outcome is the expansion of the system; the model areas were expanded from three to four, and the districts adopting the SBTP increased from 20 in 2002 to 39 in 2004.

In these districts, local teachers took the initiative of continuously running the training program on a monthly basis, which was attended by all teachers of science and mathematics in the districts. The on-going monitoring and evaluation results revealed that teaching methods had been improved. Although the effects in the students' proficiency had yet to be evidenced, steady outcomes had been observed in improved quality of lessons.

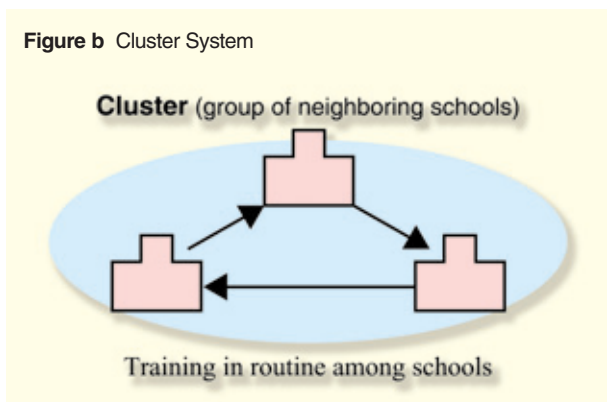
Since the training was provided in such a way so that the teachers in the area gathered at the classrooms of existing schools, the training sessions were virtually cost-free. The government of the Philippines had announced the improvement of science and mathematics education as a priority issue of the basic education in the mid-term plan for the National Development Plan and had doubled the project budget from 2002 to 2004, showing its high commitment.

■ Contributing Factors

As mentioned above, the project produced favorable outcomes in terms of both sustainability and impact. The introduction of a training system suitable for the local education setting and various efforts at planning and implementing stages for the establishment and expansion of the system contributed to the outcomes.

First, the SBTP was formed by utilizing and upgrading the in-school training system which was traditionally conducted in some parts of the Philippines. It also aimed at cost-free training system in line with the needs of the field based on the lessons learned from the Package Cooperation. Thus, the project was familiar and acceptable to the counterpart, which led to the establishment and expansion of the system and the securing of ownership.

Figure b Cluster System





Teachers discuss what needs to be improved in the study session following a mock lesson.

As far as expenses were concerned, the existing classrooms of schools were used as already mentioned and neither transportation fees nor expenses for foods were provided. Therefore, training were provided with a small budget, thus contributing to the expansion of the system.

In addition, training on weekdays was not normally permitted; however, the SBTP was authorized to provide training on weekdays by the Department of Education. Training on weekdays encouraged teacher participation and continuous training. The authorization of the Department of Education was obtained through the efforts of the project actors. One of the factors contributing to the authorization was the involvement of the Philippines counterparts from the planning stage of the project to increase ownership.

The understanding and support of the related parties play an important role in sustaining and developing the training. In the project, educational seminars and opinion exchange sessions were frequently conducted for the local related parties such as administrative officers, school principals and PTA representatives.

Besides them, the project actively pursued collaboration with universities, commissioning the local universities to conduct social surveys at the time of planning and third-party evaluations with focus on the changes in the quality of education. In order to control the quality of training after the termination of cooperation, collaboration with teachers' colleges in each area was also promoted. With this, universities provided the SBTP with technical support, and monitored and followed up teacher graduates of these universities. This cooperation was beneficial not only to the SBTP but also to the universities, allowing them to receive feed back on the educational challenges at school.

(2) Poverty Reduction (Community Development)

Poverty reduction is an important development goal shared by the international community, and JICA has been making a variety of efforts. One of them is the cooperation for the community development such as rural development. Cooperation for the community development in the past

adopted mainly two approaches: an approach to strengthen capacity of administrative organizations and administrators in developing countries, and a grassroots approach to directly support local residents. In recent years, however, it is increasingly recognized that the approach to both administration and residents is essential for more effective community development. Furthermore, we have evidence in some cases that this approach generated a cooperative relationship between the residents and administration, which led to the improvement of conditions. Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs in Indonesia is a project which created a rural development model based on community participation by such approach and achieved a great impact.

Indonesia

Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs

■ Overview

In Indonesia, the regional disparities between Java and other areas (particularly Eastern Indonesia) pronounced along with the progress of development, and they had to be corrected urgently. The government of Indonesia specified development equality and poverty alleviation as one of the main goals of national development in the Sixth Five-year National Development Plan issued in 1994 and showed a particular commitment to this goal. The government called for support for participatory rural development activities to address poverty in South Sulawesi Province, one of the most impoverished area in the Eastern Indonesia. The administrative system in Indonesia was then strongly centralized, and virtually no participatory rural development activity had been undertaken. However, the traditional top-down type of development activity had not been implemented smoothly because it could not count the needs of rural areas and the strong incentives of people to participate. Under such circumstances and in light of decentralization, the Indonesian government tried to employ the bottom-up type of development activity to reduce the regional disparities.

With this as a background, this project introduced a concept of rural development based on community participation and aimed to vitalize the rural economy through development activities utilizing existing resources as well as to establish systematic framework for local administration in support of the activities. The project was implemented for five years starting in 1997 in Takalar District in South Sulawesi Province, where four villages under different situations (total population: approximately 12,000) were designated as lab villages. Activities carried out in those villages were: (1) development of administrative system in support of participatory rural development in line with local needs (SISDUK), (2) implementation of training programs for the community

development (PLSD) to develop human resources engaged in SISDUK, and (3) promotion of participatory rural development based on SISDUK (Figure c).

■ Effects

In this project, activities described above were carried out involving not only community and administration, but also an NGO supporting capacity development and empowerment activities for residents and a local university in support of the PLSD training. With voluntary participation of residents, participatory social development model (Takalar Model) in collaboration between community and administration was developed. The performance of the Takalar Model was acknowledged by the district government during the implementation of the project, and was legislated in the governor ordinance and district ordinance. As a result, SISDUK spread throughout the district in 2002.

The legislation disseminated the SISDUK throughout the district and the target areas of the Takalar Model expanded from the initial four lab villages to 73 in 2003. This also increased the opportunities for residents to participate in development activities and more than 600 rural development activities were implemented annually, generating large impact on the improvement of living conditions and livelihood. In addition, increased transparency in development activities and improved access from residents to administrative services through establishment of relationship with administration are also reported as positive effects of introduction of the model.

The Takalar Model was introduced to many other districts in South Sulawesi Province because of activities carried out by a follow-up team set up by the provincial govern-

ment after the termination of cooperation. Thus, a great number of visits were made to Takalar from other districts.

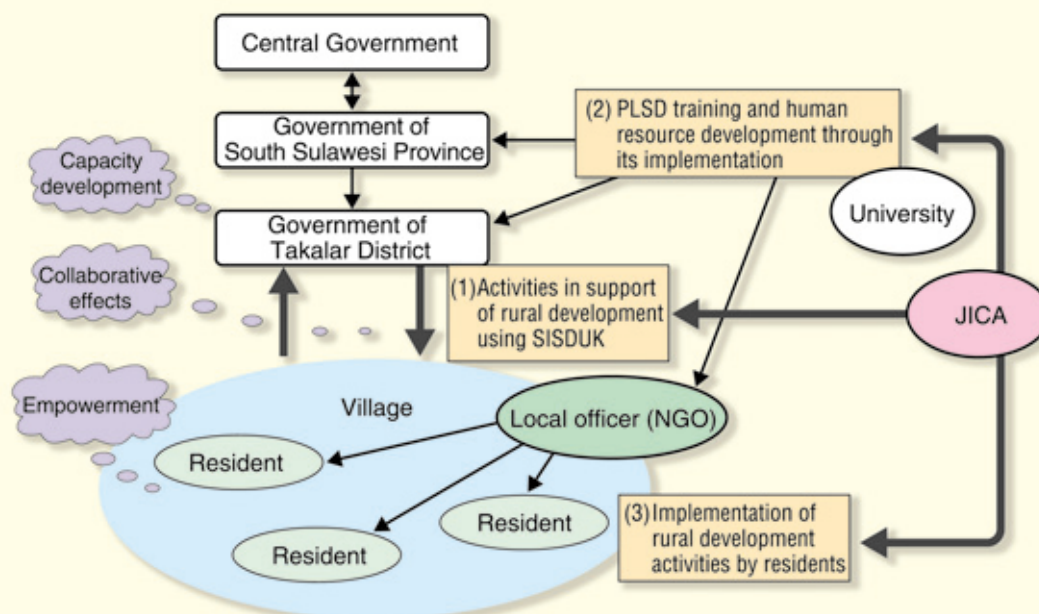
In terms of sustainability, since the activities were designated as an official operation by the ordinance, organizational basis was strengthened and discretion at the district level was further enhanced by the decentralization, increasing the budget and human resources due to the strong commitment of the district government. Technically, it became possible to conduct activities in the areas where the model had been newly introduced because of manuals prepared by the project and the implementation module of the PLSD training. However, due to rapid expansion of the targeted communities, implementation systems are not yet in place in some cases.

■ Contributing Factors

As mentioned above, this cooperation yielded high sustainability and large impact. The contributing factors are the efforts to establish a model with its consolidation and dissemination in mind from the initial stage and to build a framework for the model by involving a wide range of people concerned.

First, at the beginning, the project conducted various full-fledged social surveys in cooperation with the district government to grasp the situation in the target areas. This survey contributed to the establishment of a collaborative model suited to the area. What made such full-fledged surveys possible was a preparation period that allowed flexibility in field activities. Specifically, the project implementation period was divided into a period of social preparation, a period of establishing the collaborative model, and a period of disseminating the model.

Figure c Outline of the Approach Adopted in the Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs in Indonesia





An example of community development activity under SISDUK (vocational training in sewing for teenagers who have left junior high school)

Next, the project involved a wide range of people concerned in establishing a framework for the dissemination of the model. One of the examples is the PLSD training for officers of the provincial and district governments which administer the SISDUK. This training enhanced the officers' capacity, changed their awareness on residents' participation, fostered unified recognition on the model, and successfully maintained high motivation for the activities. Furthermore, the project carried out various activities to support residents in cooperation with an NGO. Such activities include campaigns and institutionalization to promote their participation in rural development support activities, support for activity planning and enhancement of activity management capacity. The PLSD training was implemented for the NGO, the provider of these activities, as well.

In addition, policy makers such the district governor and district council members were invited to Japan, providing them with opportunities to learn about rural development cases. This was quite successful in securing understanding and support from policy makers and in promoting the institutionalization of the model. Cooperation with a local university was also formed to implement the PLSD training. The roles were clearly divided for those concerned with the rural development project, such as governments at central, provincial, and district levels; residents; NGOs; and universities. The participation of such related parties was a significant factor to secure sustainability of the model.

In order to further ensure sustainability, the project had reduced the expense from the Japanese side gradually for supporting the rural development activities. A system was established so that all the expenses were paid by the Indonesian counterpart when the model was institutionalized. Furthermore, one third of the expenses of the activities in the SISDUK proposed by residents are supposed to be covered by the residents. This shows emphasis on residents' participation based on ownership.

(3) Water and Health

It is difficult to secure safe water in Africa, and health and hygiene problems from water are extremely serious. JICA,

therefore, has implemented numerous cooperation projects for water supply targeting the impoverished group in Africa. With this as a background, a number of cooperation projects based on the concept of integrated water resource management for sustainable development began. Specifically, such projects include cooperation combining development of water supply facilities with the guidance on operation and maintenance method and organization of community groups. They also include cooperation combining community enlightenment and health and hygiene activities. Cooperation at the George Compound of Lusaka City is one of such examples, which achieved high sustainability and impact through integrated approach.

Zambia

Water Supply Project in Satellite Area of Lusaka, George Community Empowerment Program, and Lusaka District Primary Health Care (PHC) Project

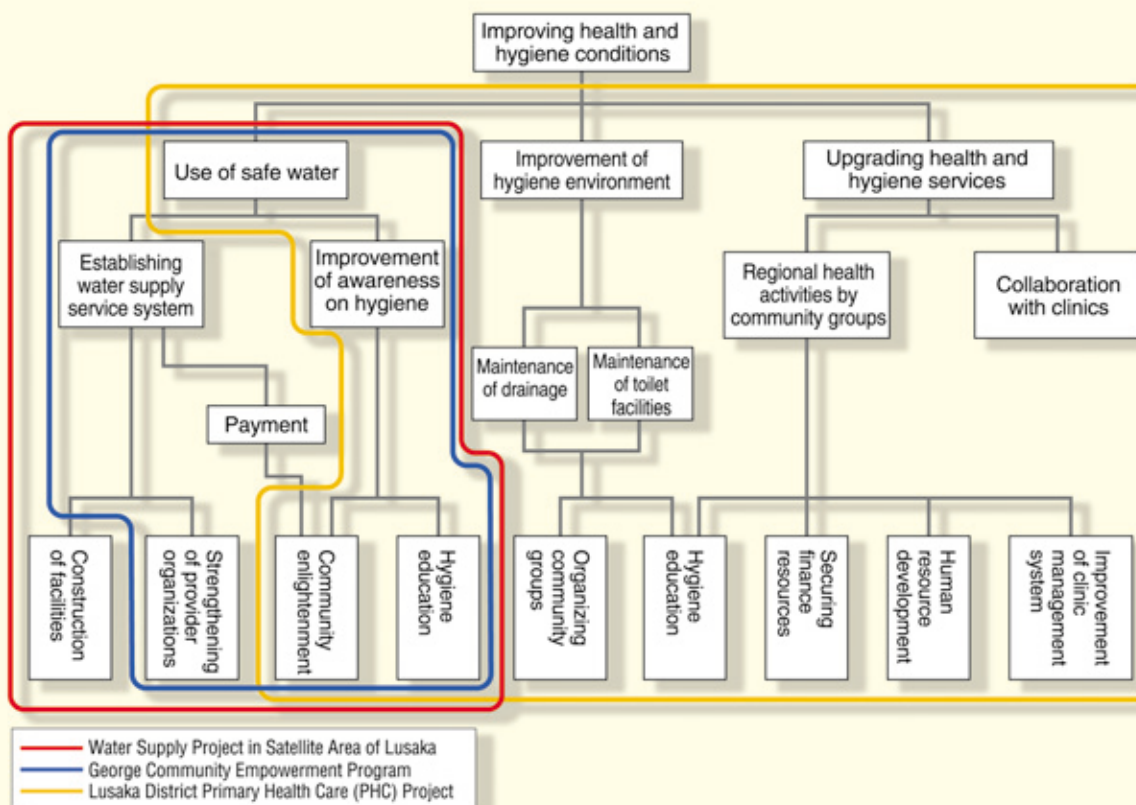
■ Overview

The rate of urbanization is quite high in Zambia. Particularly in Lusaka City, the metropolitan area, population growth and deterioration of living environment have become a serious issue. Especially in an informal residential area of the city, called unplanned urban settlement, population has increased drastically. Public services cannot be delivered due to underdeveloped social infrastructure, forcing the people to live in highly unsanitary surroundings. In response, Japan implemented Water Supply Project in Satellite Area of Lusaka, George Community Empowerment Program, and Lusaka District Primary Health Care (PHC) Project to improve hygiene environment of the low-income district of Lusaka City. These projects aimed to supply safe water and improve hygiene conditions of George Compound (population approximately 0.1 million), one of the unplanned urban settlement.

The Water Supply Project in Satellite Area of Lusaka built an independent water supply system easy to operate and maintain with grant aid between 1993 to 1998 (Phase 4) with purpose of supplying safe water in the George Compound. Along with this project, guidance and support for the operation and maintenance were provided to the Water and Sewage Public Corporation of Lusaka City and its office at George Compound. Survey and enlightenment activities were carried out for the users of supplied water. Furthermore, activities were carried out to promote participation of residents in management and control of the water supply project in cooperation with a local NGO, Care Zambia, which had supported community development with financial assistance from the UK.

Succeeding the above project, the George Community Empowerment Program was conducted from 1999 to 2003. Specifically, activities were carried out by Care Zambia to enhance community groups including Water Control

Figure d Conceptual Diagram of Programs for Improving Living Conditions at George Compound of Lusaka City



Committee and to improve water supply management system. This project aimed to secure sustainable operations and utilization of the water supply facility, built by the grant aid project, under the partnership between Lusaka City, the Water and Sewage Public Corporation of Lusaka City and community groups.

Lusaka District Primary Health Care (PHC) Project was implemented for five years from 1997 to improve PHC management system of Lusaka City. Specifically, a community-based PHC pilot program was implemented in cooperation with a Japanese NGO, AMDA. The project worked on improving a referral system, which introduced the appropriate medical institution to the patient based on the extent and seriousness of the disease, and upgrading school health care services. The pilot program intended to improve community-based PHC services. In the selection of a target area, George Compound was chosen where water supply facility had been developed by the grant aid project, with an aim to improve health and hygiene conditions through the synergy effects of promotion of safe water use and hygiene education.

As shown in Figure d, the combination of Water Supply Project, George Community Empowerment Program, and part of the PHC Project could be considered a coordinated program with the goal of achieving safe water use at George Compound. Furthermore, in combination with the rest of the

PHC Project, these cooperation projects as a whole formed an integrated approach with the overall goal of improving health and hygiene conditions of George Compound.

■ Effects

The water supply facility was constructed with the grant aid project, and access to public water supply services has greatly increased. According to the survey results of 2003, users of public water supplies rapidly increased from 65% in 1997 to 90% in 2002. This also contributes to reduce the illegal connection to the existing supply pipes. The survey results also revealed that many people recognized improved water quality, showing that the effect in improving the conditions for safe water use is steadily emerging.

In terms of improvement of health and hygiene conditions, improved hygiene awareness has been observed, such as promotion of hand wash practices using soaps at the community level, and many residents answered that the number of cases of diarrhea and cholera has declined. In particular, statistics showed that the outbreak of cholera decreased drastically from 70 per 10,000 persons in 1994 to one per 10,000 persons in 2000. As understanding of use of public water and proper hygiene practices has progressed, impact (fewer water-borne diseases) has become more evident.

Operation and maintenance costs of water supply systems, including personnel cost, operation expenses and maintenance

and repair expenses, are covered by the users, and the financial independence of the George Facility has been maintained. The payment rate has risen in each water supply district after the George Community Empowerment Program began, from 55% to approximately 70% on average in all the districts in 2001. Because the revenue has increased, the management system became sustainable financially.

The operation and maintenance of the system have been conducted under a partnership agreement between the George Facility and the Water Control Committee, the representative of the community, and thus a collaborative relationship between the provider and the committee is well established. The George Facility undertakes the finance of the overall operation, technical control, user registrations and settlement of complaints from users. On the other hand, the Water Control Committee is in charge of supervising Tap Leaders selected from the community in each district (persons who open and close the tap at a fixed time), and community enlightenment activities. Both parties coordinate and discuss all the issues involved in water use, operation and maintenance, whenever necessary. Many other unplanned urban settlement have started water supply projects by delegating powers and responsibilities associated with the operation to the community groups, using the water supply management system of the George Compound as a model.

■ Contributing Factors

As already described, these water supply and PHC projects have achieved favorable outcomes in terms of both impact and sustainability. One of the contributing factors is the adoption of a system suitable for the conditions in the field, with participation of residents at the planning and operation stages. First, the Water Control Committee, a community group, played an important role in the water supply project. When establishing the public water system, the Water Control Committee grasped community needs for the number and location of taps to be installed in each area. For example, one public water tap has been properly installed per 50 to 60 households. In preparation for the installation, a water resource map was created and the location of taps in accordance with the population size of each zone was then discussed and decided by the Water Control Committee and the George Facility, based on the results of the household survey undertaken by the committee members. The involvement of residents at the technical planning stage enabled installation plans to deal with potential issues such as waste of water or property loss.

Furthermore, payment capacity of users and socioeconomic conditions of targeted communities were sufficiently considered in determining the balance between rates and service level. In addition, since certain powers and responsibilities associated with operation have been delegated to the Water Control Committee, a community group, it is possible to review and modify the operational approach through dis-



A public water tap at George Compound

cussions and collaborations between the community and the provider in response to external factors such as changes in socioeconomic environment.

An example of such modification is the introduction of the payment system reflecting the needs of the poor. The Water Control Committee conducted a survey to include the households, which were unable to pay monthly charges, into the service. The result of the survey showed that the majority of poor households were unable to save money since they spent income as soon as they received. Reflecting such needs of the poor, a pay-as-you-go system, under which people can buy a bucket of water, has been adopted, in addition to the monthly fixed payment system. Thus, reviewing the service system flexibly responding to new problems that arose after the launch of the project has further increased the effects of the cooperation. And at the same time, facilitating the improvement in the payment rate has contributed to the increased sustainability of the system management.

Besides them, the PHC Project has supported the enhancement of the function of issue-specific community organizations in the area of health and hygiene. It also has made efforts in developing community leaders who would conduct enlightenment activities for residents and resolve conflicts among residents. These community organizations and community leaders are expected to play a significant role in continually expanding and spreading the activities through advice and interventions at the community level.

A combination of three projects can be regarded as a contributing factor to high impact of cooperation at George Compound. This comprehensive approach has facilitated the integration of water supply facility development, the strengthening of community groups and community enlightenment. It has helped solve problems pertaining not only to water supply but also to hygiene and living environment. For example, the pilot program of the PHC Project conducted various activities to follow up the development of water supply facility. Educational activities to promote safe water use by a team of the health center and community group through door-to-door visits, tracking the patients and disinfecting a contaminated

source at the outbreak of cholera, and periodic sample survey of shallow wells were carried out. A drastic decrease in the number of cholera incident, as mentioned earlier, is considered to attribute to nothing but the synergy effect of these activities of the PHC Project and development of the water supply facility.

3. Lessons Learned from Good Practices **—From Common Contributing Factors**

We have so far examined the key factors for securing sustainability and impact in each of the four cases. Although project areas differ, we have found that the deciding factors for inducing effects are essentially similar to these cases. These factors are summarized below as lessons learned for effective cooperation in the future.

Planning in Collaboration with Developing Countries

Detailed surveys at the initial stage in collaboration with counterparts in identifying the needs of a partner country and planning that reflects the conditions of the field will generate sustainable effects during implementation and after the termination of cooperation.

In Strengthening of Mathematics and Science in Secondary Education (SMASSE Project) in Kenya, sufficient discussions were conducted with the implementing body of the partner country at the planning stage, and decisions reflected the needs of the partner. This helped establish a training system suitable for conditions in the field and encouraged initiative in the partner after the launch of the project. Strengthening of Continuing School Based Training Program for Elementary and Secondary Science and Mathematics Teachers in the Philippines (SBTP Project) used the lessons learned from the preceding Package Cooperation, formulated project plans in line with the needs in the field, and carried out the project in the same manner as the SMASSE Project, which eventually led to the establishment of a training system that was easy to consolidate and develop. The Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs (Sulawesi Rural Community Development Project) secured a period of preparation to conduct a sufficient field study in cooperation with the implementing body of the partner, which in turn helped establish a community development model acceptable to the implementing body of the partner as well as local residents.

In addition to an approach to the partner's implementing body at the organizational level, three projects in Zambia—the Water Supply Project in the Satellite Area of Lusaka, the George Community Empowerment Program, and the Lusaka District Primary Health Care Project—concertedly

approached local residents, who were the end beneficiaries of the project (the George Compound Project). Through collaborative activities with local residents, their needs were grasped and reflected in the project and their ownership was fostered. The participation of residents in both the planning and operation stages made the system for installing public water taps and the management method suitable for the conditions in the field.

Selection of Operable Technology/Methods and Ingenuity for Consolidation

In addition to the consideration given to recipient-centered planning mentioned above, spending sufficient time on preparation such as preliminary needs surveys allows for the development of technology and methods suitable for conditions in the field, thus leading to the establishment of a model or system that is acceptable to the partner. Furthermore, in many cases, high sustainability is generated and the outcome becomes widespread through institutionalization.

When creating a community development model in the Sulawesi Rural Community Development Project in Indonesia, considerations were given to make it suitable for conditions in the field, acceptable to the implementing body of the partner country and local residents, and easier to spread by simplifying the training implementation process. As a result, a diffusion of the model was achieved through institutionalization.

The two cases in the area of primary and secondary education show that two different training systems, the cluster and the cascade systems, are firmly established in each country, suggesting that suitable techniques and methods will differ depending on the political, social, and cultural environment. More specifically, the cascade system, which is suitable for a centralized educational administrative system, was adopted in Kenya based on the decision of the Kenyan counterparts, and it produced favorable outcomes. However, in the Philippines the cascade system that had been adopted in the preceding Package Cooperation failed to spread through the local communities. In response, the project switched to the SBTP, which was an upgraded version of the cluster system that had been traditionally used. Although the project is still ongoing, it is expected that the system will be consolidated and developed. That is because this system is more acceptable to the Philippines, as the SBTP is founded on the existing training system. It is also because the decentralized cluster system is more suitable for the decentralized administrative system in the Philippines.

Furthermore, the SMASSE Project in Kenya devised a unique way to promote the project. For example, it changed the cascade system from the initial three-stage system (center–district–school cluster) to a two-stage system (center–district), and made the simple keywords and slogan of “ASEI” (initials

of activity, student, experiment, and improvisation) to summarize the concept of training. This was intended to deliver training without loss of effects in the course of dissemination.

The SBTP Project in the Philippines adopted a system where teachers in the same area learn from one another in mock lessons conducted by fellow teachers using the existing teaching materials. This system was devised based on the lessons learned from the Package Cooperation: (1) If the provided teaching equipment and materials are used in training, it is difficult to reproduce the same training outcomes in schools where similar equipment and materials are not available, (2) the teaching materials developed by the university researchers at the center may not reflect the situations of the area or the needs of the teachers, and as a result, it may limit the dissemination and continuity of the outcomes.

Thus, effects occur more easily with the introduction of technology, methods, and models that are easy for the partners to apply by themselves after the termination of cooperation. When this takes place, it is essential to develop a model that takes into consideration the situations and conditions of the partner country, by using existing methods as a basis or devising a system without much operational cost.

Ingenuity for Securing Financial Sustainability

Whether or not the project is financially sustainable greatly influences how well the effects are maintained and developed after the termination of cooperation. It is essential, therefore, to reduce operational costs as much as possible from the implementing stage so as not to depend too heavily on the donor.

In the SBTP Project in the Philippines, the operational cost of the training system was minimized by using school classrooms and not paying transportation fees and honorariums, which are the major contributing factors to the consolidation, continuation and spread of the SBTP. In the SMASSE Project, the SMASSE Fund was established by putting aside a portion of tuition to cover the transportation and accommodation fees of trainers and district teachers who participate in the training program. Under this system expenses are shared by a broad range of beneficiaries, each contributing small amounts.

Furthermore, the Sulawesi Rural Community Development Project of Indonesia set a phase-out period, during which inputs from Japan were gradually reduced, in order to secure financial sustainability after the termination of cooperation. This project enabled a smooth transition to the implementation system by the counterpart, including the burden of local costs, and at the same time ownership on the part of the counterpart was fostered.

In the George Compound Project in Zambia, a device was established to maintain the water supply system with financial security based on payments received from users.



An expert preparing for a mock lesson with teachers for improvement of teaching methods (SBTP Project in the Philippines)

Taking into consideration the situation of the poor who were unable to pay the monthly charges, a new payment system of pay-as-you-go was introduced on top of the monthly fixed rate system.

In order to secure financial sustainability of cooperation effects, operational costs in the post-project period need to be considered in light of the conditions in the field at the project planning and implementation stages.

Flexible Project Management in Response to Situations

Flexible plan modification with the consent of the partner county, when it is deemed necessary, produces benefits in many cases, even while a project is under way. It is virtually impossible to grasp all the details before a project starts. Unexpected changes in the external factors often hamper the progress of the project as planned in cooperation for developing countries. There may also be a case where a more appropriate method or approach is found during the implementation of a project. Under such situations, flexible changes in the plan can lead to higher impact and sustainability of the project.

In the George Compound Project in Zambia, it was found that poor households were unable to pay the monthly water rate during the implementation of the project. By introducing buckets of water for sale as explained earlier, the needs of the poor were accommodated and financial sustainability of water supply services was secured.

In the SMASSE Project in Kenya, based on the results of the mid-term evaluation, which found that the greater number of cluster stages the lesser the effects of cooperation, the original three-stage training system was reformed to a two-stage system, and at the same time a system was devised to deliver the concept of training accurately to the training participants. Such a flexible response helped secure the quality of training and produced favorable outcomes.

Monitoring and evaluation are good sources of information and data, which are necessary for making decisions to implement a project flexibly. The SMASSE Project in Kenya developed unique indicators to measure the quality of lessons and the improvement of students' learning, and conducted

continuous monitoring and evaluations. This showed a gap between the planned goal and the actual training results during the implementing stage, leading to the recognition of the three-stage training system as the cause. As the system was flexibly revised into two stages in response, the intended outcome was achieved in the end.

The case of the Sulawesi Rural Community Development Project in Indonesia also presents a good example for carrying out a project flexibly. This project provided field activities with flexibility by dividing the cooperation period into a few phases according to objectives to be achieved: preparation period, period to establish a model, and dissemination period.

Approach to Proactive Participation of Beneficiaries

Involvement of a wide range of stakeholders, including end beneficiaries during the implementation of a project, will lead to better understanding among the stakeholders and securing their initiative. This is useful for maintaining and disseminating the effects after the termination of cooperation.

The SMASSE Project in Kenya and the SBTP Project in the Philippines held opinion exchange sessions and enlightenment seminars, with the participation of related parties from the local community, such as administrators, school principals, and PTA representatives, before the launch of teacher training to promote the understanding of school-related people. This contributed to the sustainability and spread of the training system.

The George Compound Project in Zambia further gained the participation of residents—the beneficiaries of the project—at the planning and operation stages. To gain their participation, community groups were organized in cooperation with a local NGO, and community leaders were fostered. In the case of a project where residents are the beneficiaries, organizing local residents and conducting empowerment are effective in promoting participation. The Sulawesi Rural Community Development Project in Indonesia involved an NGO to empower and organize local people, and supported planning and the implementation of rural development activities, thus contributing to improved awareness and capacity of the residents and their proactive participation.

Model Consolidation in Collaboration with a Wide Range of Related Parties

Sustainability of a project after termination is enhanced in many cases where collaborative relationships among a wide range of related parties is developed during the implementation of the project in order to involve council members and top-level policy-making administrations in institutionalizing a model (enforcement by ordinance, etc.).

For example, the SBTP Project in the Philippines established a system to control the quality of training even after its termination by promoting collaboration between the local

teachers' college and in-service teacher training system. The project also requested the expertise of universities by delegating a social survey at the planning stage and a third-party evaluation on education quality to local universities.

The SMASSE Project in Kenya also built a direct partnership, not only with the implementing body of the counterpart but also with a human resource department called the Teachers Service Commission (TSC). By attaining many full-time staff members for the project with their salaries covered by the Kenyan side, the project was successful in securing sustainability.

The Sulawesi Rural Community Development Project in Indonesia approached related organizations during the implementation of the project so that the implementing body could assume the cost of operation of the model after the termination of cooperation. In addition, policy makers such as the governor and council members were invited to Japan for training, which helped realize the institutionalization of the model. Furthermore, this project involved all the related parties of the rural development schemes, including the central government, local administrative authorities, local universities, NGOs and local residents after clarifying the division of roles for each party. This greatly contributed to securing sustainability of the model.

Transmission and Sharing of Information for Model Expansion

Especially when a project is implemented as a pilot aiming at expansion of the model in the future, outcomes of the pilot project need to be shared among a wide range of related parties through active information transmission. Such activities encourage expansion of the introduced model. From this perspective, the SMASSE Project in Kenya and the SBTP Project in the Philippines actively transmitted the outcomes of activities through newsletters, websites, and various events.

In the case of the Sulawesi Rural Community Development Project in Indonesia, the institutionalization by legislation is the largest contributing factor to the spread of the model. On the other hand, it seems several other factors contributed to a rapid spread of the model after the legislation. For example, a wide range of related parties introduced the successful outcomes of the project to other regions and many people from other regions visited the project site.

Phase 2 of the SMASSE Project in Kenya started by aiming for the spread of the training system across the country and to neighboring countries. In the SBTP Project in the Philippines, the number of model districts increased, and the number of districts that proactively adopted the SBTP expanded during the implementation. The model of a water supply system whose authority was extensively delegated to the community group in George Compound Project in Zambia have started to be adopted in other areas. In any case, information

about the successful outcomes have been transmitted to other regions during the implementation of the project, and many visiting tours have been made.

Internalization of External Factors by Program Approach

One of the schemes thought up to gain involvement from a wide range of related parties is the Program Approach*. This approach can be regarded as an attempt to effectively solve development issues through synergy effects and risk reduction by combining several projects that accommodate external factors in a comprehensive and systematic manner.

The George Compound Project in Zambia combined three projects, which enabled it to take a comprehensive cooperation approach incorporating the development of a water supply facility, the strengthening of community-based organization, and community enlightenment including health education. This approach generated impacts in many areas, improving not only water supply but also hygiene and living environments. It is believed that these impacts were greatly attributable to various activities of the NGOs in the target area, the George Compound, in addition to JICA's cooperation and synergy effects among those related projects in terms of human resource development. The improvement in hygiene cannot fully be achieved by water supply systems only. To address this, the PHC Project was combined to influence the behavior of the residents as users. This is seen as an internalization of external factors, which cannot be accommodated simply by the improvement on the provider side.

The traditional style of development of facilities and provision of equipment and materials does not necessarily lead to an independent management by the partner country after the termination of cooperation. Magnitude and sustainability of effects can be enhanced by combining skills acquisition on operation and maintenance, increased awareness of residents with regard to the constructed facilities, and development of management systems or organizations. Incorporating these perspectives of Program Approach can bring about effective cooperation.

In addition to these factors, the following lessons can be extracted as more cross-cutting viewpoints.

Respect for Ownership of the Counterpart

In order to consolidate the effects of cooperation and continue independent development, it is necessary for a partner country to be aware of their issues and make efforts to solve them with a sense of ownership.

In order to induce initiatives at both the organizational



Installation of a meeting house has activated information sharing among related parties such as farmers and administration (Project on Strengthening Sulawesi Rural Community Development to Support Poverty Alleviation Programs in Indonesia).

and the individual levels, as has been pointed out so far, a donor's efforts to involve the partner country in the process of planning and to encourage proactive participation of beneficiaries are effective. Cooperation should proceed with the consent of the related parties through sufficient dialogue while respecting choices and decisions of the partner country at the planning stage and confirming at the implementing stage that the project meets the needs of the beneficiaries and understanding for the cooperation has been obtained. This process fosters ownership of the partner and eventually leads to sustainability of the effects of cooperation.

Adopting an Approach Suited to Local Conditions

As shown in the adoption of the cascade system in Kenya's SMASSE Project and the cluster system in the Philippines' SBTP Project, developing countries have a wide variety of political, economic, social, and technical issues. In order to sustain and develop cooperation effects, an appropriate approach must be selected with due consideration given to such conditions in the partner countries. In particular, when new technologies or methods need to be introduced, the perspectives of whether these technologies or methods are adaptable to the field and whether there are more desirable alternatives should be carefully examined at both the planning and the implementation stages.

While making these considerations, it is necessary to understand the needs at the planning stage in collaboration with the partners, choose easy-to-operate technologies, and keep in mind the ingenuity for consolidation of those technologies as well as for financial sustainability. In cases where a sudden change in situation occurs and a more appropriate approach is found, the initial plan should be reviewed under the concept of flexible project management in response to the situations. This is an effective process for reflecting local conditions.

* In the area of development assistance, the Program Approach is often used to mean an approach of well-coordinated cooperation among donors based on the policies and development plans formulated under the initiative of a developing country. However, in this analysis, a more generalized definition is adopted: an approach for implementation with a coordinated combination of several related projects.

Emphasis on the Mechanism for Consolidation and Sustainability of Cooperation Effects

Looking ahead at the post-cooperation period, it is important to integrate a framework to secure sustainability and self-sufficiency at the planning and implementation stages of a project. An effective inducement to this end would be to establish communications and collaborative networks by involving related parties at both the organizational and the individual levels. To this end it is important to collaborate with a wide range of related parties, induce the proactive participation of beneficiaries, and transmit and share information. A direct approach to the related parties in charge of policy and system making, such as council and administrative agencies, is also effective in reflecting such efforts in policies and systems. Furthermore, in order to incorporate external factors into projects and organizationally establish a mechanism for embedding and continuing the effects of projects, the Program Approach, in which cooperation embraces various areas in a comprehensive manner, may be effective to secure sustainability and self-sufficiency.

In addition, in order to attain financial independence after the termination of cooperation, it is important to take an inge-

nious approach toward securing financial sustainability at both the planning and the implementing stages. Besides giving consideration to the reduction of the operation cost at the planning stage, consideration to share appropriate local cost with a partner country should be provided during the implementing stage. As the termination of a project approaches, a gradual shift in the management including the cost burden to the implementing body of the partner country (“exit strategy”), becomes more effective. Such an ingenious approach to cost management is in many cases effective in fostering ownership of the partner country.

Currently, JICA has been enhancing approaches from the perspective of “capacity development” to strengthen the problem-solving capacities of developing countries and provide cooperation that can yield high sustainability and impact. Capacity development is an important approach toward the realization of human security, which aims for human-centered cooperation reaching out to people. The lessons mentioned above are the perspectives emphasized in the capacity development approach. This capacity development approach is outlined in the following BOX article.

Box 2 More Effective Cooperation: Capacity Development Approach

JICA is currently strengthening its approach from the perspective of capacity development (hereinafter referred as CD) as an approach to provide cooperation that yields high sustainability and large impact. CD is defined as the process in which individuals, organizations, institutions and societies develop their “abilities” (the capacity of problem-solving) at each level to perform functions, solve problems, and set and achieve objectives*.

The CD approach is the support for improving the problem-solving capacity in developing countries as an endogenous process by utilizing existing capacity. This approach is based on awareness that the conventional type of development cooper-

ation is not necessarily improving the capacity of problem-solving in developing countries. This is based on the idea that cooperation from the outside cannot compensate for the lack of necessary development skills and ability in developing countries. In the CD approach, the role of outsiders is identified as a catalyst, which facilitates the efforts of the developing country itself. Furthermore, with the recognition that capacity development is necessary at the level of individuals, organizations, and institutions and societies, it is important to consider these comprehensive perspectives in order to improve the problem-solving capacity of the developing country. This is because individuals are involved with the

organizations, institutions, or societies to which they belong when dealing with various issues by utilizing individual capacity. The capacity of individuals or organizations is indispensable for a institutions or societies to function properly.**

JICA, as part of its reforms, has been expanding the cooperation of human-centered approach to reach needy people under the concept of human security. The CD approach is one approach that realizes the concept of human security by enhancing the capacity of the people in developing countries, the leading actors of development, and by emphasizing the approach at the governmental, the community, and the individual level.

*“Capacity Development Handbook for JICA Staff: For Improving the Effectiveness and Sustainability of JICA’s Assistance” (JICA, March 2004). This handbook is available on the “Resources” page of the JICA website.

**The CD approach is becoming the standard in other donor countries as well. The conventional

term “Capacity Building” has been superseded by the term “Capacity Development” because the intention is to clarify the concept that outsiders support the endogenous development process of the existing capacity in developing countries, rather than the concept that outsiders build new capacity in developing countries. A

literal translation of “Capacity Development” is “Ability Development,” but “Ability Development” often means to improve individual knowledge or skills. On the other hand, in the CD approach, it is emphasized in the comprehensive development of the capacity of individuals, organizations, and society.