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Development Assistance to the Kingdom of Cambodia: From Reconstruction to Sustainable Development

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Institute for International Cooperation
Japan International Cooperation Agency

Islam and Development

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One of the strongest prejudices among Japanese people towards Islam is that Islam is a universal doctrine, which unifies all Muslims in the world and rules all the fields of their life and thinking in history regardless of time and space. It is an incorrect prejudice. The true is that Islam has had and continues to have a number of sects or law schools. The opinions and interpretations of these sects or law schools about individual items are more different than we expect. Islam has been differently adopted according to the situation of time and society. Islam has enough flexibility that it can correspond to the changes of society in principle and reality, although the "fundamentalistic" view of Islam has been influential in recent years.

This lack of understanding about the flexibility of Islam often leads to cultural conflicts between inhabitants and development actors in the fields of development in Islamic countries by making developmental problems too ideological. We are inclined to overestimate the ideological aspect of Muslim activities in today's "fundamentalistic" atmosphere, although, in reality, their activities are motivated by realistic standards. What should we do to avoid cultural misunderstandings of this kind? We ought to pragmatically estimate the roles or functions of Islam in society, not by its disciplinary implication but by its practical effects. The author believes that this pragmatism leads to a pluralistic understanding of the real Islam built in society and to a practical strategy of development in Islamic countries.

I. Basic Knowledge about Islam

1. Islam tolerates a diversified range of interpretations

Whoever has had the experience of living in an Islamic country must be bewildered by the gap between the Islam he or she has actually experienced and the Islam that the media in Japan reports. You will wonder why things, which you do not feel odd as long as you lead an ordinary life, are often reported in Japan as very special events. We notice that Japanese are prejudiced towards Islam on several points. This prejudice towards Islam tends to be enhanced by the rise of "Islamic fundamentalism" in recent years.

One extreme prejudice towards Islam is to regard it as if it were a monolithic ideology. The fact is that, in all ages, Islam has had many sects and law schools, and the differences in opinion and interpretation among them are larger than one may expect. In addition, Muslims have diversified life styles reflecting the ingenious cultures of their respective regions and societies. Consequently, the same Islam is applied quite differently in different countries, regions and ages.

Variations even apply to idiosyncratic aspects of Islam concerning women that are often talked about,

such as the use of veils and polygyny. Variations are also applied to the legal system, which allows the coexistence of Islamic law and modern law, to economic issues typically represented by Islamic (interest-free) banking, which is based on a prohibition rule of interest, and to the Islamic custom of not drinking.

2. Polygyny and modern Islamic law

The Koran, the Holy Scripture for Muslims, stipulates that a man can have up to four wives. Since the Koran is the word of God itself for Muslims, no Muslim can contravene this scripture.

Accepting the scripture and applying it literally are two different things. In fact, there are quite a few Islamic countries that recognize polygyny, but apply some kind of restriction. For example, in Syria, Morocco, Iraq and Iran, a man is subject to treating all wives equally both physically and spiritually if he wishes many wives. When a wife feels that such these conditions are not being fulfilled, she can complain to the court. According to the Koran, "But if you are afraid of not treating them equally, then only one, or those you own as slaves." (Sura 4:3),

Since the majority of the people in Turkey are Muslims, Turkey is considered to be an Islamic country. When the Republic of Turkey was established in 1923, however, it abolished the application of Islamic

* This article was originally published in Japanese in *Kokusai Kyoryoku Kenkyu*, Vol. 18 (1) (April 2002).

law in all legal fields, and introduced modern law as a part of the secularization of national politics. As a result, following the European standard, monogamous marriage was legalized in Turkey. Total secularization of national politics, as in Turkey, is not the only way to prohibit polygyny in Islamic countries. For example, in Tunisia, while Islam is defined by its constitution as the national religion, having multiple wives is denied and the law stipulates monogamous marriage, which is based on scripture in the Koran.

In other words, concerning having many wives, the Koran says, "You will not be able to be completely fair between your wives, however hard you try." (Sura 4:129). As long as you follow the word, it is clear that although God says a man can have up to four wives, God also points out that it is impossible for one man to treat many wives equally because of man's nature. This suggests that God recommends monogamous marriage.

3. The pattern of thinking of Muslims

The author introduced polygyny not to make fun of it, but to show a typical pattern of Muslim thinking in creating norms and rules. Muslims create rules from a group of norms taken mainly from the Koran. However, the group of norms, which form the base of rules, is so diversified in content that totally opposite rules are created from it.

The tradition of knowledge in Islam is vast. Within this vast knowledge, Muslims are challenged by how to cope with each new situation of an age arising without conventional values rapidly collapsing. One way of coping is by making rules using the logic described above. This method has been used in all ages.

This kind of logic may seem to be jesting and sounds false to people that hold different values. However, no one may think it is a good idea to immediately discard tradition to cope with each new situation of a new age. We need to see the flexibility of this kind of logic in the Islamic way of thinking. Moreover, this flexibility has guaranteed the continuity of the Islamic way of thinking throughout history, from its beginning to the present.

Thus, every theme has been discussed from various points of view, ranging from fundamentalist interpretations to reality-ratifying interpretations. In addition to the women's issue discussed earlier, commonly discussed topics such as the legal system and the economic system, in particular Islamic banking, have been discussed in the same manner.

4. The legal systems in Islamic countries

We are apt to think that the legal systems in Islamic countries are all based on Islamic law. However, except for a few countries such as Saudi Arabia, even if Islamic law is defined in its constitution as the source of law, they are only one of the many sources of law.

The actual legal system is a combination of Islamic law and modern law that is familiar to us. In substance, modern law constitutes the legal system except in some legal fields.

Historically speaking, the fields in which Islamic law as a positive one has controlled people's life are limited. In pre-modern times when the Islamic faith was said to have had a vast influence on people's lives and every aspect of people's minds, administrative law established by the state was applied to the field where public law concerns political organization, and customary law was applied to local community level issues.

Most of the fields in which Islamic law was being applied were related to the private lives of Muslims and centered on family law such as marriage, divorce and inheritance. This aspect has not changed. This is why when it comes to an Islamic law issue, it usually concerns family law and centers on women's issues. Even in this field of law, the application of Islamic law concerning the private lives of Muslims has also had a large range of interpretations as discussed in the preceding section.

5. Islamic law and Islamic banking

Islamic banking is an issue concerning the prohibition of interest, "ribā", by Islamic law. Banking that charges no interest is beyond our imagination. Therefore, when we talk about Islamic economics, we automatically connect it to the issue of Islamic banking theory, a unique aspect to its economy.

Concerning the prohibition law for interest, there are two different legal interpretations, and both of them are based on the Koran. One interpretation is to literally regard the ribā as interest in general. The other interpretation is to regard the ribā as a usurious rate of interest, that is, high interest. Historically speaking, the law schools that regard the ribā as high interest have been in the mainstream. In this case, the issues discussed in Islamic banking theory become irrelevant because the interest itself is approved.

On the other hand, it is obvious that if the ribā is interpreted to be interest in general, it becomes incompatible with modern banking management. So, why is interest prohibited in Islamic law? Islam regards labor as the source of revenue, and from this viewpoint, interest is an unearned revenue.

Then, isn't it good to treat the interest of banking as due revenue of the profit brought about by investment, rather than regarding it as unearned revenue? From here, Islamic banking theory develops in which the main feature of the theory is the combination of management agreements between the depositors, who provide capital and labor, and banks, and between the banks and the loan receiving business owners.

As a matter of fact, Islamic law defines business forms that allow various combinations of capital and labor. Partnership¹ is a business agreement in which

1. This is called "mushāraka" or "sharika" in Arabic. Concerned parties provide capital or labor, and the profit is distributed according to the ratio of contribution. There is an agreement to distribute profit and loss through cooperation.

partners share profits and risks among themselves, and *commenda*² is a business agreement composed of the capital that investors provide and the labor that agents provide.

It is well known that in the pre-modern Islamic world, various combinations of capital and labor were attempted through these kinds of business agreements, and the economic development at the time was achieved. Thus, the discussion here may be perceived as an unreasonable attempt to persuade the reader that *ribā* is not interest based on the explicit prohibition of *ribā* in the Islamic law. However, the discussion here is developed on a firm foundation in Islamic law.

II. Various Problems in Development for the Islamic World

1. The Islamic world is not just for Muslims

It is said that Islam is a religion that relates to the whole personality of Muslims, both in their internal and external lives, and covers the entire scope of human life, not only religion but also politics and economics. There is nothing wrong with such an understanding. However, as earlier pointed out, in all ages the Islamic religion has not always controlled all aspects of the lives of Muslims.

The political, social and economic systems of the Islamic world are much less controlled by Islamic ideology. When we say the "Islamic world," we tend to imagine it to be composed of only Muslims. However, when we come to realize that such an Islamic world where only Muslims live has never existed anywhere, it becomes easy for us to understand the point. You cannot understand the dynamics of the Islamic world by ignoring the existence of non-Muslims.

Be it a development issue or any other issue, the difficulty for us in working with the Islamic world relates to how we evaluate Islamic ideology, and how we cope with it. Ignoring the ideology creates unnecessary friction. On the other hand, if we take the ideology at face value, our position becomes uncertain. The difficulty of NGO activities in the Islamic world is a good example of this. Here, let us introduce Egypt as one example in the Middle Eastern Islamic world.

2. Poverty in Egypt and the Islamic movement

Currently, developing countries have been experiencing multiple socioeconomic changes in which processes for system transition and for economic development are mutually intertwined in the surge of economic globalization and the transition toward market economy. New lower classes or marginalized peripheral classes (the unemployed, urban and rural poverty class, migrant labor, rural people who left their villages, etc.) have been created through these pro-

cesses. Except for a few oil-producing countries, the Islamic world in the Middle East, which is a collected body of developing countries, is no exception.

The ratio of people living in poverty in developing countries of the Middle Eastern Islamic world is relatively small. The ratio of poor people in Egypt, however, is outstandingly high. Even so, in terms of international poverty levels, poverty ratio and the disparity in income levels are still smaller in Egypt than in other developing areas.

The characteristics of poverty in Egypt are not so much of a quantitative nature, as of a qualitative one. Most of the causes of the poverty in Egypt can be found in the obstacles to access to the labor market, education, land, etc., which may be referred to as the "institutional gap" of access in a broad sense. In other words, the lower standard of "human development" is contributed by the "institutional gap" that produces disparities in access between urban and rural areas, among districts, and between genders.

This nature of poverty is a hotbed for the radical Islamic political movement in Egypt. Actually, the principal leaders of the movement are not from poor society, but are young people who graduated college and cannot find satisfactory jobs. Most of them are from the countryside. Along with the globalization of the world, their movement is now extending beyond national borders. The recent war in Afghanistan has vividly proven this fact.

It is obvious that safety in Egypt has been exacerbated. Only fifteen years ago, foreigners could freely travel all over the country including the deserts and oases. The author also enjoyed the richness and variety of features of Egypt on such trips. But now, even on the outskirts, at sightseeing spots such as Faiyum, Luxor and Aswan and in deserts or oases, you cannot move freely without the lead of a police car.

Setting aside the "chicken-or-egg" question, along with the radical Islamic political movement, the return of Egyptian society to Islam has steadily progressed. It is clear that the poverty issue in Egypt is deeply connected with this social trend. In fact, as background to the return of Egyptian society to Islam, there have been grass roots social welfare activities by Islamic groups since the 1980s to aid lower and peripheral classes that have emerged through the process of the socioeconomic changes. Their activities have developed various forms of services, including the opening of free clinics and law centers.

3. NGO activities and Islam

Non-Islamic welfare organizations have also recognized that poverty alleviation is indispensable to stabilize the society. Thus, many NGOs are currently promoting various social welfare activities that mainly target the lower and peripheral classes.

2. *Commenda* is Italian, and is called either "muḍāraba" or "gīrād" in Arabic. In this agreement, contributors of the capital bear all losses, and then share the profit with the labor providers. It is said that this agreement has its origin in the customs of the caravan. For more details on notes 1 and 2, refer to the corresponding and relevant explanations in *The Dictionary of Islam* (Eds. Kazuo Otsuka, et al. 2002).

Here, NGO means non-governmental and non-Islamic philanthropic/welfare organizations. However in Arab countries, including Egypt, the lines between governmental and non-governmental, and Islamic and non-Islamic are not clear. In Arab countries the state tries to control all philanthropic/welfare organizations, be they Islamic or non-Islamic, by registering them.

Why, then, does the state try to put fetters on the legs of civilian activities? Probably, one of the big reasons is that the states regard such civilian activities as rivals to the state's welfare policy. What the state is afraid of is that recognizing free civilian activities, which may expose the failure of the state's welfare policy, might lead to a doubt in the legitimacy of the regime.

Thus, the state is increasingly on its guard against organizations that have funds and influence beyond national borders, such as Islamic organizations represented by the Muslim Brotherhood and NGOs that are connected to overseas aid agencies in Europe and the United States for support. Here, we have a confrontational structure concerning development aid, in which a state is placed between Islamic groups and NGOs. In this situation, however, the influence and effect of NGO activities have not reached as extensively as that of the Islamic groups because of a wall of "Islam."

The reason why NGOs are not favorably received by Muslim residents is not likely because NGOs claim "human rights" in their activities, and that human rights replace Islamic values. Even though their activities have not reached very far into society, the unwelcomeness cannot be attributed to the "human rights" value. "Islamic" wall in this context does not mean one that is produced through the confrontational structure of a simple "Islam" versus "human rights."

The "Islamic" wall is rather a product of a political situation in which the state regards civilian activities, especially those of Islamic organizations, as rivals, and so tries to control them. The Islamic organizations, in response to this attempt by the state, try to base the motivation and foundation of their activities more and more in "Islam." Thus, civilian activities are forced into the political game between the state and Islamic organizations centered on gaining the support of residents. This political game tends to be fought through Islamic words and needs, because in the current trend of returning to Islam, the state is also unable to ignore Islam.

Consequently, the NGO activities cannot be free from the welfare policy of the state nor from the philanthropic/welfare activities of Islamic organizations. In addition, NGOs are, on many occasions, placed in a position of rivalry with the other two. This automatically makes their activities discussed, in the context of "politics" centered on Islam. Residents also use Islam as litmus paper to evaluate the activities of the state, Islamic organizations and NGOs. Perhaps

this is the condition of the times. The "Islamic" wall, namely a return to Islam, is a condition of the times, in which everyone who works in the Islamic world, regardless of position, has to face.

4. Islamic common bond as a safety net

In the Islamic world, development issues represented by measures to fight poverty are discussed in the context of Islam. It is at issue how development policy should deal with Islam. Of course, when one is dealing with development issues, cultural and ideological issues cannot be avoided. Why, then, do we need to pay special attention in dealing with Islam than in dealing with other cultures and ideologies?

In considering this point, let us review once again why welfare activities by Islamic organizations have come to be widely accepted. The fact that the majority of Egyptians are Muslims is not the answer. A probable answer is that the ordinary people of today cannot think of any other means of protecting their lives other than through Islam. What has brought about this situation is the failure of the past national welfare policy, which had been advocated until the 1970s with nationalism as the leading ideology.

People's disillusion and distrust of the state is deep. As a result, we may feel that they need to find a means of protecting their lives without relying on the state. In the case of Egyptian society, however, their "community" foundation is much weaker than we may imagine. It could be that they used to have the foundation, but it collapsed through various policies of unionism under the planned economy system whose peak was in the 1960s.

Today, what is most impressive when we conduct field studies in villages in Egypt is the weakness of the village residents' sense of belonging to the community. Village people's daily living environment is composed of human relationships connected through blood relationships and marriage. Beyond this, momentum to nurture the community consciousness is limited to the collective prayer on Friday followed by a meeting, and registration of children in elementary and junior high school. This tendency is especially strong among women who are not involved in public life. As even village society is in this kind of shape, it is easy to imagine how much less the level of the "community" foundation is in urban communities.

5. A pragmatic evaluation of Islam

By examining the situation as discussed earlier, we come to gain a viewpoint of Islam not as norms or an ideology, but as one of the safety nets to protect peoples' lives. For example, the mosques provide a forum for the community through their collective prayer in which a sense of a common bond is raised and form an organization for legal charitable activities. Major Islamic organizations conduct their activities with mosques at the center.

This aspect leads us to see the ideology of Islam not in terms of norms but pragmatically. In other words, the role of Islam in society should not be evaluated by its scripture, but by the actual results in the society.

For example, when we examine the time before and after the 1979 Islamic revolution, we are surprised to hear that the rate of women going into higher education as well as their employment rate increased after the revolution in Iran. This is because we associate Islam with the norms of isolating women such as wearing the veil. It is beyond our imagination that such a norm could bring social advancement for women.

In reality, however, parents in Iran, for example, felt safer about sending their daughters into society as the system of isolating women became established. Thus, a paradox exists. This trend will, in the near future, result in collapsing the patriarchal values in Iran, and bringing about a major change to the entire Iranian society. The women's advancement in social activities can, among others, reduce the education gap between husband and wife, which has supported the patriarchal values of the family.

This is just one paradox. If we analyze Islamic norms carefully from the effect and result they have brought to politics, the economy and society, without being excessively caught up in its ideological wording, we will find many other cases that may appear

paradoxical. In today's trend of fundamentalism, such a pragmatic view becomes possible only by observing purposefully and consciously. This is an attitude especially required at development field.

References

Concerning descriptions in this paper, refer to Nakamura (1997) for basic knowledge about Islam, Kato (1999) for the varieties of Islam, Richard et al. (1996) for the political economy of the Islamic world, and Suzuki (2001) for NGOs in Egypt.

Kato, Hiroshi. 1999. *Islam Sekai no Joshiki to Hijoshiki (Common Sense and non-Common Sense in the Islamic World)*. Tankosha.

Nakamura, Hirojiro. 1997. *Islam to Kindai (Islam and the Modern Age)*. Iwanami.

Richard, A. et.al.1996. *A Political Economy of the Middle East*, Second Edition. Westview Press, Oxford.

Suzuki, Emi. 2001. "Gendai Egypt Seiji to NGO - Shindankai Kisei-hou no Kousatsu (Modern Egyptian Politics and NGOs - Review of the New Regulatory Law on Organizations)." *Nihon Chutou Gakkai Nenpou (Annales of Japan Association for Middle East Studies)* No. 16. over, the actual processes of public spending are not properly supervised by the fiscal authorities.

Recommended Reading

1. Yamagishi, Tomoko, et al (eds).1998. *100 Qs and As to understand Islam well: People's Life, Economy and Society*. (in Japanese) Aki Shobo. This convenient book explains the basics regarding Islam and the Islamic world from ideology and politics to economy and society using a question and answer format.
2. Kato, Hiroshi. 1995. *Islam as a Civilization. An Attempt to Describe the Multiple Level Society*. (in Japanese) University of Tokyo Press, 1995. The author explains Islam not as a narrow religion, but as a life mode that encompasses all of life, from the material to the spiritual life, as a civilization.
3. Rodinson, Maxime. 1966. *Islam et Capitalisme*. ed. Du Seuil, Paris, translated into Japanese by S. Yamauchi. Iwanami-shoten,1978. This book was written while the socialist economy was still intact, which means that some descriptions are now obsolete. Nevertheless, this is basic for reviewing the relationship between religion and economics in Islam.
4. Leila, Ahmed. 1992. *Women and Gender in Islam. Historical Roots of a Modern Debate*. Yale University Press, translated into Japanese by M. Hayashi et al., Hosei University Press, 2000. Relying on existing studies, the author places this controversial theme in a historical context and discusses it in a balanced manner, moving from ancient times into the present.
5. Kojima, Susumu. 2002. *Islam and Development: Transformation of the Ishmail Sect in Karakoram*. (in Japanese) Nakanishiya Press, 2002. Although this book deals with a unique religious group, the Ishmail Sect in Pakistan, it is the first academic Japanese book to discuss development and Islam on a full scale.

Further Reading:

1. For Islam and modernization, see the following works: Eickelman, Dale F. 1989. *The Middle East: An Anthropological Approach* 2nd ed. Englewood Cliffs: Prentice-Hall; Eickelman, Dale F. et al. 1996 *Muslim Politics*. Princeton University Press.
2. Readings on the economy and banking system in the Islamic world include Saeed, Abdullah. 1996. *Islamic Banking and Interest. A Study of Prohibition of Ribā and its Contemporary Interpretation*. E.J.Brill, Leiden; Al-Oman, Fuad. et al. 1996. *Islamic Banking, Theory, Practice and Challenges*. Zed Books, London.
3. About NGOs in Egypt, see Sullivan, Denis J. 1994. *Private Voluntary Organizations in Egypt, Islamic Development, Private Initiative, and State Control*. University Press of Florida.

Approach to Poverty Reduction in Developing Countries and Japan's Contribution

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Since the 1990s, the goal of international development seems to have converged on poverty reduction. There has emerged, based on the views and concerns of poor people themselves, a more comprehensive conception of poverty encompassing not only income and consumption but also economic vulnerability and sociopolitical conditions of powerlessness. Accordingly, a multidimensional strategy for poverty reduction has been proposed, which consists of three pillars: 'expanding income-earning opportunities,' 'enhancing security,' and 'promoting empowerment.' These developments represent a significant advance in the understanding of the totality of the lives of poor people and in the search of effective synergetic measures for poverty reduction.

The World Bank, in particular, has come to play a broader leadership role both in the formulation and implementation of policy and institutional reforms and in the coordination of actors involved, official and private, as well as local and international. It has instituted two schemes, "Comprehensive Development Framework (CDF)" and "Poverty Reduction Strategic Paper (PRSP)" for poverty reduction in low-income countries. CDF is summarized in a matrix, where development issues and goals are listed along the horizontal axis and contributions by various actors in each issue area are registered along the vertical axis. The matrix is designed to provide an overall view of the ongoing and anticipated contributions by all the development actors involved, and serve as diagnostic and prognostic device for the host country in its attempt to promote and facilitate coordination and collaboration. PRSP is a three-year action plan for poverty reduction to be drawn up by the government and approved by the Boards of the World Bank and the IMF. It is stipulated that the formulation and implementation of PRSP be predicated on the following requirements: a) a long-term and multidimensional approach to poverty reduction; b) determination of the priority of policies and programs based on their feasibility and effectiveness in poverty reduction; c) broad participation in the decision making process within the country, and promotion of the coordination and partnership among the various actors under the government's leadership.

This new approach raises many important issues. In many countries administrative capacities of governments may prove to be inadequate for the task and political processes, which might militate against the realization of meaningful participation. The Japanese development community should not take the CDF-PRSP regime as given, but instead, should endeavor to conceive and propose effective approaches to poverty reduction based on its own experiences and perspectives. It is high time that the Japanese government, private organizations, and researchers face up to the global challenge of poverty reduction.

Introduction

Since the 1990s, the goal of international development appears to be focused once again on poverty reduction. The World Bank has made poverty reduction its top priority since the latter half of the 1990s and has directed all its activities toward this goal. The Bank has also taken the lead in redefining poverty through publishing a *World Development Report* subtitled *Attacking Poverty* (WDR

2000/2001), and has worked out new policies based on a broader conception of poverty.

This article will describe these new developments, identify significant departures from traditional approaches and practices, examine the poverty reduction strategies espoused by the World Bank and the International Monetary Fund (IMF), and comment on their contributions and limitations. Lastly, the author will offer his views on contributions that Japan could make and the changes needed to realize those contributions.

* This article was originally published in Japanese in *Kokusai Kyoryoku Kenkyu*, Vol.17 (2) (October 2001).

I. New Developments in the Conception of Poverty

The *World Development Report* (WDR 2000/2001) set out an important new approach in defining poverty, which now includes the following two aspects.

First, the definition of poverty was broadened to reflect concerns in the various aspects and characteristics of the lives of the poor. Under the traditional economics-based approach, poverty was usually measured based solely on consumption or income level, with these variables defining the poverty line and determining who are the poor. Since the mid-1960s, a greater focus has been placed on the delivery of social services such as education and health care to better reflect the quality of life which consumption and income levels alone fail to reveal; poverty came to be defined as taking into account the extent to which basic human needs fail to be met. The WDR 2000/2001 further broadened the definition of poverty to include two other aspects and raised new poverty reduction issues related to those aspects. The first was focusing on the vulnerability of the poor, as manifested by the weakness of their livelihood base, and addressing their security-related issues — how well they could manage the risks and uncertainties inherent in daily life and what is their ability to respond to unfavorable situations. The second was attempting to understand the lives of the poor in the context of their social and political relationships, thus shedding light on sociopolitical aspects of their lives such as their powerlessness and voicelessness, and pointing to the need for empowerment to enable them to overcome such conditions. Broadening the definition of poverty has made an important contribution toward developing new, multidimensional approaches to poverty reduction corresponding to the overall picture of the lives of the poor, as opposed to the single indicator-based poverty line approach. While the definition of poverty per se now encompasses more facets, however, the conventional consumption or income level-based indicators remain the practical yardstick for assessing the degree of poverty and determining the extent to which poverty reduction goals have been reached.

The second aspect in the new conception of poverty places more importance on the perception of the poor concerning their situations, and also on their own desires for and priorities in improving livelihood conditions. This reflects the desire on the part of aid donors to avoid imposing inappropriate external judgments and to accord priority to the most pressing needs of the poor. Importantly, it implies a role reversal, viewing the poor as active participants, or actors, in remedying their situations, not as passive aid recipients. In preparation for the WDR 2000/2001, a Voice of the Poor survey, interviewing 60,000 poor people in 60 countries across the developing world, was carried out to determine how the poor view their living conditions, what restrictions and barriers they face,

and what goals they have. This survey yielded an unprecedented detailed understanding of their lives and had a great impact in expanding the definition of poverty, revealing as it did the vulnerability of their livelihoods and their powerlessness/voicelessness in sociopolitical relations.

II. New Focus in Approaches to Poverty Reduction

New policy approaches to poverty reduction have been formulated on the basis of these new developments in the conception of poverty. New elements in policy approaches may be clearly identified when they are compared to the policies proposed a decade ago in the *World Development Report* 1990. In the WDR 1990, poverty was defined in terms of income/consumption levels and the availability of social services. The basic approach to poverty reduction focused on the supply and demand for labor, the main income source among the poor. The WDR 1990 advocated dealing with two issues simultaneously: achieving labor-intensive growth patterns that would increase the demand for labor, especially unskilled labor, and creating human capital that could respond to the income-earning opportunities generated in the course of the growth process, by providing education, health care, and other social services. While endorsing these measures, the WDR 2000/2001 defined poverty more broadly as a complicated phenomenon and advocated multidimensional approaches to poverty reduction in order to respond to the most urgent concerns of the poor.

Three tasks have been identified as the keys to poverty reduction. The first is promoting opportunity among the poor, who lack assets, access to markets, and work opportunities, in order to increase their income and allow them to escape from poverty in terms of consumption and income levels. This approach roughly corresponds to that of the WDR 1990. The second is enhancing security, which is reducing their vulnerability and enabling the poor to cope with unfavorable situations because they tend to be greatly affected by factors out of their control such as illness, poor weather, natural disasters, worsening market conditions, and public safety. The third is facilitating empowerment, which makes formal political-administrative and informal social institutions work in favor of the poor, who have tended to be disadvantaged and discriminated against in both domains.

The WDR 2000/2001 also emphasizes the complementarity among the three tasks identified above, and advocates the adoption of a comprehensive approach encompassing all three in order to generate synergy. It further maintains that poverty reduction strategies based on this comprehensive approach should involve not only governments but also broad sectors of society. These poverty reduction strategies envision major changes to national economic, politi-

cal, and social systems, taking place over a long period of time. But at the same time, WRD states that policies or programs should be evaluated for (short-term) results in terms of their impact on poverty, to determine which policies or programs are effective, and that an evaluation system should be created for this purpose. It also emphasizes the importance of the role of the poor as active participants in all stages of formulating and implementing poverty reduction policies, and thus the importance of devising schemes and procedures for involving them in the decision-making and implementation processes.

As summarized above, the new approaches to poverty reduction cover a broad range of tasks and actions. The World Bank's activities will be geared to promoting these approaches, and it will play an active leadership role.¹

III. Poverty Reduction Strategies and the Role of the World Bank and the IMF

In January 1999, the World Bank formulated the Comprehensive Development Framework (CDF). At a joint annual meeting of the World Bank and the IMF in September 1999, they decided that drawing up and presenting a Poverty Reduction Strategy Paper (PRSP) would be a precondition to implementing concessional lending or the Heavily Indebted Poor Countries (HIPC) Initiative. These initiatives have determined the basic tenets of approaches to poverty reduction to be collectively pursued by the international community as a whole.

The CDF includes the following important new approaches. First, it states that an overall, long-term perspective is needed in order to understand the development process, and that economic, social, political, and administrative aspects should all be thoroughly considered. It proposes that, to determine the success or failure of development over the long term, assessment should go beyond the usual economic and social indicators and place importance on other factors such as (broadly defined) governance issues encompassing government, legal, and financial systems; investment climate; education and health care; and official and nonofficial social security. Second, it urges that all the actors involved in development — developing countries' governments, multilateral and bilateral aid agencies, civil society, and private-sector enterprises — should work cooperatively through sharing information and coordinating activities to promote the development process and boost overall development impact. Related to this, the CDF lays down operating principles for country ownership, participation, transparency, evaluation, and accountability.

The CDF is summarized in a matrix format,

where development issues are listed along the horizontal axis and contributions by various actors in each issue area are registered along the vertical axis. The matrix is designed to provide an overall view of the ongoing and anticipated contributions by all the development actors involved including multilateral and bilateral aid agencies and NGOs, and to help the host country government take leadership in coordination and collaboration in aid policies and role assignment among all the development actors. Coordination and collaboration among the development actors, however, is actually carried out in the process of formulating and implementing the PRSP.

The PRSP is a three-year action plan for poverty reduction incorporating and articulating the approaches and principles set out in the CDF. In its formulation and implementation, the PRSP therefore reiterates many of the viewpoints and principles emanating from the CDF. It takes a long-term and multi-dimensional approach to poverty reduction. Policies and programs are to be prioritized based on their feasibility and effectiveness in poverty reduction. At the operational level there should be broad participation in the decision-making process within the country; the host country government should take the initiative in promoting collaboration and partnership among aid agencies and NGOs. The PRSP document consists of five parts. First, it reviews current poverty situations and diagnoses the causes of poverty. Second, it indicates goals and policy measures. The goals include both long-term (10-15 years) poverty reduction targets and short-term (2-3 years) targets; the latter are readily monitorable for timely evaluation of policy measures. The policy measures constituting the strategy comprise macro and sector-level economic policies, social policies, and administrative and political reforms. Third, it establishes a system to monitor and evaluate policy effects. Fourth, it determines the effectiveness of and the need for external assistance. Fifth, it reports on methods and schemes for ensuring broad participation in the formulation and implementation process and on the degrees of participation achieved.

These principles and contents were formulated based on critical reflection on past experiences in conditionalities and aid effectiveness on the part of the World Bank and the IMF. They are understandable as idealistic wish lists, but they may prove impossible to apply in practice. The two organizations admit that drawing up a PRSP in accordance with the above-mentioned conditions is not an easy task. One manifestation of this recognition is found in the fact that they have allowed interim PRSPs (I-PRSP) to be prepared and submitted to enable countries to obtain needed aid before full PRSPs are formulated. The only requirement for an I-PRSP is that the government

1. The organizational goals and guiding principles of the World Bank are spelled out in the following documents: *World Bank Group Strategic Framework* (World Bank 2001a) and *Strategic Directions for FY02-FY04* (World Bank 2001b).

concerned indicates its commitment to poverty reduction and the steps it will follow in drawing up a full PRSP. Another manifestation is the publication of a *Poverty Reduction Strategy Sourcebook* as an aid in drawing up PRSPs. The purported aim of the sourcebook is to shorten the time needed for formulating PRSPs by allowing officials and departments involved to work simultaneously on various components of the document. It also highlights the areas that World Bank/IMF assessment will focus on. The contents of the *Sourcebook* itself are very broad-ranging, however, which demonstrates the substantial burden imposed on governments in drawing up PRSPs.²

The World Bank and the IMF stress country ownership because they have learned, based on their experiences with structural adjustment lending (SAL), that policy conditionality will not be adhered to in the absence of the country's commitment. They also stress broad participation because they understand that without it, policies and programs coming out of the policy-making process will fail to reflect the interests of the poor. These are both correct recognitions of administrative-political reality, but that does not imply that these new emphases can actually be applied. The problem with the PRSP approach is that it makes inappropriate assumptions concerning the administrative capabilities and the domestic political process, particularly at the local level, of the poor countries concerned. Formulating and evaluating long-term poverty reduction strategies, and the policies and programs based on them, requires large human, organizational, and financial resources for collecting and analyzing the relevant information. The poorer the country, however, the more its government faces major limitations in administrative capability and has no choice but to depend on external assistance in formulating and implementing a PRSP. In most cases, however, it is also doubtful that broad participation in the decision-making process could be effectively carried out so that deliberation and dialogue could play a meaningful role in reflecting the voices of the poor in policy formulation and implementation. Similarly, it would be only in exceptional cases that the country would be able to take an initiative in aid coordination.

There is great significance in the PRSP approach insofar as the World Bank and the IMF, the two most well-funded and powerful international organizations, highlight poverty reduction as the single most important priority and make their poverty reduction strategy the basic framework for aid to poor countries. Their adoption of a joint policy also has a very large impact on aid coordination throughout the international development community. From the viewpoint

of poor countries receiving aid, they have no choice but to accept the PRSP approach as the new aid regime. First they must draw up a pro forma document meeting the requirements for country ownership and broad participatory process. This could have an ironic effect of drawing up an ostensible document without any commitment, as seen in the case of structural adjustment lending, which might be repeated on a larger scale. Through approval of PRSPs at their Boards and Joint Staff Assessments preceding this, the World Bank and the IMF have a major influence on the formulation process and the contents of PRSPs. It is the World Bank and the IMF which decide if the principles of country ownership and broad participation have been adhered to. It is no exaggeration to say that the PRSP regime actually operates with these two organizations effectively leading the countries in question and participating broadly in the process of drawing up their PRSPs.

IV. Japan's Contribution to Poverty Reduction

The Japanese government and aid agencies must respond promptly to this environment where the international development community has identified poverty reduction as the single most important goal and aid coordination will be carried out under the PRSP regime.³ The author would like to identify four important issues here and suggest directions for consideration.

The first issue that must be considered is the extent to which the orientation of development assistance be focused on poverty reduction. This involves determining the weight placed on the approach of direct support to the poor and the weight on reducing poverty through overall economic growth, or exploring how these two approaches may be combined. Although simultaneously pursuing both approaches is the appropriate course, more emphasis should especially be placed on building stronger links with domestic and foreign NGOs to offer direct support to the poor. Planning and evaluation should be carried out with various dimensions of poverty in mind such as better income opportunities, providing social services, measures for addressing vulnerability, and promoting empowerment.

The second issue to be addressed relates to the relevance and significance of Japan's experiences in development or assistance when it comes to developing poverty reduction strategies and policies. This would entail determining what significant experiences Japan has had with respect to the two approaches described above and their combinations. In particular,

2. The *Sourcebook* (World Bank 2001c) is a lengthy document consisting of two parts: Part 1 - Core Techniques and Cross-Cutting Issues, and Part 2 - Macro and Sectoral Issues. Part 1 consists of two chapters (in 11 sections), and Part 2 of four chapters (in 14 sections). The cross-cutting issues in Part 1 include participation, governance, community-driven development, gender, and the environment. Part 2, covering sectoral issues, deals with rural and urban poverty, human development, the private sector, and infrastructure.

3. For more details and discussion concerning PRSP and aid coordination under PRSP, see *Basic Research on Poverty Reduction* (JICA 2002).

Japan's experience can make an important contribution in understanding the channels through which the fruits of growth can be widely shared, and of organizations and agents that contribute to improving aspects in daily life.⁴

Third is the issue of what position Japan should adopt regarding aid coordination under the PRSP regime. A strong appeal is now being made in favor of a more integrated approach to external assistance through sector programs or common funds, or even general fiscal support, and against uncoordinated provisions of project assistance by individual donor agencies. This appeal is based on the recognition of the problems inherent in the traditional practice of individual aid organizations promoting their own projects without mutual coordination or collaboration, thus failing to pay adequate attention to sector- or economy-wide goals or performances. There is a major question concerning aid effectiveness that restricting the use of funds or improving the efficiency of resource use at the level of individual projects does not guarantee that allocating funds will be appropriate at the sector level or in the overall economy. Disregarding these broader issues and focusing only on individual projects would inevitably result in criticism of not being able to see the forest for the trees. The conception of development assistance needs to be shifted to the level of sector or the overall economy.

Fourth is the question of how Japan can be involved in the PRSP formulation process. The paramount concern here is whether it is possible to set up a system where officials in charge can digest documents written in English or the language of the country concerned, formulate views and opinions based on their analysis of the documents, and take part in meetings and communicate in English or the local language. This issue can be approached on two levels. First, there is need for creating a system where information about the country in question can be collected and analyzed locally. This would probably necessitate strengthening such capabilities by employing local consultants as analysts or even as negotiators. Second, it would be advisable to set up a group in Tokyo in charge of all PRSP-related documents

and meetings in order to work out Japan's overall policies and positions on the PRSP approach. One of the important goals for such a group would be developing perspectives and proposals based on Japan's own experiences in development and economic assistance.

Conclusion

The foregoing has outlined issues that should be considered by the Japanese government and aid agencies in developing contributions to poverty reduction, but the scope of Japan's contributions should not be restricted to those from the government and governmental organizations. Civil society and the private business community could also contribute in ways that reflect their interests and capabilities; utilizing non-governmental channels would help broaden the scope of Japan's contributions to poverty reduction. Non-governmental actors would also be able to play an important watchdog role in prodding the government to adopt more appropriate policies, thereby increasing public support for poverty-oriented assistance. One especially important challenge for Japanese NGOs concerned with poverty reduction is to break out of the sole focus on direct involvement in each individual project and engage in more general analysis and proposals for promoting workable approaches to poverty reduction.

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4. Of particular importance in this connection is the attempt to document and draw lessons from the experiences of the Rural Life Improvement Program implemented in post-World War II Japan. This policy initiative in community development offers valuable insights into the roles of actors and factors impinging on the processes of group formation, participation, and empowerment. A series of research projects on this case have been organized by JICA under the leadership of Mr. Hiroshi Sato of the Institute of Developing Economies (IDE-JETRO).

Sector Programs in Africa

— Development Partnership for Poverty Reduction¹ —

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Since the latter part of the 1990s, a new framework for aid to Africa, so to say, the Poverty Reduction regime, has been formulated to address issues left unresolved by the structural adjustment policy. A core of this regime is aid coordination, particularly in the form of sector programs. A sector program is a form of cooperation whereby, in line with priority development policies and plans, a majority of the stakeholders in a particular sector work together to make their activities and resource inputs consistent with one another while sharing a common, sector-wide development policy. Such sector programs are changing the landscape of foreign aid to Africa.

Sector programs and other forms of aid coordination have been developed in response to the adverse aid environment of African and other poor countries which, due to difficulties in their state formation, lack the capacity for aid absorption necessary to utilize aid effectively. Japan needs to change its conventional thinking on aid and improve its understanding of and approach to aid coordination because the aid environment of African countries differs vastly from the East Asian countries, which have been Japan's principal aid recipients so far.

Under the Poverty Reduction regime, the shortcomings of the macro-scale approach have been pointed out, and the project approach has been critically reviewed in the wake of "aid bombardment." These efforts reflect a shift of priority towards the sector level that incorporates institution-building and governance improvement. Sector programs are aimed at proactive utilization of fund fungibility (substitutability) through such measures as the creation of a common pool. An even more important task is that of redressing the asymmetry and dispersion of information among the relevant stakeholders.

Despite their significance, sector programs still have problems. The principal problem is that strengthening organizational cohesiveness may compromise openness and flexibility. Strengthening coordination could also undermine the recipient government's ownership of development activities. This risk needs to be counteracted by strengthening the government's administrative and institutional capacities. Furthermore, whereas the prospects of a sector program's success are presumably enhanced by selecting aid targets with better conditions, this creates the dilemma of ruling out potential targets that have worse conditions but a greater need for poverty reduction. The common pool approach and standardization of procedures required for sector programs are also accompanied by many problems.

Japan can be expected to play a major role in fostering respect for the aid recipients' ownership of development measures. However, because Japan cannot assert itself without participating in sector programs and other forms of aid coordination, it must make a radical shift from its conventional thinking of one-to-one bilateral aid.

I. Introduction: Sector Programs and Changes in the Aid Regime

In the late 1990s, the framework or regime of devel-

opment aid for poor countries in sub-Saharan Africa (hereafter "Africa") and elsewhere underwent major changes. If we describe the previous regime as a Structural Adjustment regime, with structural adjustment being its practical and ideological mainstay, then the

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1. The article is based on the author's *Afurika ni okeru kaihatsu patonashippu: Sekuta puroguramu wo chushin ni* [Partnership for Development in Africa through Sector Programs], published in Japanese in the first issue of the JICA Institute for International Cooperation's Aid Issues Series (March 2001) (Takahashi 2001), with extensive abridgement and some additions and revisions based upon new information. The original Japanese paper can be downloaded from the website at [<http://www.jica.go.jp/activities/report/etc/200103.html>].

current one could be said to be a post-Structural Adjustment regime, or the Poverty Reduction regime, which aims to solve the problems left over from structural adjustment.²

The changes in the regime have also brought about extensive changes in the nature of aid. The concepts that provide the key to understanding these changes are coordination and partnership. The core of aid coordination under way in various dimensions is cooperation at the sectoral level. While such sectoral coordination is referred to in various ways, this article uses the term "sector program" (SP).³

The definition of a sector program varies from author to author and from organization to organization. There is, nonetheless, a general consensus that a sector program is one in which:

- (i) a majority of stakeholders in a given sector, or sub-sector, including the relevant government authorities of the developing country and the major aid donors,
- (ii) in close accordance with national development policies, strategies, and budgets,
- (iii) and encompassing the entire sector, or sub-sector,
- (iv) share a consistent sector development policy, and
- (v) work together to make their activities and resource input coherent.

Sector programs are transforming the nature of aid to many developing countries, particularly to the African and other poor countries which form the main arena of international aid aimed at poverty reduction.⁴ This paper will examine the rationale, implication and problems of sector programs in the context of development assistance to Africa.

II. Japan and the Aid Environment in Africa

In terms of intellectual initiative, Japan was only a marginal development partner in the Structural Adjustment regime that was in place up to the early 1990s. Now, at the turn of the twenty-first century, Japan has quantitatively become a major donor. Japan has implemented numerous aid projects and actively participated in the formulation of development aid policy for impoverished African countries through the formulation of the new development strategy of the OECD's Development Assistance Committee (DAC) and the two Tokyo International Conferences on African Development (TICAD). Drawing on this experience, Japan should study and deepen its under-

standing of the rationale and problems of aid coordination and sector programs and on that basis be even more active in making relevant proposals. It is in this way that Japan can become an intellectual leader in the field of African aid and fulfill its responsibility as a major donor.

For Japan, however, the formation of the Poverty Reduction regime centered on sector programs entails a range of serious problems. Until now, Japan has been an exceptionally fortunate donor in that its main aid recipient countries, namely those in East Asia, have been able in total to utilize aid effectively. Japan's basic approach of "self-help support" has been premised on a certain capacity to absorb aid on the side of the recipient country and implemented so as to respect and complement such absorption efforts. It has been formulated through this experience in providing aid to countries in East Asia.

However, conditions in African and other poor countries are completely different from those in East Asia. The ability of those countries to absorb aid was limited to begin with, and is now deteriorating even further because of their increasingly serious fiscal deficits. In the context of this meager capacity to absorb aid there has also arisen a conspicuous state of competition among donor countries (the situation is so-called "aid bombardment"). Sector programs have been devised as a way of dealing with this serious situation. If Japan aims to participate fully in the planning of sector programs for Africa, it must radically revise the approach it has formulated under the comparatively favorable aid conditions it has faced until now.

In Africa in particular, this serious situation is closely related to the formation and nature of governments. As has often been pointed out, the high level of heterogeneity within an African country, a result of the arbitrary division of Africa into colonies, makes it extremely difficult for it to achieve social consensus. Furthermore, the majority of the population lives in rural areas, and many of them continue to be engaged in subsistence farming. Although governments have a major role to play in developing small-scale agriculture, they have limited resources. This often leads to competition and friction between different regions and social groups, making effectively concentrated resource input very difficult to achieve.

In light of the aid experience in East Asia, it has been argued that in Africa too there is a need to create the developmental state which (a) places priorities on macroeconomic stability, outward-looking

2. Aid regimes may be defined as "the arena where international actors (aid donors) conduct activities based upon certain common principles." This view is based largely on the arguments of Nicholas Van de Walle (Van de Walle 1998). Van de Walle's argument is modeled on those of S.D. Krasner (Krasner ed. 1983). Furthermore, what the World Bank (along with the IMF) calls the "second generation approach" and is seeking to formalize as a Comprehensive Development Framework may be viewed as its interpretation of the post-structural adjustment approach and its principles.

3. Different donors and individual projects use different terms, including Sector Investment Programs (SIPS; used by the World Bank), Sector Coordination, Sector-Wide Approaches (SWAPs; used in the U.K.), and Sector Development Programs (SDP, the EU term).

4. There are numerous African countries in which some forms of sector program are being carried out, including Ghana, Ethiopia, Tanzania, Zambia, and Mozambique. The same kind of cooperation is also occurring outside Africa in such places as Vietnam, Bangladesh, and Papua New Guinea. Japan's involvement in African sector programs is focused on the areas of health and education in Ghana, education in Ethiopia and Tanzania, and health in Zambia. Since 2001, Japan has also come to play an increasingly central role as a donor in Tanzania's agriculture and regional development sector.

external policies, and efficient allocation of resources, and (b) concentrates on development of basic infrastructure and human resources in order to improve agriculture and other bases of livelihood for the mass population. However, as is evident from the above, in order for a state to become a developmental one it must have the tenacity to withstand the society's internal discord and create consensus on how to achieve development, and there must be flexibility in the society as well. In this light, there is no comparison between East Asian countries, which already had such favorable preconditions as thousands of years of national history, a tradition of bureaucracy, a certain degree of capital accumulation and market economy formation, with African countries, which have only a brief history of state structures and social integration.

Some analyses have described the countries of Africa as examples of the direct opposite of the developmental state, namely as "the predatory state" or "the feeble state." The more feeble the state fabric, the more likely that the state will rely on anti-development and predatory policies which serve the interests of social groups with strong political power at the expense of the voiceless rural populace. This kind of depredation, along with the economic stagnation it is intimately connected with, corrupts the state's legitimacy for the people and erodes the structure of the state. This vicious cycle is common to many, if not all, African countries.

African states' feeble governing capabilities are typically shown by their low level of domestic tax and other autonomous revenue, one of the results of which is their prolonged dependence on aid. The number of government employees in such states had continued to swell since independence, and this has brought about a marked drop in the average wage of public employees and a shortage of funding for administrative and developmental activities. The fall in wages has in turn led to corruption and, particularly among the lower echelons of the public service, deterioration in their working morale. In many African states, these factors have plunged governance into crisis. Attempts are being made to improve governance and reform administration and public finances through structural adjustment, but the continuing weakness of revenue bases and the leveling out of aid volumes since the 1990s have complicated the prospects for such reforms.

There is little need to elaborate on Africa's economic hardships. To cite just one piece of evidence between 1980 and 1999 the region's average US-dollar-denominated per capita GNP fell from \$648 to \$492. This means that over this period the average African's income dropped by roughly twenty-four per cent. No other developing region has experienced such a decline in income (World Bank 2001). It goes without saying that in the emerging framework of international development assistance, which is currently being reorganized around the principal concern of poverty reduction, aid

to Africa is the main stage of activity. Furthermore, in considering not only sector programs but also overall policies on aid to Africa, we must bear in mind the abovementioned crisis of governance in Africa. In order to play a leading role in aid to Africa under the Poverty Reduction regime, Japan must change its conventional thinking on aid and create a new approach to meet the needs of the new circumstances.

III. The Background and Rationale of Sector Programs

1. The formation of a Poverty Reduction regime: general principles

This section examines the rationale and background of sector programs, beginning with their implication for the features of the framework of aid to Africa in recent years, particularly the shift in emphasis towards the sectoral level. It also explores the relevant theoretical background by highlighting the issues of fund fungibility and information management, which appear to be particularly important in the rationale of sector programs.

The post-structural adjustment Poverty Reduction framework or regime can be regarded as an evolution from the Structural Adjustment regime. This evolution was driven not only by the collapse of the Cold War structure, the spread of democracy in Africa and elsewhere, and an increasing emphasis on aid effectiveness, but also by the realization that the earlier structural adjustment approach, far from serving to reduce poverty, in fact caused the accumulation of massive debts while also failing to address the abovementioned problems of state-building and governance. The principal features of the Poverty Reduction regime may be described as including (a) succeeding the core policies of structural adjustment (macroeconomic stability, a market economy led by the private sector, and an outward-looking development strategy), (b) close coordination between donors, (c) a focus on institution-building, (d) incorporation of governance issues in aid policies, (e) a shift of focus to activities at the sector level, (f) a selective approach to determining which countries and sectors will receive aid, and (g) an emphasis on the principle of poverty reduction.

Also, what is new for the Poverty Reduction regime is that it is associated with collaborative responses from African leaders. This point is very different from the Structural Adjustment regime that invited antagonisms from old-generation African leaders. The New Partnership for Africa's Development (NEPAD), a resolution of African leaders adopted in 2001, embraces principles of the Poverty Reduction regime including good political and economic governance. The NEPAD also calls for ODA reform.

While the Poverty Reduction regime is clearly more comprehensive and multi-faceted compared

with the Structural Adjustment regime, the abovementioned principles are closely connected with each other; indeed, they are closely interrelated. Sector programs are the nexus by which these various principles come together.

2. The background to the shift in focus to the sector level

Of these features of the Poverty Reduction regime, the most important in the context of the present paper is the shift of focus to the sector level. This shift will be examined from the viewpoint of the limitations of both the macro-level and project-based approaches.

First, we will briefly discuss the limitations of the macro-level approach. In Africa as elsewhere, some countries are making progress in the liberalization of foreign exchange markets and the transition to a floating exchange rate system. Thus the aim of macro-policy aid is shifting from the international balance of payments to the fiscal balance. Although some countries appear to be improving their fiscal balances, this is primarily due to grants from foreign donors, and their capacity for tax collection remains weak. This situation further highlights the importance of prudent expenditure management.

Under their structural adjustment policies, the International Monetary Fund (IMF) and the World Bank tried to curb expenditure of the African by having them formulate Policy Framework Papers and Public Investment Programs. In many African countries, the national budget consists of two parts: a development, or capital, budget, which includes public investment and debt repayment, and a recurrent budget, which covers salaries and operational expenses. The reality in countries which have fallen into serious aid-dependency is that most of the development budget besides debt repayments is either financed by aid resources or made up with aid-related items. Recurrent expenditure is also significantly influenced by the content of development expenditure. In many cases, moreover, the actual processes of public spending are not properly supervised by the fiscal authorities.

For these reasons, in order to prompt such governments to effect thorough fiscal management, it is not enough simply to impose policy conditions on them through Public Investment Programs. Rather, there is now growing awareness of the need to manage expenditure with the participation of aid donor countries. In the Poverty Reduction regime, such extension of the scope of expenditure control is linked and reorganized with policy coordination at the macro-level, the result of which can be seen as a combination of policies and fiscal programs with a "Poverty Reduction Strategy Paper" (PRSP) in its center. It is notable that the NEPAD welcomes PRSP. But because in most cases donors are interested in concrete activities within particular sectors, coordination of policy and fiscal management inevitably extends beyond the macro dimension and bears on each sector.

At the micro level, the trend is toward formulation of aid programs which strengthen the mutual links between projects, or individual development activities. In extreme cases, it is said that "deprojectization" is desirable.

The background to this is the situation known as "aid bombardment," or "aid proliferation," where foreign aid is excessively concentrated for recipient governments with limited aid-absorbing resources such as recurrent budgets and competent personnel, resulting in failures to make full use of the aid. The feeble administrative capacity of African governments makes it impossible to coordinate such multiple aid activities. At the same time, due to their stringent domestic fiscal resources they cannot cover local costs, especially operating expenditures. Many African countries have been swamped by aid precisely because they are poor, resulting in a proliferation of projects which overlap one another, are not coordinated or interrelated, and receive scant funding for activities on the recipient side.

Two measures can be taken to render aid more effective under these circumstances: to provide assistance to enhance Africa's aid-absorbing resources themselves, or to coordinate aid input in view of both the volume and complementarity on the donors' side. Current joint efforts of the United Kingdom or Northern European donors toward sector programs built around budgetary support including recurrent expenditures, and donor coordination can be regarded as combining these two measures.

The issue of sustainability and positive impacts of individual projects are negatively related with "aid bombardment". Many aid projects in Africa collapse because they are not sustainable after the aid object has been completed or the foreign experts have withdrawn. Even when the project itself continues, the impacts are often minimal, and the successful project appears like an isolated island in a vast sea of poverty. One way to redress this situation is to strengthen the links between projects and incorporate them into broader programs. It is also necessary to build underlying institutions to ensure the financial and technical sustainability of aid and other forms of developmental intervention.

While the details of such institutions vary from sector to sector, at the same time each one applies to a given sector in its entirety. Consider the example of health projects. In order for health projects to sustain themselves, as in all other fields, they must be continuously allocated sufficient funds. Sustainable financing normally requires a universal financial system applicable to the health sector as a whole, where the funds are provided from medical insurance systems, government budgets, or aid. Then, interest in the relevant issues naturally transcends the individual project and extends throughout the whole sector.

The dysfunction of financial systems in Africa is often due to corruption and inefficiency. In order to prevent them, it is necessary to incorporate mecha-

nisms which ensure rule of law, transparency, and accountability. This means realizing the essential requirements for governance reform such as the democratization of and participation in administration, as part of concrete institution building at the sectoral level. As is evident from these points, emphasis on institution building and governance, which are two of the central principles in the Poverty Reduction regime, is closely related to the shift in interest from project-based aid to sector-focused aid.

The foregoing discussion demonstrates that sector programs connect the project and macro levels. This is the crucial factor in the principles of the Poverty Reduction regime.

3. The fungibility of financial assistance

One issue which has surfaced in connection with the increased emphasis on fiscal management in African countries is the fungibility of financial assistance. Japan and other donor countries have attempted to restrict aid fund usage to specific projects, foreign currency supply, or investment (capital expenditure) financing. The concept of fungibility was applied in the negative sense of inducing corruption or undesirable expenditure such as military ones. This situation arises because money can be used for any purposes irrespective of its source.⁵

On the other hand, the fact that money is "fungible" means that it can be used in a dynamic fashion. One could argue that, in order to meet development-funding needs which change day by day, and provided that measures are in place to prevent fund misappropriation, funds should be utilized in such way as to take advantage of their fungibility. The occasional use of funds for most desired needs at each moment might be ideal insofar as it increases the effect of each unit of money.

For example, Japan's grant aid is mainly for constructing facilities or provision in kind. But if a certain country's educational sector has school facilities lying idle, the most efficient use of any additional unit of funding would not be the construction of new schools but assistance toward employing teachers and covering operational and maintenance costs for the existing schools. As this example demonstrates, provision in kind and limitations on usage can be obstacles to taking advantage of the positive aspect of fund fungibility. If aid funds were provided without restrictions on their use, and were allocated for use on exactly the same basis as the developing country's own public funds, it would be easier to avoid aid bombardment and the imbalance between the aid and the recipient's capacity to absorb it.

A common pool for sector programs and direct

budget supports are currently being discussed on the basis of the need to apply fungibility in this way. Individual donors initiating their 'own' projects are viewed negatively in this light as fragmenting development resources. Deprojectization is advocated in extreme cases.

4. Asymmetry of information and perception gaps

Other important issues that cannot be ignored when considering the background to sector programs are the flow of information among stakeholders, the formation of perceptions, and decision-making.

In order to devise the optimal policy for a given sector, the recipient government must have sufficient development-related information to formulate an accurate and reasonable perception of the situation. At the same time, it must have enough knowledge of the aid provision and available resources on the donor side.

However, as mentioned in Chapter 2, many African governments cannot be expected to possess these capabilities. In the first place, it is impossible to form an accurate idea of development conditions in the various sectors because relevant statistical systems have not been properly established. Furthermore, there is no close domestic exchange of policy-related information between the government and the society at large. Lack of technical ability on the part of government officials is another problem. For these reasons, information is dispersed among government agencies, potential beneficiaries, donors, and other stakeholders, with the result that they have differing perceptions. Under such circumstances, it is unlikely that either sector development policies or decisions on individual aid activities are optimal. The greater the number and diversity of stakeholders, the more serious the asymmetry and dispersion of information, and the more likely it becomes that inappropriate decisions will be made. We could say that the other side of aid bombardment is the marked dispersal and asymmetry of information between donors and recipient governments.

Solving this problem of sector-wide information asymmetry will require all stakeholders, including the recipient government and donors, to share as much information as possible, reduce their perception gap, and on that basis carry out joint decision-making at all levels, from individual projects to sector-wide development policy. This would reduce both local cost shortfalls for each project as well as duplication and inconsistencies between projects. The considerations of transparency and accountability mentioned in section 2 in this chapter will also be important from the point of view of information-sharing among stakeholders.

5. Even when different lots of money have different sources and intended purposes, once they have entered the government's accounts and accounting systems they become mutually fungible (substitutable) and no longer distinguishable from one another.

IV. Problems of Sector Programs

1. The conflict between openness and organizational cohesiveness

Despite their significance in various respects, sector programs in Africa have a number of practical and theoretical problems. This section will discuss the following problems: the contradiction between openness and organizational cohesiveness, ownership by aid-recipient governments, selectivity of aid recipients and targets, and difficulties accompanying the introduction of common procedures and formation of a common pool.

Inherent in sector programs are two contradictory demands, one for 'organizational cohesiveness,' i.e. systematically cooperating with each other, and the other for 'openness,' i.e. broadening the common basis for sharing information and perception among the stakeholders.

Sector programs can be regarded as a form of interorganizational coordination as explored in American public administration and studies and organizational economics. Rogers et al. (1982) consider coordination as a means of overcoming the adverse effects of stove-piping and duplication between government organizations. Comparing coordination with the looser concept of cooperation, they list the characteristics of the former as follows: (a) formal rules are established between the organizations, (b) the organizations share objectives, (c) the previous relationship between the organizations is affected, (d) human resources of higher echelons of each organization are more substantially mobilized, and (e) each organization's autonomy is threatened to a greater degree.

Based upon these characteristics, the following can be cited as among the problems of sector programs. First, it might be necessary to strengthen linkages among the stakeholders and improve their organizational cohesiveness to make sector programs desirable as forms of coordination. According to Rogers et al., this is likely to result in the formulation of stricter and more formal rules. Given the large number and variety of stakeholders in the current reality of development and aid in Africa, if strict organizational cohesion were to be pursued, many of them would be alienated and unable to participate. Such a situation would be contrary to the required collaboration across the entire sector concerned, and for openness through the collection and sharing of information, as pointed out above in section III. 4. Decision-making in such circumstances could hardly be expected to be optimal. This is most problematical when there is insufficient participation by domestic stakeholders within each African country. Furthermore, information on potential aid resources held by excluded donors will not be reflected in the decision-making process.

A further consideration is that, in sector programs where the barriers to entry are high, it will be difficult to respond when the situation in the sector has changed markedly. For example, an entity outside the current DAC membership could become a new development cooperation partner, or domestic stakeholders could change as the result of, say, privatization of health care or education or increased private-sector involvement in these areas. It is highly likely that sector programs unable to respond to such changes would lose their potential and practical significance. The possibility that organizational cohesion could undermine flexibility and dynamism of a sector program must be given due attention.

2. Ownership by the governments of aid-recipient countries

As Rogers et al. (1982) point out, increasing organizational cohesiveness runs the risk of impinging upon the autonomy of the participating stakeholders. A particular problem in this regard is the African side's ownership. Decision-making through a partnership with other stakeholders in a sector program means that at the same time the authority in terms of the policy-making rights of the sovereign African governments can be constrained. This concern is heightened in cases where the government has little ownership.

If a recipient government has sufficient development ownership to begin with, then there is probably no need for strict sector programs. In such cases it is sufficient for stakeholders, including donors, to operate under the leadership and coordination of the government. The relative success of aid to East Asia in the absence of sector programs demonstrates this clearly.

Actual sector programs in Africa are often carried out in order to supplement the fragile ownership and poor aid absorptive capacity of vulnerable recipient countries. However, if the recipient government has weak ownership, the success of the sector program itself becomes questionable. In response to this dilemma, some European aid donors believe that, if the proliferation of aid activities can be solved by sector programs, the transaction costs borne by the recipient government are reduced significantly; then it becomes easier to manage and monitor information and resources across the whole sector, and the degree of ownership is heightened. That is, based on the premise of meager capacity on the part of the recipient government, this approach is aimed at lowering transaction costs through donor assistance. This would be a recommendable approach to take in the short to medium term.

Viewed from a more fundamental perspective, however, strengthening of ownership cannot be expected without an improvement in the administrative and organizational capacity of the African countries involved. Nowadays even African political leaders who signed the NEPAD themselves frankly admit that

state capacity is very weak, and seem to understand that is a critical point for development ownership. While this point is widely acknowledged, also by European aid donors, from now on it needs to be more consciously incorporated as a component of sector programs. The improvement of administrative and organizational capacity is an indispensable task in order to remedy the weaknesses of African states. The main structural elements of administrative and organizational capacity can be analyzed as (a) technical competence of staff at all levels and the appropriate posting of these staff, (b) adequate financing mechanisms to cover both investment and recurrent expenditure, (c) systems for collecting information and building consensus, and (d) a managerial approach aimed at better services by making full use of the abilities of staff, particularly at the middle level and below.

The last point relates to one aspect of structural adjustment by the World Bank, namely, its effort to reduce redundant personnel, improve the conditions of the remaining officials, and reinstate a meritocratic system to measure their skills and performance. This is essential to reform unnecessarily bloated civil services. However, whereas western developed countries have had a tradition of top-down management practices based on commonly accepted social values, African countries have had only a short history of modern organizations, and these are made up of people with a diverse range of backgrounds. A different approach is therefore required in the African context.

If we accept that Japan has succeeded in developing, within the institutional frameworks it adopted from the West, an organizational culture which emphasizes broad-based internal decision-making and provides for bottom-up information flows, then this could serve as a reference for countries in Africa. The form of organizational culture most necessary and effective in highly diverse and heterogeneous societies in Africa is one that is open to the bottom.

3. The problem of selectivity

As discussed in section III.1, there is an increasing tendency under the Poverty Reduction regime to be selective in designating aid recipients. One aspect of this is the concentration on areas considered to have a direct effect on poverty reduction, such as education, health care, and rural development. Furthermore, from the point of view of controlling aid volume and maximizing practical results, donors are increasingly selecting countries and sectors where the aid environment is more favorable.

This kind of thinking is commonly seen in discourse on sector programs too. Harrold et al. (1995) state that the pre-conditions for the success of sector programs are (a) macroeconomic stability, and (b) leadership and commitment on the part of the recipient country's government. Macroeconomic stability was the essential factor of structural adjustment, and in this

context keeping inflation down is foremost important, because unless the value of the currency is stable, it becomes difficult to coordinate financial management involving multiple stakeholders participating in a given sector program. The latter point (b) has been discussed in the previous section (IV.2).

What is important here is that the selection of aid recipients according to these strict success conditions and the demands of poverty reduction are in practice contradictory. The greater the country's macro economic instability, and the weaker the commitment and leadership of its government, the more acute its poverty and the larger potential need for aid. From now on, this dilemma is likely to be serious not just for sector programs but for all dimensions of aid to Africa.

4. Common procedures and fungibility

As one of the aims of sector programs is to reduce transaction costs borne by the recipient government, then it would be best if the current donor-specific aid-delivery procedures were harmonized under a common system, and if differences in the modalities in which aid is provided were eliminated as far as possible. As mentioned in section III.3, these needs have led to such ideas as establishing a common pool to proactively exploit the fungibility of funds and carrying out direct budgetary support. In practice, however, those efforts face a number of problems.

One is that, even with a common pool, the donors that contribute to it are not exempt from being accountable to their own taxpayers. This means that there still must be some kind of monitoring and account reporting. Because submitting separate reports to numerous donors would increase transaction costs, what is called for is the establishment of common accounting and reporting procedures among the various donors.

In reality, common pools are being established in the absence of progress toward common procedures among donors or adequate coordination among projects. Given the weakness of many African governments' financial management systems, this will lead to numerous problems in monitoring and reporting how the funds are used. The inevitable response to this situation would be for the donors to have a greater say, which could lead to greater infringement on local ownership.

Among actual sector programs involving common pools, there are many cases in which the transaction costs of the recipient government and the leading donors that support it have paradoxically increased. While this can be regarded as an initial investment cost inevitable in the process of building up cooperation, it could also reflect the inherent difficulty of promoting collaboration among the numerous and diverse stakeholders involved in each area of sector development in Africa.

Another problem is that not all forms of aid are

fungible in the way that money is. In particular, technical assistance has unsubstitutable value due to the distinctive nature of each donor. Furthermore, when the development resources of the developing country are also taken into consideration, there could be areas which should be treated under separate funding accounts because of their differing natures. In the health sector, for example, these might include health insurance, pharmaceutical revolving funds, local cost recovery mechanisms, and local (municipal) government finances apart from the central government budget. It is therefore important to remember that providing assistance in the form of a singular common pool and budgetary support is not always the most appropriate approach.

V. Conclusion: Japan's Response to Sector Programs

Regardless of whether or not there are formal sector programs, the coordination of all forms of aid in Africa must proceed with the following objectives in mind: to fully coordinate sector development policies and activities under a comprehensive macroeconomic policy; to resolve the problem of "aid bombardment"—the lack of coordination and balance between the volume of aid and recipient country's aid absorbing capacity—and thereby enhance the overall effectiveness of aid and development intervention; finally, to promote more participation by and information sharing among stakeholders, both local and foreign.

There is a large diversity in aid-absorbing environments among developing countries, notably in terms of their varying forms of government. In considering aid coordination, it is probably therefore wise to accept that there is no universally correct solution either for Africa or elsewhere. It also goes without saying that Japan cannot expect to encounter the same conditions in African countries that it found in East Asia, where it enjoyed close partnerships.

Nor can current aid coordination efforts, which at first glance appear to represent excessive intervention on the part of donors, be condemned outright. Rather assuming African countries and aid donors take poverty reduction to be their common goal seriously, then aid coordination which strengthens ties from the macro-level of PRSPs right down to the project level, with sector programs being the pivot, should be welcomed as the realization of development partnership in Africa. Japan's aid to Africa can no longer be implemented without due consideration of these trends, especially if those efforts prove to be effective in achieving the three objectives noted above.

However, as many people active at the front lines of aid are sensing, the more solid such partnerships become, the larger becomes the danger that they will undermine ownership of the recipient country.

Perhaps this is where the true merit of Japan's philosophy of "self-help support" can be brought to bear. Learning from its experience in partnerships with Asian countries, it is essential that Japan strive to ensure that the aid-recipient governments hold some latitude of choice and room for trial and error. At the same time, it is important to promote greater openness of sector programs so that development partnerships are supported by a broader social base on the African side. The valuable lesson we should draw from our experience in East Asia is that it is precisely such broad social consensus that could make shared growth and the formation of the developmental state possible.

However, no matter how correct Japan's views may be, in areas where frameworks of aid coordination already exist, the reality of aid in Africa is that Japan will not even be able to express those views unless it participates in those frameworks. Based on its aid experience with East Asian countries relatively well equipped to absorb aid, Japan's current aid system was formed as an extension of the conventional approach of one-to-one bilateral aid. Under this system, Japan's response to the call for an aid coordination framework has so far been little more than merely a supplementary task. In order to formulate its own approach to the new aid environment, Japan urgently needs to establish a system that allows it to participate in frameworks of aid coordination including common pools.

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Feasibility of Greywater Treatment Using Algal Growth in Tropical Monsoon Regions

— Field Surveys of Waste Stabilization Ponds in Thailand —

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Sustainable development has been referred to as an overall goal for developing as well as developed countries, because of limitations on their available resources. Wastewater treatment should follow these principles, namely, resources and energy-saving strategies.

As the Thai people have adopted traditional sanitation using leaching cesspits, most of the sewage in Thailand is considered to be "greywater" with less human excreta contamination than true sewage. This greywater consists of fresh organic ingredients, which tend to be easily decomposed by the naturally occurring microorganisms in hot climates. Thus, it can be purified using a low-cost wastewater treatment option very similar to natural ecosystems.

Waste stabilization ponds are one of the energy-saving processes utilizing photosynthetic oxidation instead of mechanical aeration. Although algae are an indispensable component in the process, most of the pond systems in Thailand act as sites for primary production, but not for proper organic decomposition, this being due to the low organic content of the water.

However, it has been proved that the pond systems could be upgraded by adopting a multiple-step treatment process, which would enable the removal of nitrogen and phosphorus. There is also another possible advantage of greywater-fed aquaculture. High ratios of inflowing water-to-pond volumes cause slow water currents in pond systems. As a result, filamentous algae such as *Cladophora* replace phytoplankton as primary producers. The algal mat can be harvested easily with a net and dewatered by hand. The harvested algal cells containing a high nutrient concentration can be composted as a fertilizer.

There are still many ways in which waste stabilization ponds in Thailand could be improved as a means of sustainable wastewater disposal and nutrient recycling. This paper discusses the feasibility of greywater treatment linked with algal production in Thailand, with special reference to environmental sanitation.

Introduction

With the beginning of the 21st century, sustainable development has increasingly become the ultimate goal for every country to achieve, with the understanding from the scientific standpoint that the available global natural resources are limited. In response to the proposals of Agenda 21, Thailand is also aiming

to create a recycle-oriented society¹ with special consideration being given to the environment.

Human beings enjoy a wide range of activities in a society. It has been pointed out that human beings are not free from the constraints of "being an organism" that must continue its biological activities.² Food intake and excreta discharge are the major requirements for human beings.

This paper discusses the feasibility of wastewa-

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1. According to the guideline for sewerage in Thailand, formulated in line with Agenda 21, the Thai government has carried out decentralization and the establishment of a public corporation. Its aim is to construct 40 wastewater treatment plants in the country and to treat half of the wastewater generated in Bangkok. The government is also considering the construction of composting plants that utilize organic waste including sewage sludge. [www.un.org/esa/earthsummit/thai.cp.htm#chap21]

2. Mr. T. Ozawa, the former generalist on environmental issues at the Swedish Embassy in Japan, stated that "Human beings are basically animals through the 21st century," which means that we still need biological requirements as a component of global ecosystem. His personal website is as follows: [www.angel.ne.jp/~ozawa/]

ter treatment using energy-saving stabilization ponds which could contribute to food production as a low-cost alternative sewerage, based on the results of field studies carried out in Thailand.

Thailand is regarded as a potential developing center for South-East Asian countries due to its geographical location. Drawing up a strategy of wastewater treatment suitable for Thailand's climate is expected to lay the foundations for future technical assistance to other developing countries in tropical monsoon regions that have similar conditions.

I. Conventional Sewerage and Low-Cost Wastewater Treatment

Modern sewerage for improving public sanitation was initiated as a measure against cholera epidemics in the middle of the 19th century in England.³ It was designed to immediately remove human waste from the living environments. Disposal of excreta into rivers, via sewers, brought about pollution of the receiving waters. The response to this was the development of various techniques, such as trickling filter and activated sludge processes, for treating sewage. The modern sewerage is designed to transport a small amount of dirty waste in a large amount of clean water over a long distance, and then solids and liquid are not completely separated in the end.⁴ This is a basic contradiction to underlying ideology of modern sewage treatment as an end-of-pipe solution. Originally, feces and urine were a potential resource that could be used as a fertilizer, and it could cause eutrophication once the excess nutrients are discharged into semi-closed water bodies.

It must be noted that sanitation problems facing developing countries concern the safety of drinking water supply and human waste disposal, whereas Western-developed sewerage is based on a mixing these two contrastive materials: human waste and drinkable water. In other words, the Western-style sewerage is not always the best choice for developing countries. In the future, therefore, strategic development of sewerage alternatives that accommodate the existing technology to the local needs of each country will be required.

1. Global trend of alternative sewerage technology

Alternative sewerage is used to mean low-cost and/

or sustainable sewerage. The human waste treatment developed to date can be divided into two types: wet sanitation and dry sanitation. The latter dry sanitation, which is also referred to as ecological sanitation (EcoSan), employs a composting toilet with feces-urine separator through which urine is collected as a water-soluble fertilizer and feces are composted. Since this is a containment-type treatment with a zero-emission basis, which saves water resources and never contaminates natural water environment, it has the advantage of environmental sustainability. However, it may provide less comfort to the users of the composting toilet than conventional sanitation using the flush toilet. In order to promote the EcoSan technology, social and cultural factors need to be taken into consideration.⁵

Apart from current sewerage systems, Thailand has policies for disposing wastes separately according to their source of origin. The Thai-style flush toilet, in which a user flushes human waste with a minimal amount of water after use, is a part of those policies. Buildings and factories are obliged to install their own wastewater treatment facilities under Thai building regulations. In these circumstances, feces and urine do not go into sewers directly. The implementation of sewage collection and subsequent treatment systems would therefore imply a double investment in infrastructure.

By the end of 1999, 32 public sewage treatment plants were in service in Thailand. The observed results common in these cases were low levels of organic matter, which were less than 50% of the concentrations of the intended level.⁶ This is due to both minimal contamination of greywater by human waste and rapid microbial decomposition of organic matter at high water temperatures.

2. The geography of Thailand

Since sewerage can be defined as a water carriage system by which wastes are transported, true sewerage can be regarded as human waste diluted with sufficient water.⁷ Thailand that has not been affected by any country's occupation has independently developed a unique flush toilet (Stoll 1996) using leaching cesspits.⁸

Thai people often eat out at stalls. Although left-over food is supposed to be separated, the liquid fraction is usually disposed of in side gutters on the lane. This waste liquid is a source of sewage. Thai sewage contains fresh organic matter, which is known as

3. Modern sewerage started as a measure against cholera epidemics in England. Sir Chadwick, the official in charge of governmental administration at the time, is well known as the originator of public health.

4. Dr. R. Goodland of the World Bank, pointed out that modern sewerage has some problems in terms of environmental sustainability. For details of this view, refer to the relevant website offered by the United Nations Environment Programme (UNEP). [www.unep.or.jp/ietc/Publications/INSIGHT]

5. *Ecological Sanitation Manual*, published by Sweden International Development Agency (Sida), was translated into Japanese by Japan Toilet Association. The translation was supervised by Prof. S. Matsui: *Ecological Sanitation*, Japan Toilet Association, 2001. p90.

6. Based on surveys, including facilities under Bangkok Metropolitan Administration (BMA)'s jurisdiction, conducted by Ms. Piyaphan, the Material and Research Division (MRD) of the Public Works Department (PWD).

7. Theoretically the sources of sewage content are considered to be feces, soil, wastes from industrial plants, and others (e.g. livestock, clinical practices, and laboratories), as pointed out by Takeuchi (1999).

8. According to Dr. Stoll of the German Development Bank, domestic toilets are leaching cesspools with a soil-penetrating blanket around two tanks. When the cesspools are blocked up, BMA's Public Cleansing Department sends a vacuum truck to remove sewage sludge upon request.

Table 1 Wastewater classification based on source of origin and the treatment*

Type	Sources	Applications
Sewage**	Toilet, kitchen, and bath	Public and private sewerage
Black water	Wastewater from toilet	Digestion tank (night soil)
Greywater	Kitchen and bath	Thai-style sewage
Light greywater	Bath, face wash	Thai domestic wastewater
Yellow water	Urine	Used as liquid fertilizers
Brown water	Feces ***	As composting materials

Note:

* Classification by Henze and Ledin (2001), partially modified according to actual conditions in Thailand.

** BOD level is not less than 200 mg/L.

*** There may be a risk of infectious diseases, but proper composting does not have any public health risk.

greywater.⁹ The predominance by greywater excluding human waste is essential to consider the means of controlling water pollution in Thailand.

Recently, wastewater has been categorized according to its properties from the viewpoint of source of origin and subsequent treatment (Table 1).

Thailand, which belongs to the tropical monsoon region, has constant temperatures but distinct rainy and dry seasons. The Thai lowlands suffer from frequent floods during the rainy season. Sewerage has also played an important role in controlling floods. The primary reason for laying sewers in Thailand was to remove excess rainwater.¹⁰ This differs from Western countries, where the sewerage networks were developed for the purpose of removing human waste from the living environment as a measure to prevent cholera.

Thai sewers were laid before the construction of the wastewater treatment plants in order to prevent storm-water from overflowing onto the road. They are interconnected, forming extensive arterial networks.¹¹ Each end of the networks reaches relay pumping stations that lead to canals or other flood control sinks such as ponds and wetlands (Pollution Control Department, PCD 1993).

The sewerage systems can play a role to ensure urban runoff reservoirs during the rainy season. Since the sewerage networks are set almost horizontally, the water may be stagnant in the sewers. However, the excess water, including used water discharged from houses and other buildings, ensures movement through the sewerage networks which may flow either directions underneath the flat land.¹² It is estimated that it takes approximately five days (Takeuchi et al. 2002) for wastewater to travel from its sources to the terminal wastewater treatment plants.¹³ The longer residence time of biodegradable wastewater in sewers and the higher ambient temperature decompose organic matter.¹⁴ This partially decomposed wastewater of low organic concentration flows into

the treatment plants.

Interceptor pipes have recently been laid to divert the wastewater from waterways to the treatment plants in Bangkok. However, rapid microbial decomposition of organic matter in greywater could have occurred in sewers close to its sources. As a result, wastewater is highly diluted with storm-water during the rainy season or, alternatively, actively decomposed by microorganisms in the sewers during the dry season, keeping organic concentrations low throughout the year.

3. Current water pollution and wastewater treatment in Thailand

Thailand is recognized as a South-East Asian country that has rapidly and successfully developed its economy (Ishibashi and Takizawa 1998) although it faced a serious economic crisis in 1997. It is understood that environmental pollution, including water pollution, has expanded along with this economic development, as would be expected. It should be noted, however, that the tropical climate with its higher water temperature and high rainfall helps to prompt the self-purification of wastewater and diminish organic pollution of water environments (Acheson 1992).

The sewerage networks in Thailand started with introducing sewers to serve as urban storm-water drainage for the primary purpose of flood control. As the sewers lie almost horizontally and are not really designed to transfer the water to the terminal treatment plant, their capability of collecting wastewater is extremely limited.

Most areas of Thailand are low and flat. To collect wastewater efficiently, the water needs to be transported through gravity sewers set on a gradient via pumping stations, or actively transported to the treatment plants using a pressure assist. However it will require large-scale renovation work in cities that equipped sewerage, and new construction work will require capital and involve maintenance costs for

9. Table 1 shows a modification of the detailed classification of wastewater by M. Henze and A. Ledin (2001).

10. Based on the master plan of the Bangkok Metropolitan Regions (BMRs).

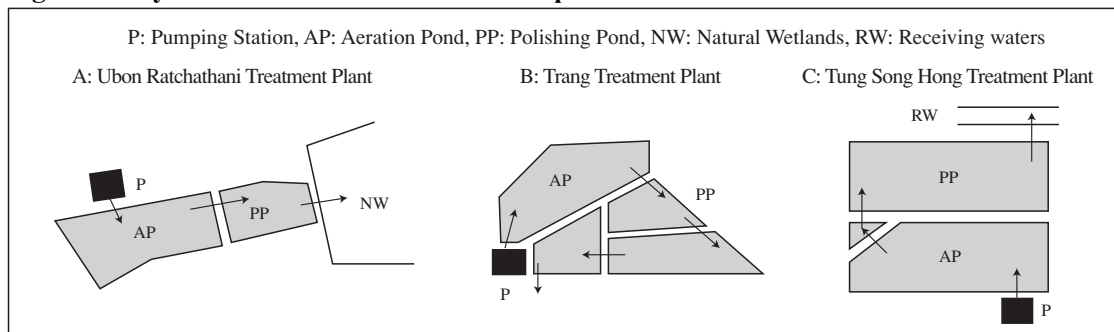
11. The study, conducted by Dr. M. Koga, JICA expert dispatched in 1999, revealed that rectangular sewers were susceptible to the accumulation of sediment, and about half of the effective volume of sewers was filled with sediment.

12. Mr. H. Matsui, JICA expert dispatched in 1997-98, was the first to point out that wastewater flows backward in some sewers depending on the discharge flow. Then, the authors observed the backward flow of wastewater when it was raining. This happened because the sewers did not have enough slope to push the water forward.

13. Average time of wastewater to reach the final treatment plant was estimated to be five days, based on decreases in the BOD levels and the succession of protozoan fauna in the water which were compared between freshly-discharged wastewater and naturally-aged wastewater that had been allowed to stand.

14. In general, biological reactions are largely affected by environmental temperature, and Q_{10} value is used to quantify biological reactions. Q_{10} usually ranges from 2 to 3, which means biological reactions occur two to three times faster when the temperature rises by 10°C.

Figure 1 Layout of the wastewater treatment plants



power pumps which are prohibited.

Due to these constraints, an alternative sewerage technology would be preferable for the Thai situation. There are some cases of introductions other than the specific treatment facilities (a rotating biological contactor has been commonly adopted) installed in public buildings and residential condominiums.

In addition, each wastewater treatment plant is attached to newly constructed industrial estates in the suburbs, where human waste, greywater, and treated industrial wastewater are collected together through sewers via the pumping stations. Since they have the same features as the ordinary Western-style sewerage systems, they work well because the plant and the incidental equipment are designed in an appropriate size.¹⁵ After all, the core of problems facing the existing municipal treatment plants originates from its low nutrient strength of influent as compared with the volume of bioreactors.

II. Functional Evaluation of Waste Stabilization Ponds in Thailand

Sewage in Thailand is commonly characterized by high treatability as well as its low organic content. When such wastewater is treated in a waste stabilization pond, mineralization of organic matter is so accelerated that algae are produced in a mass in the pond as a result of the nutrients released during the mineralization. Consequently, the waste stabilization pond tends to be a site of organic production rather than degradation. This is an unfavorable outcome in light of the purpose of sewage treatment. However, as the existing waste stabilization ponds can be improved from the viewpoint of environmental sustainability, we will report successful cases of stabilization ponds in Thailand as follows.

1. Ubun Ratchathani Wastewater Treatment Plant

1) Site description

This plant is located in northeast Thailand and originally designed as an aerated lagoon. However, it actually has the same appearance as that of a waste stabilization pond.¹⁶ The surface of the pond is covered



Photo 1 Dense blue-green algae (*Microcystis* spp.) accumulated on the banks of a waste stabilization pond

with blue-green algae (*Microcystis* is the most predominant genus) (Photo 1). Excess nutrients, namely, nitrogen and phosphorus are recycled via microbial decomposition of wastewater and exposure to sunlight in the hot climate produces a large amount of phytoplankton biomass in the pond. The local government has policies to prohibit the people from catching fish in the pond.

2) Field survey

Field surveys were carried out twice, in June 1998 and in July 1999 in response to a request from the local government to save electricity for operating mechanical aerators.¹⁷ One of the purposes was to examine possible intermittent operation of the aerators.

The facility is laid out as shown in Figure 1-A and consists of two ponds: an aeration pond and a polishing pond. The aeration pond was 3 m deep with an area of 24,000 m² and was equipped with seven aerators. The biochemical oxygen demand (BOD) value of the influent sewage was around 35 mg/L, less than half of that of sewage in Japan. This BOD level indicated that the sewage was subjected to self-purification in the sewers to some degree before it reached the treatment plant.

The treated sewage had a BOD value of approxi-

15. Some facilities in wastewater treatment attached to industrial estates, such as Nava Nakorn district located in the northern suburbs of Bangkok, are open to the public.

16. Aerated lagoon is defined as "activated sludge without the return sludge line" according to Prof. D. Mara of Leeds University. This means that it is natural that the aerated lagoon water appears brown because of the presence of activated sludge (Mara, 1975).

17. The authors accompanied counterparts and others to take part in a routine water quality examination, which was carried out at wastewater treatment plants in Thailand by MRD of PWD in 1998.

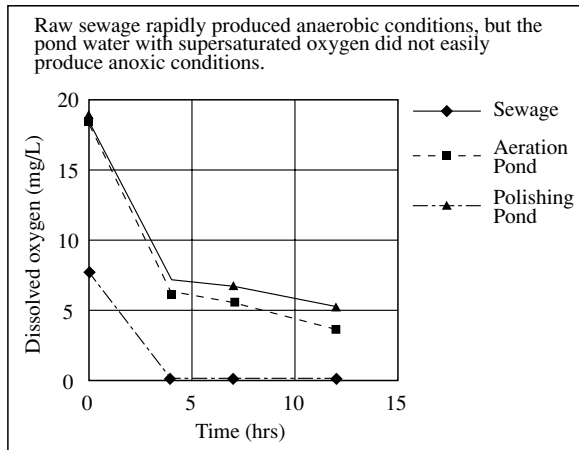
Table 2 Results of water quality analysis carried out at Ubon Ratchathani Plant

Tested on July 22, 1999 (units for chlorophyll *a*: µg/L; units for others: mg/L)

	BOD*	DOD	Filtrate COD	Chlorophyll <i>a</i>
Influent sewage	35	67	43	...
Aeration pond	...	92	22	354
Polishing pond	6	83	11	289

Note: * Based on the data by the Public Works Department (PWD) 's routine test.

Figure 2 Changes in dissolved oxygen (DO) in a dark bottle



mately 6 mg/L, which shows that the wastewater was largely mineralized. In addition, chemical oxygen demand (COD) values of filtered wastewater (potassium bichromate oxidation) decreased as the treatment process proceeded, which indicates that the function of removing dissolved organic matter worked well. However, the COD, an indicator of the total amount of organic matter in wastewater, was 67 mg/L in the influent, whereas it was 83 mg/L in the effluent.¹⁸ The mean residence time of the water in the aeration pond was 28 days. These results indicate that this facility shifts from being a site of decomposing organic matter to one of producing algal cells. This is also obvious from the chlorophyll content, indicating phytoplankton standing crop in the pond water.

Owing to algal photosynthesis, the carbon equilibrium is affected by the presence of algae and the pH of the pond becomes alkaline. In fact, the pH values of the surface water that contained abundant algae were almost as high as pH 10.

At night in contrast, since algae do not photosynthesize to produce oxygen, dissolved oxygen (DO) in the water is likely to be consumed. To simulate the

decrease in DO during nighttime, a portion of water samples was bottled in a DO bottle covered with aluminum foil and submerged in the pond water, and the decrease in DO (the amount of oxygen consumed) was measured. The results showed that decreases in DO were suppressed due to supersaturated oxygen in the pond water (Figure 2).

The vertical distribution of DO during daytime revealed that the pond water of bottom layer (2.5 m deep) had a constant DO value of around 2.5 mg/L.

With the cooperation of the local government, the aerators were completely stopped for 24 hours so that a sufficient DO level in the bottom layer water could be observed the following morning. The deficiency of DO was not observed before dawn when the DO level usually goes down to the lowest level in a day. The DO value was approximately 2.0 mg/L, which proved that the water would not run out of the necessary oxygen under the present conditions.

The actual measurements obtained in this facility are shown in Table 2.

3) Observations and possible solutions

As the field observation data show that the photosynthesis by phytoplankton provides sufficient amounts of DO to mineralize organic matter in sewage, the artificial aeration in the pond is not necessary. If waste sludge accumulates on the bottom of the pond, however, the bottom layer water might be in short of DO. In this case, DO might need to be mechanically supplied or the excess sludge may have to be dredged up for restoration. As most of the treatment plants went into service not long ago in Thailand, they have not yet experienced dredging of the deposited sludge on the bottom of the ponds.¹⁹

Algal cells overflowing out of the treatment ponds could cause secondary pollution of the resultant organic products. Installing a rock filter²⁰ or creating constructed wetlands as a post-treatment facility can prevent the leakage of algae. In order to respond to this problem in Ubon Ratchathani, effluents

18. BOD stands for biochemical oxygen demand, and is measured from a decrease in the dissolved oxygen in a bottle. Under the standard method, the bottle is incubated at 20°C for five days. A sample containing algae in the reproduction phase has unexpectedly low BOD levels, whereas a sample containing dead algae has high BOD levels. COD stands for chemical oxygen demand, the amount of oxygen consumed in the complete oxidation of organic matter in an effluent sample with an oxidizer (dichromic acid). Special attention is needed when comparing data of COD levels between Japan and Thailand. Japan uses permanganic acid as an oxidant because of fears of heavy metal contamination, resulting in low DOC levels for the same sample.

19. Mr. Y. Nagaoka, a JICA expert dispatched in 1998, collected mud samples in a canal in Bangkok. He reported that the collected mud was almost completely mineralized. According to a survey conducted by Mr. H. Oomura, a JICA expert dispatched in 1999, the predominance of bacteria responsible for decomposing high-molecular organic matter was observed in the sediment of the canal. These findings led the authors to project that sludge would hardly accumulate on the bottom of the canal and the frequency of desludging could be kept low.

20. Regarding rock filters that collect algae flowing out of stabilization ponds, refer to the following website of the Civil Engineering Research Institute, Leeds University: [www.leeds.ac.uk/civil/ceri/water/wsp/wsp-uk]

Table 3 Results of water quality analysis at the Trang Wastewater Treatment PlantTested on July 19, 1999 (units for chlorophyll *a*: µg/L; units for others: mg/L)

	COD	Filtrate COD	BOD	MBOD*	MBOD-N**	MBOD-P***	Chlorophyll <i>a</i>
Influent sewage	50	41	33	25	21	9	...
Aeration pond	164	33	27	33	32	>43	192
Polishing pond 1	76	...	15	109
Polishing pond 2	53	...	14	72
Polishing pond 3	48	30	11	6	14	4	49

Note:

* Inorganic nutrients were measured by adding organic matter (The values show the amount of biologically available nutrients).

** Inorganic nitrogen was measured by adding organic matter and phosphate (The values show the amount of available nitrogen).

*** Phosphate was measured by adding organic matter and inorganic nitrogen (The values show the amount of available phosphorus).

are discharged to nearby natural wetlands, taking advantage of its location (Photo 2). In spite of its appearance, a waste stabilization pond system is a civil engineering construction equipped with lift pumps. Even though it is built on lowlands, its embankment is designed to prevent a risk of unexpected submer-sion during flooding.

The natural wetland was completely submerged by a flood at the second visit. However, the transformation of excess organic matter into stable humus buried in soil as a sink can be evaluated as an option of waste sludge disposal that involves natural process.

In 1999, aquatic plants (a kind of lotus) began to grow thickly in the polishing pond, which is 2 m deep with an area of 6,500 m². A great number of aquatic plants were luxuriant in a waterway in the receiving waters, which might cause some problems to the local fishing. These plants need to be harvested as wastes, but permitting in-facility fishing or promoting aquaculture in the pond can recycle the excessive nutrients in a more useful way. India has successfully adopted wastewater-fed aquaculture in waste treatment facilities.²¹ Thailand is situated in a more advantageous position in linking wastewater treatment to the secondary aquaculture as an integrated solution, because Thai sewage will not have a health risk due to the fecal contamination.

2. Trang Wastewater Treatment Plant

1) Site Description

This plant is located in southern Thailand, and employs the aerated lagoon process. In reality, however, it consists of four ponds with mechanical aerators running intermittently in order to maintain their original performance. Fishing in the facility was not regulated, and gill nets for catching fish were placed in the ponds. In this facility not only fish but also freshwater shrimps were caught.

2) Field Survey

The field survey was carried out in July 1999 at the request of the Sanitary Engineering Division (SED). This plant operated successfully because there was less reproduction of algae in the final polishing pond



Photo 2 Landscape of a natural wetland behind the Ubon Ratchathani Plant

than in those of any other treatment plants. The purpose of this study was to determine the reasons for this successful operation.

The facility is laid out as shown in Figure 1-B. The depth of the water is 3 m for the aeration pond, 2m for the polishing ponds. The areas of the ponds are 47,000 m² for the aeration pond, and 21,000 m², 19,500 m², and 21,000 m² for the three polishing ponds, No.1, 2 and 3, respectively. The plant has a multiple-step treatment process, but not the standard two-pond design. Due to the spatial limitations of the close positions between inlet and outlet, the water travels successively through each pond module.

This study revealed that the four-pond system has a remarkable effect on the stepped purification of wastewater. Since a series of ponds formed an environmental gradient, the amount of chlorophyll *a*, indicating phytoplankton biomass, decreased as the water went from the first to the last polishing pond (Table 3). The amount of chlorophyll *a* in the last polishing pond reduced by more than 80 % of that of the Ubon Ratchathani plant. This suggests that the stepwise treatment process could prevent the over-grown algae from being washed out, which is supposed to be almost inherent to the waste stabilization pond process.

To clarify the most probable limiting factor of the primary production, biologically available nutri-

21. Wastewater-fed aquaculture is common in Calcutta, India (Edwards and Pullin 1990).

ent pool was assessed by the modified BOD (MBOD) method.²² The results indicate that phosphorus concentrations surpassed nitrogen concentrations in the aeration pond, whereas phosphorus and nitrogen were in short in the final polishing pond. The nitrogen shortage was also supported with the presence of nitrogen-fixing blue-green algae, *Anabena* spp., in the pond. In addition, it is assumed that the multiple-step treatment process helped to keep the final pond aerobic and allowed dissolved phosphorus to precipitate with clay minerals containing iron and aluminum. These water quality parameters explain a clear advantage of the multiple-step mechanism that could reduce the final algal production.

3) Observations and the possible solutions

This plant, in the second year of service, is regarded as being the most successful case in that algal growth is controlled in the final pond. This success is attributed to the multiple-step treatment process that needs a four-pond formation because of its layout limitations, i.e., the inlet and outlet must be adjacent to each other. Reducing the depth of the final polishing pond would also make the whole water column aerobic, leading to the further removal of phosphorus.

This finding suggests that partitioning the existing large waste stabilization ponds could practice step-by-step purification so that the final water quality should be significantly improved. Since fishing, in theory, is an action of removing nutrients from the water, fishing should be recommended to help control the total algal output.

3. Tung Song Hong Wastewater Treatment Plant

1) Site description

Sewage that is received at the Tung Song Hong Wastewater Treatment Plant, which is originally designed for a housing complex close to Don Muang Airport, contains human waste. Filamentous algal growth is seen in this pond and periodically removed by hand. This survey was requested by the Department of Drainage and Sewerage (DDS) of the Bangkok Metropolitan Administration (BMA) to understand the ecological role of these filamentous algae.

2) Field survey

A field survey was conducted in July 1999. The layout of the facility having a two-pond structure is shown in Figure 1-C. The influent wastewater had higher BOD values, which were about 70 mg/L on average. Anaerobic decomposition tended to be accelerated in the receiving basin, which made the water black.

A great number of water fleas (*Daphnia*, *Alona*, and *Bosmina* spp.) were observed along the banks of the aeration pond, which is 3.7 m deep with an area



Photo 3 Dried mat of filamentous algae at the Tung Song Hong Treatment Plant

of 12,500 m². *Cladophora* sp., a kind of green filamentous alga, fully covered the bottom of the polishing pond, which is 1.5 m deep with an area of 4,350 m². Since the polishing pond is shallow, it had a slow-moving water current (resident time: 1.5 to 4 days). These conditions might have contributed to competitive growth of the filamentous algae over the planktonic algae predominating in stagnant water. Algal colonies holding oxygen bubbles of a photosynthesis origin detached from the bottom of the pond were apt to be floated in scum (e.g., oily debris, dead organisms and fermented wastes).

3) Observations and possible solutions

Detached algae floating on the surface were collected manually with nets three times a week. The collected filamentous algae can more easily be dewatered than the planktonic green-blue algae (Photo 3). Although the air-dried algal mats are usually disposed of as waste, they can be recycled as green manure (Postgate 1992) because of its high nutrient content assimilated. Composting the algal mats through thermophilic aerobic digestion would be the easiest method for effective use.²³

Lower ratios of pond volume-to-influent volume could create slow water current in the pond. Besides, designing a shallow pond could also provide a niche for the benthic filamentous algae instead of the planktonic algae. These improvements based on hydraulic calculation enable us to manipulate a favorable algal group in the pond so as not only to remove nutrients from greywater, but also collect excess algae as biomass (biological resources).

Moreover, a cluster of filamentous structure of algae provides a habitat for other aquatic organisms. Water fleas grown in the structure are suitable natural food for fishes. Though wastewater treatment seems antithetical to food production, they are to be closely linked together in terms of matter recycling.

22. Modified BOD (MBOD) method is a bioassay that one of the authors (N.N.) developed in Brazil in 1974. This method was used to decide the limiting factors in determining the water pollution standard applicable for Lake Biwa, Japan (Nakamoto 1995).

23. Vietnam has a history of using nitrogen-fixing Cyanobacteria to produce green manure (Postgate 1992). Dr. M. Koga, a JICA expert dispatched in 1999, conducted an experiment to prove that excess algae can be composted by using thermophilic aerobic digestion process.

III. Sewerage Options Suitable for Thailand

Western-style sewerage is designed on the concept that human waste should be mixed with water to flush them away. In contrast, the biggest feature of sewerage in Thailand is separation of human waste from the sewerage system. Thus, in order to take advantage of this feature, it is reasonable to make sewerage plans keeping human waste and greywater separate.

The only problem concerning the present human waste disposal is the possibility that the Thai-style sanitation using leaching cesspits might contaminate the surrounding soil and groundwater. Replacing this traditional toilet with a composting toilet would prevent excreta from leaking to the environment, and enable them to be used as fertilizer. The compost produced as a byproduct of ecological sanitation should be useful in improving the soil condition and maintaining agricultural productivity in Thailand.

In general, constructed wetlands are often recommended to treat greywater,²⁴ in case human waste is separately treated. Under the tropical conditions in Thailand, however, the wetlands might cause reproduction of undesirable insects, such as mosquitoes and flies, and thus waste stabilization ponds are considered to be advantageous. These ponds also offer nurseries for dragonflies as beneficial insects, and can serve as a fishpond for commercial use. Concrete technology options for improving the existing waste stabilization ponds applicable to the Thai context are suggested below.

1. Linkage with aquaculture

Greywater can be treated in waste stabilization ponds, and be used as a nutrient source for aquaculture. Greywater with good treatability does not cause oxygen shortage in the water. Thus, there are no operating costs for aeration mixers. In addition, greywater with less human waste contamination has little risk of causing any sanitation problems to wastewater-fed aquaculture. An abundance of fish makes the ecosystem more integrated, resulting in reduction of the final algal density in the pond.

Marine fish inhabit an artificial treatment plant (e.g., an oxidation ditch, OD) influenced by seawater in coastal areas. In this situation, constructing a lagoon (equivalent to a wastewater stabilization pond) for marine aquaculture would be feasible. Producing feed from greywater can be incorporated into shrimp hatcheries and farms. According to Dr. Putth of the Marine Shrimp Research and Development Center, there are many technical similarities between lagoons and nurseries. Treatment of used seawater and recycling of purified seawater for aquaculture has already begun in southern Thailand as a field trial.

2. Advanced treatment with multiple-step process

Construction of multiple small wastewater stabilization ponds is more advantageous in many ways over that of a single large one. First, nutrients decrease step-by-step according to the gradient generated by the multiple-step structure, as proven by the Trang Treatment Plant. The idea of multiple-step treatment process would be applicable to any type of pond/lagoon system.

Moreover, converting a spare pond into a shallow wetland would make commercial plant production possible. Actually, Phak Bung, a kind of vegetable, grows along the bank of the polishing pond in the Ubon Ratchathani Treatment Plant.

The wetland will also make it possible to trap the overflowing algae to achieve incorporation of organic matter into the soil. The organic deposits in the sediment can be exposed to aerobic decomposition through periodic drying in the sun. The strong tropical sunlight can be used to dry up the bottom mud.

In addition, as construction of each unit of pond series can be phased in to meet the increasing amount of influent sewage, the multiple-step treatment process is also reasonable in terms of planning and design of sewerage.

3. Composting excess algae

Generally, construction of a wastewater stabilization pond requires a large area, and so is unfeasible in the city. However, ponds can be designed small so that filamentous algae can be artificially grown to transform nutrients in greywater into excess biomass.

Natural composting of algae alone, however, might be slow because algae are mainly composed of fibers. Thus, composting collected algae with kitchen waste such as leftover food generated in the cities may be an option.

Cladophora, water hyacinth and duckweed are potential excess biomass that can be composted. The compost rich in fibers and nutrients would contribute to maintaining and recovering soil fertility in Thailand.

Concluding Remarks

This paper has discussed that greywater treatment with algae is very promising in Thailand from the viewpoint of environmental sustainability. Japan has not yet accumulated the technical data to transfer the wastewater treatment technology using waste stabilization ponds or lagoons, because it has mainly adopted the conventional activated sludge process and its variant. Recently, waste stabilization ponds or lagoons have been discussed in regions with different climates (Arther 1983) because of their low-cost and energy-saving strategies.²⁵ Germany has set

24. For details on greywater and its simple treatment methods, refer to the following websites: [www.greywater.com/synopsis or www.clivusmultum.com/greywater].

25. Wastewater treatment using waste stabilization ponds has been carried out in tropical regions. Having recognized the feasibility of this treatment in warm and cold regions, support groups have been established to spread it, and technical guidelines for it have been issued.

a precedent by introducing this treatment, and even in Britain, a country with similar climatic conditions, there is a movement to introduce it in terms of fixation and emission reduction of carbon dioxide (Mara and Person 1998).

This study clarified the problems related to the existing stabilization ponds in Thailand, and offered suggestions for improvement based on field data. The wastewater treatment with algae suggested in this study is applicable to all sewerage systems irrespective of water quality. The authors hope to see that the views offered in this paper help Thailand to improve the function of wastewater stabilization ponds and to use limited resources more effectively.

As only a few engineers specialize in algal research in Japan, we hope this study will help this technology-transferring donor with technology cooperation guidelines.²⁶

Before the development of modern sewerage, every region had a unique excreta disposal. Asian countries, in contrast to Western countries, have a history of creating unsophisticated but recycle-oriented societies. These traditional sanitary solutions which are outmoded but seem to be somewhat reasonable.²⁷ Thus, a partial modification of basic technology, if suitable in terms of economic conditions, life styles, and land conditions, would be a desirable application of technology transfers to improve the present system (Hayase 1999).

Evidently, a cheap stabilization pond system offers a good opportunity not only for recipient countries but also donor countries under the official development assistance (ODA) schemes to review environmental sustainability.

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26. The technical applications that are suggested in this paper would be suitable in tropical monsoon regions such as Southeast Asian countries with similar climates to that of Thailand.

27. The existing sewers are designed to control floods, and are not sloped enough to transport suspended solids. Currently both Japanese and Thai civil engineers agree that reconstructing the sewers into ones with an adequate slope will involve technical and financial problems. Even though Western-style toilets are ubiquitous in Thailand, Thai people are unlikely to use toilet paper.

Introduction of the Community Health Direction in Tertiary Medical Institutions

— A Trial in the Bach Mai Hospital Project for Functional Enhancement in Vietnam —

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It is a growing concern in international cooperation how to utilize limited resources most effectively to benefit the maximum number of people. In the field of medical cooperation, it is extremely important to establish an appropriate hospital linkage and a referral system from the primary level up to the tertiary one, and to provide effective technical guidance from upper to lower levels, which will surely make the cooperation highly effective. This study was conducted to consider an appropriate implementation method of technical cooperation in tertiary institutions.

The Bach Mai Hospital Project for Functional Enhancement has been underway since January 2000 in a tertiary hospital, Bach Mai Hospital (BMH), in Hanoi City in Vietnam. As a part of this project, technical guidance has been provided to local (provincial, district and village) hospitals—mainly provincial hospitals—from the beginning, as one of the tertiary hospital endeavors integrated into the technical cooperation program. Prior to the application of this new approach, a primary study was conducted to examine the situation of local hospitals, their relationship with BMH: annual referral cases on average are 377 per hospital, and 52% of the hospital staff have been trained in BMH. Based on these results, BMH has planned and conducted a directive guidance to local hospitals.

Since the project was initiated, training of local hospital staff and information exchange on referral cases between BMH and local hospitals has been successful. The results of the primary study have been extremely useful in planning and monitoring the project activities. It could be concluded that integrating the community health into a project for a tertiary medical institution from the initial stage is highly effective in extending the benefits gained from the project. It will be increasingly necessary to incorporate comprehensive perspectives in planning hospital-based projects and making them more effective, efficient, and beneficiary, in due coordination with other assistant programs.

Introduction

Hospital medical services play an important role for diagnosis, treatment, and prevention of diseases in developing countries. While tertiary institutions bear responsibility for many healthcare and hygiene missions relating to the population and residents over large areas, primary and secondary medical services are much closer to ordinary residents. It is of vital importance to the improvement of medical systems in developing countries to establish an appropriate hospital linkage from primary and secondary to tertiary institutions for efficient cooperation (Unger and

Criel 1995, Yoshitake et al. 1998, Hasegawa 1998).

Recently, international medical cooperation is showing growth at the primary level, including disease prevention. On the other hand, and although traditional medical cooperation for large hospitals has been conducted with non-negligible results, such cooperation tends to be subject to debate over the cost performance of its large budgets. Technical cooperation especially directed to large hospitals may not necessarily benefit many residents and tends to lay a heavy burden on hospital budgets (Uehara and Wagatsuma 1990). For hospital cooperation, it is preferable to build up a beneficial policy aiming at improvement of health and medical services for the resi-

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dents by working with lower level institutions such as district hospitals and village health-stations (Yoshitake et al. 1998).

In Vietnam, medical services once devastated by the war have been the focus of a government drive to improve the difficult financial conditions existing since the end of the war. Government efforts have translated into improved health and medical indices, significantly better than those in the surrounding countries; average life expectancy (67.3 years), infant mortality rate (3.7%), vaccination rate (96.4%), percentage of health and medical services expenditure to the national budget (5.7%) (Health Statistics & Information Division, MHV 1999). However, many medical institutions are facing serious problems such as superannuated facilities and buildings, inadequate staff discipline, and delayed treatment for non-infectious diseases and traffic accidents which are currently on the increase. To cope with these problems, the government has elaborated the Basic Strategy for Health and Medical Services Policy in 1993 and the New Basic Strategy for Health and Medical Services Policy in 1998. The most pressing issue for the health and medical services is the provision of a medical network including tertiary hospitals.

Since January 2000, a technical cooperation project has been conducted in the capital, Hanoi City at the Bach Mai Hospital, hereafter BMH, by the Japan International Cooperation Agency (JICA). This project aims at improving the quality of medical services in BMH, a tertiary hospital in the northern region of Vietnam, and the medical services' level in the region. A distinguishing characteristic of this project is that it includes not only technical guidance specifically directed to the large hospital, but also community medical services to benefit local areas from the initial stage of the project, an pilot case as a hospital project.

The situation in the targeted hospitals and their degree of expectation towards BMH were studied through a basic study prior to the inception of the project, and guidance to local hospitals such as provincial, district and village hospitals was conducted based on the results of the study. This paper examines the result of the above-mentioned "pilot case" to discuss the possibility of medical cooperation in a tertiary hospital.

I. Target and Method

1. Bach Mai Hospital Project and community health

This case study focuses on the direction activities conducted in the Bach Mai Hospital project in order to improve community health.

Since its establishment in 1911, BMH has contributed to medical services in the northern region of Vietnam. It is one of the largest general hospitals in Vietnam with 1390 beds, covering 31 northern provinces and approximately 25 million people (Vietnam



Photo 1 New BMH ward constructed as a Japanese government's Grant Aid Cooperation project

has 61 provinces and about 77 million people). BMH bears the responsibility for many missions including medical services, education, guidance and information services for the community, clinical research, disease prevention, and international cooperation. It also fosters many doctors and paramedical staff, as the most important educational institution of Hanoi Medical University. However, the hospital was facing a host of problems, such as obsolete facilities and equipment and staff indiscipline in the 1980s, deteriorating the level of medical services in the northern region of Vietnam. In October 1996, the government set up a master plan that aims to provide high-quality medical services to the residents of northern provinces by enhancing the functions of BMH, and initiated the hospital improvement activities (Bach Mai Hospital 1997).

From September 1998 to July 2000, a project was undertaken by Japanese government's Grant Aid Cooperation for BMH to construct the new ward and to provide medical materials and equipment. In addition, in response to the technical cooperation requested from the Vietnamese government, the five-year technical cooperation project was launched on January 10, 2000, based on the outcomes of various studies.

This project has its purpose of pursuing the most effective utilization of the input of the Grant Aid Cooperation, as well as quality improvement of the medical services in BMH. The project sets its overall goal to benefit the northern region of Vietnam, emphasizing the importance of (a) developing infrastructure as a tertiary institution, (b) contribution to community health, and (c) enhancing educational and training functions to achieve highly beneficial medical cooperation for hospitals. The technical guidance includes a wide range of fields from hospital management, clinical medicine, nursing management, clinical examination, to community health. A close relationship between BMH and Japan continues to grow rapidly through the Grant Aid Cooperation and the subsequent technical cooperation project. The new ward symbolizes friendship between Japan and Viet-

Table 1 Relationship between local hospitals and Bach Mai Hospital (in 1998)

No.	Hospital name	Type	No. of beds	No. of referred cases to BMH	No. of staff reeducated in BMH
1	Dong Da	Hanoi Municipal General	240	101	**
2	St. Paul	Hanoi Municipal General	450	*	16
3	Bac Ninh	Provincial General	400	265	11
4	Bac Giang	Provincial General	500	272	18
5	Lang Son	Provincial General	250	276	7
6	Ha Nam	Provincial General	350	78	24
7	Nam Dinh	Provincial General	400	255	16
8	Ninh Binh	Provincial General	350	1126	3
9	Thanh Hoa	Provincial General	620	918	6
10	Nghe An	Provincial General	500	380	4
11	Ha Tinh	Provincial General	500	498	12
12	Quang Binh	Provincial General	400	218	4
13	Thai Binh	Provincial General	600	672	4
14	Hung Yen	Provincial General	350	110	2
15	Hai Duong	Provincial General	500	153	2
16	Vietnam-Czech Friendship	Hai Phong Municipal General	600	258	47
17	Quang Ninh	Provincial General	380	274	1
18	Vinh Phuc	Provincial General	300	369	16
19	Phu Tho	Provincial General	300	1,441	3
20	Tuyen Quang	Provincial General	305	216	0
21	Ha Giang	Provincial General	200	257	8
22	Thai Nguyen	Provincial General	500	233	16
23	Bac Can	Provincial General	200	*	8
24	Cao Bang	Provincial General	230	297	15
25	Ha Tay	Provincial General	350	542	9
26	Hoa Binh	Provincial General	250	367	3
27	Lao Cai	Provincial General	150	137	8
28	Yen Bai	Provincial General	220	85	2
29	Lai Chau	Provincial General	250	*	**
30	Son La	Provincial General	300	*	**
31	Hai Ba Trung	Hanoi Municipal General	450	*	**
			Total:	9,798	265

Note: *Not surveyed/no answer, **Unknown

Source: Based on questionnaires and interviews to each hospital and reference material from various ministry health bureaus.

nam (Ohara 2000) (Photo 1).

In August 1998, the Direction Office of Healthcare Activities at Provincial and Lower Levels (hereinafter referred to as DOHA) was established in BMH before the technical cooperation project began, aiming for the improvement of the hospital's functions to extend the maximum benefit to the local residents with improved medical services. Staff composition includes one director, four full-time doctors, one full-time nurse, one part-time doctor, and 30 doctors serving in each service section (as of August 2001).

2. Basic study concerning community health direction

A basic study was conducted to obtain information and materials necessary for planning and monitoring the community health guidance activities. By selecting target local hospitals (mostly provincial hospitals) closely related with, and located in the BMH

referral range, disease trends and hospital situation in the province, their relationship with BMH and requests to BMH were studied (DOHA-BMH 2000, Nguyen et al. 2001).

The basic study was conducted for four months from August to December 1999. Table 1 shows the details of 31 targeted hospitals.

- (i) Founded by: Province (27 hospitals), Hanoi City (3), Hai Phong City (1)
- (ii) Number of beds: 200 or less (3 hospitals), 220-400 (18), 450-620 (10)
- (iii) Location: Northern mountain region (16 hospitals), Red River Delta (11), northern and central, coastal regions (4)

The field studies were carried out through observation of actual conditions, interviews and questionnaires. Information on the status quo of medical services in the province was collected from the Provincial Health Department and the Ministry of Health.

Table 2 Training sessions for local hospital staff (at Bach Mai Hospital in 2000)

Training items	Duration (days)	No. of Trainees	Evaluation *	
			Exam. (before)	Exam. (after)
ICU	60	40	55	75
Nursing management	60	40	60	72
Pediatrics	60	40	46	79
Gastroenterology	60	40	Not examined	70
Cardiology	60	40	49	68
Infectious and tropical diseases	60	40	Not examined	80
Biochemistry	90	50	Not examined	74
Nosocomial infection control	2	130	48	84
Hospital management	2	230	Not examined	Not examined

Note: *Evaluation was made through pre- and post-training examinations. The table above displays average examinee score (out of 100 points). 30 percent of questions in post-training examinations were identical to those in pre-training examinations. In addition, post-training examinations are slightly more difficult than pre-training examinations.
Source: Based on data from Training Evaluation Committee, DOHA, BMH

The information was sorted and analyzed after discussion with the staff members of DOHA in BMH. An overview of local medical services and systems in Vietnam was made based on the data from Ministry of Health (Health Statistics & Information Division, MHV 1999, MHV 1999).

3. Overview of community health direction activities in the Bach Mai Hospital Project and evaluation of the training sessions

The community health direction activities conducted in the project are outlined in the chapter II Result. To evaluate the result of the training, examinations for the participants were carried out before and after the training to evaluate the result (Table 2).

II. Results

1. Basic study

1) Features of Vietnam's medical services systems and community health care policy

A healthcare network has been structured for various levels ranging from the national to the village level (Figure 1), implementing a generous policy for war-wounded, poor and minority people (MHV 1999, UNDP 1999).

The following is the outline of the community health service policy by Ministry of Health from 2001 to 2010: Improving the health and medical services at each level in order to provide access to high quality medical services for all people. Towards this goal, it is important to develop primary health care, improve the provincial and district hospitals' functions, develop tertiary hospitals, and enhance health and medical systems including the referral system. Furthermore, it is important to promote provincial hospitals and prevent the overconcentration of patients to tertiary hospitals in major cities, as well as to construct a system in which upper level institutions effectively guide lower level institutions (from tertiary institutions, provincial hospitals, district hospitals to health care

posts) (Government of Vietnam, 2001).

2) Disease trends

All hospitals show sharp increases in non-infectious diseases such as malignant tumors, high blood pressures, apoplexies, heart diseases, diabetes and traffic accidents in addition to diseases with traditionally high incidence, such as infectious diseases and perinatal disorders.

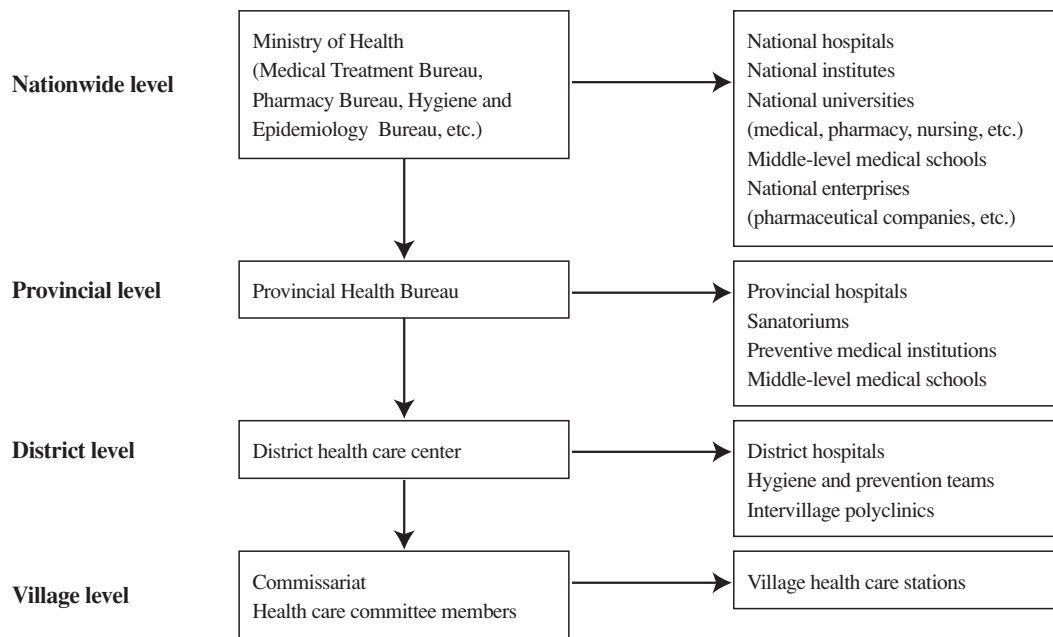
3) General information about the hospitals

In the 31 hospitals that were studied, average number of patients was 14,583 in 1997, 16,284 in 1998; average length of stay was 8.7 days in 1997, 8.9 days in 1998; and average bed occupation rate was 112% in 1997, 117% in 1998. Average possession of major medical equipment was as follows; regular X-ray equipment 48%, ultrasonic diagnostic equipment 100%, color Dopplers 23%, endoscopes 74%, electrocardiograms 35%, respirators 100%, essential biochemical/hematological analyzers 100%, ELISA readers 26%, artificial dialyzers 23%, and CT scanners 3%.

4) Relationship with BMH (see Table 1)

- (i) Number of patients transferred to BMH: The study was conducted at 26 hospitals. Total number of patients sent to BMH by these hospitals annually was 9,798 (patients per hospital on average: 377).
- (ii) Reeducation in BMH: Trainees were invited from 27 provincial hospitals. Total staff numbers (doctors, nurses, and paramedics) reeducated at BMH for ICU, digestive diseases, neurological disorders, infectious diseases, etc. were 265 (trainees per hospital: 9.8).
- (iii) Guidance conducted by BMH staff members dispatched to the local (provincial, district and village) hospitals: 186 guidance curriculums were implemented for 15 provincial hospitals (number of dispatched staffs: 276).
- (iv) 52% of doctors in the targeted hospitals had been educated or trained in BMH previously.

Figure 1 Health care and medical services systems in Vietnam



Note: The healthcare network has been organized from the national to the village level. The referral system has been operating under the network.
Source: Based on the data from Ministry of Health.

5) Requests to BMH

Major requests to BMH from the targeted 31 hospitals to the study were as follows;

- (i) To provide information, such as health conditions, about patients sent from local hospitals to BMH (requested by 31 out of 31 hospitals)
- (ii) Guidance on medical technology including diagnosis and treatment, especially for digestive diseases, infectious diseases, cardiovascular diseases, and ICU (requested by 31 out of 31 hospitals)
- (iii) To provide information of the latest medicine (requested by 24 out of 31 hospitals)
- (iv) Support for research and seminars (requested by 21 out of 31 hospitals)
- (v) Advice on purchasing medical equipment (requested by 4 out of 31 hospitals)

6) Participation in national health care programs

Vietnam's Ministry of Health is carrying out 22 national health care programs and each one of the targeted hospitals has participated in one or more programs; acute respiratory infections control program (21 hospitals), diarrheal diseases control program (21), AIDS control special program (19), safety transfusion (21), and malaria prevention (14).

2. Overview of community health direction activities in the Bach Mai Hospital Project and evaluation of the training

Before the establishment of DOHA, each service department at the hospital had conducted guidance and training for local hospitals at provincial, district and village levels without being supervised by a specific section responsible for integrated management.

DOHA was established to manage these activities for effective implementation. Although each service department is still undertaking some form of training, lectures, study sessions, and workshops—usually small-scale and over the short term—, DOHA has began to check and control these activities. The evaluation process of the major activities and the training conducted to date since the establishment of the department is described below.

1) Activity planning

The activity plan of the project is made based on the result of field studies at the 31 abovementioned hospitals. The plan is set up with the cooperation of DOHA, each department of BMH, and experts from JICA, and approved by the director prior to the preparation and implementation of the project.

In order to draft the plan, it is important to focus the basic policy of the Ministry of Health (giving high priority to provinces which are either in mountainous areas, separated and started recently, or problematic), requests from local hospitals, and the guidance ability of each BMH department. In giving guidance to the provincial hospitals, a special consideration is given to the possible benefit for the local areas that the targeted provincial hospitals cover. Thus provincial hospital staff members are prompted to educate medical staff at district- or village level institutions. Post-training evaluation and reporting sessions are also held.

2) Training sessions conducted in BMH

In 2000, training sessions were held nine times under the co-sponsorship of DOHA and the BMH Project

(see Table 2), mainly for doctors, nurses, and paramedics of provincial hospitals with a period of one to three months. Pre- and post-training examinations showed improvement of 24 points on average, and trainee questionnaire results showed high levels of satisfaction with the training (67% trainees answered the training was very beneficial, 33% of the trainees beneficial). In cooperation with experts from JICA, the textbooks and manuals are prepared prior to training sessions.

3) *Training sessions in local (provincial, district and village) hospitals*

The training sessions were held 14 times in the provincial hospitals in the northern part of Vietnam (in 2000). Doctors and nurses of district hospitals and village healthcare stations also participated in the sessions. Durations of the sessions were from three days to two weeks and numbers of participants were 50 to 100 (Photo 2).

4) *Answers concerning referral cases*

Answers concerning patients transferred from local hospitals to BMH are written by doctors of each department in BMH and are sent to the local hospitals by DOHA. Number of answers in 2000 was 735 cases.

5) *Medical information service*

Latest medical information is provided for local hospitals according to their requests.

6) *Primary medical activities*

A total of 31 doctors and nurses were dispatched to some remote places of the Tuyen Quang Province to provide primary level medical services in April 2000.

7) *Gathering information and creating statistics about local hospitals*

Available medical services information, such as diagnostics, treatment method, prevention, epidemiological information, and research information, answers the queries of local hospitals. Statistical information of local hospitals (mainly provincial hospitals) is gathered to create statistics indicating the outline, details of medical services, and the medical conditions of each province.

8) *Others*

Providing books and teaching materials, health check-ups in rural areas, emergency aids, research activities, used equipment, consultation for medical equipment and materials are also carried out.

III. Discussion

Recently, sharp increases not only in typical infectious diseases but also in malignant tumors, cardiovascular problems, and traffic accidents are present



Photo 2 Training session for infectious diseases in the Vinh Phuc Provincial Hospital (Sponsored by Bach Mai Hospital Project)

in developing countries, with medical service systems as of yet ill-prepared to cope with these problems (Murray 1996). There are too many referral cases from local (provincial, district and village) hospitals to many tertiary institutions than can be accepted, leading to many cases being excluded from treatment. While tertiary institutions in major cities have an important role to play for providing people with better medical services, it is also very important to bring up local medical institutions closely related to local residents, and construct and implement referral and information systems between local hospitals and tertiary institutions in addition to their traditional roles.

Historically, technical cooperation for major hospitals has been conducted mainly for clinical study at hospitals, with some attempts of technical cooperation subsequently extended from the hospitals to the community. However, if the second phase is not close in time to the first phase, cooperation often needs to be restarted again with the improvement of tertiary institutions. To avoid such a situation, it may be necessary for the tertiary institutions to actively conduct technical guidance for local hospitals by incorporating community health direction to the program, which will lead to the improvement of medical services at provincial, district and village levels in addition to the technical guidance to themselves.

The Bach Mai Hospital Project has been conducting activities to promote coordination between tertiary medical care and community medical services from the start, and has been on the right course of action so far. Being newly established before the project, DOHA has almost attained its initial target of planned activities. The outcomes of the basic study have been helpful to provide essential materials for planning an activity and monitoring the result on community health direction. Moreover, the study has made clear the linkage between BMH and local hospitals, and expectations to BMH from.

The attempt of the Bach Mai Hospital project can be an excellent policy implication in the sense that benefits brought by enhancement of tertiary hos-

pital function is likely to be efficiently extended to the community. The practice of "community health direction" agrees with the basic policy of Vietnam's Ministry of Health (Government of Vietnam 2001, MHV 1993). While the primary target of BMH community health direction has been provincial hospitals, the ripple effect is expected to continue on up to the primary level via guidance to district hospitals by provincial hospitals in the future.

However, "community health direction" is conducted within the framework of the Bach Mai Hospital Project and is, therefore, limited in its activities. Establishment of a referral system requires strong support from the government level and efforts from local hospitals as well as the understanding of local residents. To accelerate the extension of benefit from provincial central hospitals to lower level institutions including district hospitals and village health care stations, it is necessary to seek effective cooperation with projects targeting community development with local medical institutions as their core, as well as with other health and medical programs.

With a fundamental philosophy to use limited resources effectively, there will be increasing needs for international cooperation in the future. There is also a pressing need to think about more effective schemes for healthcare and medical services systems from a comprehensive viewpoint (Unger and Criel 1995). The attempt to establish a linkage between tertiary medical care in BMH and community medical services is a new approach for hospital projects to be considered when planning a tertiary hospital project.

IV. Conclusion

Local hospitals, including provincial hospitals, have greatly contributed to residents' health. Strongly related to BMH as the top referral hospital, much is expected of local hospitals for medical services. Guidance to local hospitals by DOHA, which was newly established for the technical cooperation project, has been well under way.

It is necessary to devise technical cooperation for major hospitals so that the benefit may take effect promptly by being linked to district and village level institutions. To promote the benefit, it may be profitable to put community health direction into the project for tertiary hospitals from the start.

In this case, guidance for local hospitals may consist of training, guidance for referral, making and distributing materials for training, providing medical information, supplying medical books and small equipment. To conduct guidance, it is helpful to study actual local hospital conditions (basic studies) and to

establish a department for health direction in local areas like DOHA. It is more effective to develop a system under which provincial central hospitals guide the district and village level institutions.

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Multi-schemed Assistance Centering on Project-type Technical Cooperation

— Lessons and Implications of JICA Family Planning/Maternal and Child Health in the Philippines —

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Among Southeast Asian countries, the Philippines stands out for the continuous increase in its population. Based on the idea of reproductive health advocated at the International Conference on Population and Development held in Cairo in 1994, JICA implemented a family planning/maternal and child health project in the central Luzon region of the Philippines using Project-type Technical Cooperation.

Because the project needed to administer a wide area covering six provinces, three local offices, in addition to the headquarters of the Department of Health, was established. This project was run by combining two types of operations: section allocation and segmentation of duties, that is, each expert took charge of two provinces along with his/her field of specialization. In addition to the main activities of maternal and child health and reproductive health-related activities, collaboration was undertaken with resident aid activities being carried out by NGOs. These varied activities have been developed since the outset. The project placed an importance on the demand-side approach, by actively responding to the needs of residents and requests from counterparts. Another significant characteristic was the active adoption of a multi-schemed approach in operating the project, which looks for a synergistic effect by combining various aid systems in Project-type Technical Cooperation. For example, while a total of 83 facilities, including rural health units, were established through a Grant Aid project, Project-type Technical Cooperation retrained the staff at the facilities. The project also provided training to health care workers and medical equipment for health care in alignment with JOCV's group dispatch program (the Front Line Initiative Program) in the population field. Furthermore, the project supported NGOs through JICA's Community Empowerment Program and Grant Assistance for Grassroots Projects implemented by the Japanese Embassy in the Philippines.

This project is outstanding in that it presents many ideas and lessons related to the activities and operation of the Project-type Technical Cooperation.

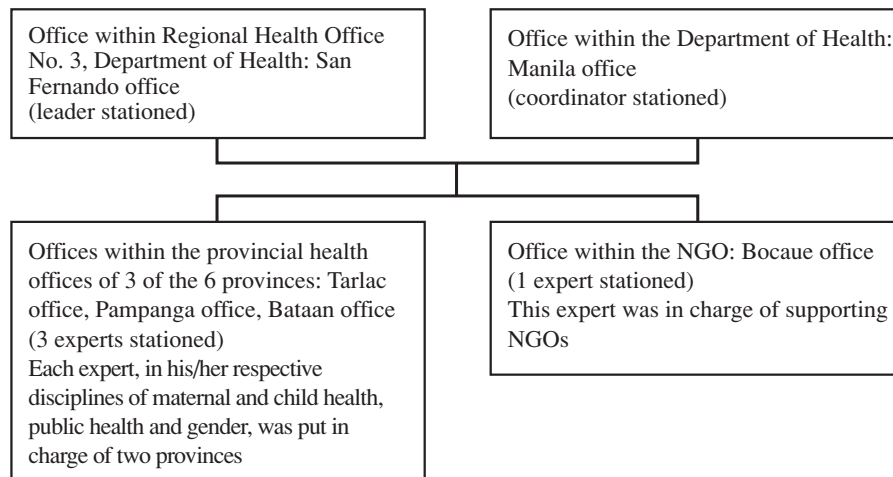
Introduction

The aim of much of JICA's Project-type Technical Cooperation is to set up model cases feeding back lessons and recommendations to the recipient country, and at the same time serve as experiments in de-

termining various approaches to how Japan as a donor country can provide cooperation. Consequently, just as the impact of project-type technical cooperation on recipients is evaluated, the management of Project-type Technical Cooperation must also be evaluated. The accumulation of examples of past Project-type Technical Cooperation will enable JICA

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Figure 1 Project administration chart



to learn and improve the management of new cases.

The Project-type Technical Cooperation described in this paper, the JICA family planning/maternal and child health project in the Philippines, not only incorporates a large variety of activities, but the way in which it was managed can be a useful reference elsewhere. Thus, this paper will describe the project's features from the viewpoint of project activities and management.

I. Background and History of the Project

The average rate of population growth of 2.1% between 1995-2000 in the Philippines is the third-highest in Southeast Asia after Laos and Cambodia (Marshall et al. 2000). The total fertility rate, at 3.62 between 1995 and 2000, is also still high (Marshall et al. 2000). Due to concerns that a rapid population increase will restrain socioeconomic development, the Philippine government has adopted various population and family planning policies, including requesting technical cooperation from the Japanese government in the area of population/maternal and child health care. Through JICA, Japan carried out Phase I of a family planning/maternal and child health project from 1992 to 1997 in Tarlac Province in central Luzon, which has a population of 900,000. Phase I successfully introduced the Maternal and Child Health Handbook, provided prenatal health examinations, and motivated citizens to take part in community activities. Phase II began in 1997 for a 5-year period with the aim of spreading these undertakings to other provinces. The field was extended to Region III which incorporates six provinces with a total population of 6.93 million, in 1995 (PNSO 1997). The six provinces were Tarlac, Zambales, Bataan, Pampanga, Nueva Ecija and Bulacan. This region adjoins the National Capital Region and the population growth rates of these provinces range from 2.6 to 3.2%, much higher than the national average (PNSO 1997).

Thus, the project site was selected targeting a region with strong needs for population control. When it began in 1992, the main activity of the project was family planning for population control. In Phase II the project has shifted its focus to a new approach based on the concept of reproductive health as espoused in 1994 in order to create conditions where women who wanted children could have them safely and raise them in sound health (MOFA 1996).

II. Section Allocation and Segmentation of Duties

In Phase I, since only one province (area: 3,000 km²) was involved and the Philippine counterpart for the project was the provincial health office, a local office was set up within the provincial health office and field experts were assigned to it. In addition, since the project required coordination with the Department of Health in Manila, 140 km away from the project site, the project set up another office within the Department of Health, where the project leader and coordinators were stationed.

When Phase II began, the project was expanded to involve six provinces, necessitating a different type of management. After studying various alternatives, it was decided to establish a project office within a new counterpart, Regional Health Office No. 3 in the Department of Health, where the project leader would be located and monitor the entire project (Figure 1). The project office within the Department of Health was retained as it was in Phase I, and staffed by the project coordinator. The six-province field was divided into three sections of two provinces each: local offices were established within the provincial health offices and staffed by one expert each who were given the responsibility for two provinces. At the same time, the three experts were also required to handle their respective disciplines of maternal and child health, public health and gender. If a problem in one particular expert's field arose outside of his/her assigned sec-

Table 1 Schemes used for each program

Project-type Technical Cooperation programs		Grant Aid	FLI*	Community Empowerment Program	Grant Assistance for Grassroots Projects	Collaboration with NGOs	
						Japanese NGOs	Local NGOs
1. Integrated maternal and child health program	Promoting Under Five Clinic (medical check for children under five)						
	Training health care center personnel						
	Training health care volunteers						
	Establishing a maternal and child health center function						
2. Reproductive health initiative program	Developing reproductive health education materials						
	Involving men in family planning						
	Adolescent health						
	Producing and distributing reproductive health videos targeted at adolescents						
3. Community activity support program	Supporting construction of simple toilets						
	Livelihood improvement by health volunteers						
	Producing and distributing health videos						
	Puppet theater activities						
	Supporting operation of village cooperative pharmacies						
	Supporting pharmacy management through revolving funds						
	Nurturing NGO federations						

Note: *FLI: Japan Overseas Cooperation Volunteer (JOCV)'s group dispatch program (Front Line Initiative) in the area of population and family planning.

tion, this expert would go to the section in question and work with the other expert covering that section to handle the problem. Accordingly, project administration was structured so that all activities were carried out by the expert assigned to the specific section together with the expert in the specific discipline.

Incidentally, this combination of section allocation and segmentation of duties is the method typically used in Japan with public health nurses working for community health. This combination is proven to be efficient to cover a large part of the target population and a large area with a small number of people, insofar as health center public health nurses in charge of several municipalities, or municipal public health nurses responsible for all the citizens in their communities, are concerned. This method of combining the two is a particularly effective way of administering projects such as this one, which cover a broad region and involve multiple counterparts.

III. Responding to Varied Demands

Another significant characteristic of this project was its broad range of activities because, from the outset, the project placed a high value on the demand-side approach. Various programs were undertaken although the project duly followed the scope of the Record of Discussions (R/D) between Japan and the Philippines (R/D is an agreement exchanged between Japan and the recipient country at the beginning of JICA's Project-type Technical Cooperation). The project, as it proceeded, began to actively respond to the demands voiced by counterparts and resident beneficiaries, and activities were added to the project based on needs and feasibility. Thus, support could be offered for various activities outside the narrow

definition of family planning, and maternal and child health.

As activities progressed, the broad-ranging project was divided into three programs (see Table 1 for details). The primary maternal and child health-related program, which included health examinations for infants and children under five, and the training of midwives and other health care center personnel, was classified as an integrated maternal and child health program. Reproductive health-related activities, covering adolescent health, the involvement of men in family planning and consideration for gender in health activities, were grouped into a reproductive health initiative program. Since both programs were designed in accordance with government population, and maternal and child health policies reorganized after 1994, and based on the idea of reproductive health advocated at the International Conference on Population and Development in Cairo, these included new activities begun in Phase II.

Even though the JICA undertaking was Project-type Technical Cooperation in population, and maternal and child health, it also carried out an extensive "community activity support program." Many of the sub-programs came about as a result of the demand-side approach. For example, support for operation of village cooperative pharmacies called *Botika Binhi*, identified as the most pressing need in surveys of residents, was begun in cooperation with the local NGO SMBK (*Samahang Maggagawa ng Binhing Kalusugan* — Group for Nurturing Healthy Seedlings). The livelihood improvement program through a sewing operation by female health care volunteers was initiated because these women, who underwent training in maternal and child health, formed an association of health care volunteers that voiced a need for this activity. Support for construction of simple

Table 2 Philippine public health administration system and health facilities constructed through Grant Aid

Administrative level	Health administration office	Health facilities built through Grant Aid
State	Department of health	
Region	Regional health office	
Province	Provincial health office	Maternal and child health centers (newly built in 5 locations)
Municipality	Rural health unit	Health units (Refurbishment of 18 locations)
Barangay (village)	Barangay health station	Health stations (Refurbishment of 60 locations)

toilets was offered after approaches by the local NGO SKGK (*Samahan ng Kababaihan ng Gatbuca sa Kaunlaran*—Women's Association for the Development of Gatbuca) aroused a strong response in experts who felt the necessity of raising awareness of proper sanitation among the male population. Other community empowerment-based activities, such as residents' participation in the showing of health care videos and puppet theater performances, resulted from requests by the provincial health offices. Of the abovementioned activities, support for operation of village cooperative pharmacies, construction of simple toilets and puppet theater activities were initiated in Phase I in Tarlac Province, but were extended to and established in Zambales, Bataan and Nueva Ecija in Phase II. Production of health care videos was started in Phase I, and by Phase II, nine videos had been completed and shown extensively at health care centers, schools, aboard long-distance buses, and on government information programs, and so on. Activities based on demand and the needs of counterparts and residents themselves, and those that are of great benefit to residents are likely to continue for a long time.

IV. More Variety of Inputs from the Japanese Side

The most significant characteristic of this project is the active adoption of a multi-schemed approach in operating the project. The multi-schemed approach is the combination of various aid systems other than the Project-type Technical Cooperation offered by JICA or Japanese embassies abroad. Aid systems other than the Project-type Technical Cooperation employed in this project included Grant Aid, JOCV's group dispatch program and Community Empowerment Program (these three being JICA schemes), and Grant Assistance for Grassroots Projects (Japanese Embassy scheme), as well as support through collaboration with Japanese or local NGOs. Cooperation was also extended to JICA's in-country-training, and collaboration with UN organizations was carried out.

Project-type Technical Cooperation is a multi-scheme approach by nature involving the dispatch of experts, the provision of equipment and the acceptance of technical training participants. However, it is an aid system which incorporates provision of

equipment and training of counterparts in order for technology transfers to be conducted more smoothly and effectively by experts, and budgetary amounts and aid beneficiaries were, therefore, determined within the scope possible for technology transfers. As this project had numerous counterparts in national and local governments, and its aim was a multidimensional improvement of community health by promoting resident participation and support to several NGOs, it necessitated incorporating various schemes into its activities implemented under Project-type Technical Cooperation. This was because the multi-schemed approach brought the following results:

- (i) More funds and manpower could be applied than is possible in Project-type Technical Cooperation, yielding a synergistic effect.
- (ii) The project was able to provide assistance for different purposes beyond technical cooperation aimed at by Project-type Technical Cooperation. In particular, the multi-schemed approach facilitated the construction of buildings and other infrastructure.
- (iii) The project was able to assist parties other than the recipients of Project-type Technical Cooperation. In particular, the multi-schemed approach made it easier to assist NGOs other than Project-type Technical Cooperation counterparts (which are often governments).
- (iv) Providing multi-dimensional support helped make Project-type Technical Cooperation itself more effective.

Table 1 shows collaboration with schemes other than Project-type Technical Cooperation for the respective programs. The following describes in detail the aims, the relationship with the Project-type Technical Cooperation employed, what was learned and the issues involved in each scheme.

1. Collaboration with Grant Aid Cooperation

The aim of the Grant Aid Cooperation in question was to improve rural health units and other health facilities in Region III, which is the field of Phase II, and to supply health and medical care equipment. Table 2 describes the structure of the Philippine health administration, and the names and number of the health facilities built with Grant Aid at each level. The maternal and child health centers serve as the main facility for each province's maternal and child

health activities, and were newly built as adjuncts to provincial hospitals. They provide various maternal and child health and reproductive health-related services, and also function as information centers and training centers for health care workers within the province. In Tarlac Province, the maternal and child health center had already been built using Project-type Technical Cooperation funds in Phase I, so one new center was built in each of the five other provinces within Region III. At the rural health unit and barangay (community or village) health station levels, no new construction was undertaken; instead, existing facilities were completely renovated. Three rural health units and ten barangay health stations in each province, for a total of 18 and 60 units, respectively, in the six provinces, were reconditioned. Accordingly, health care facilities were built in 83 locations under the project.

This project was one of the few in the field of health and medical care cooperation where Grant Aid was provided after the Project-type Technical Cooperation had begun. Grant Aid projects were identified simultaneous with the start of the Project-type Technical Cooperation. A time table was made which outlined that the basic design would be drawn up in fiscal 1999 (JICA, Kume Design, and Mohri Construction and Design Office 1999), construction would be undertaken and completed in fiscal 2000, and technical cooperation would be provided in fiscal 2001 under Project-type Technical Cooperation. The aim was for a multiplier effect to arise from the collaboration between the Project-type Technical Cooperation and the Grant Aid Cooperation. Consequently, it was possible from the design stage of the project to reflect the opinions of the experts and the know-how acquired through Project-type Technical Cooperation. This was because under technical cooperation rendered through Project-type Technical Cooperation,

- (1) the Tarlac Province Maternal and Child Health Center which had opened in Phase I of the project was used as a model for offering advice concerning effective administration of the newly built maternal and child health centers in the remaining provinces, and for retraining employees,
- (2) training was carried out at the renovated rural health units and barangay health stations, and
- (3) advice and guidance was offered concerning maternal and child health activities carried out at the newly built maternal and child health centers and the renovated rural health units and barangay health stations.

Among the lessons learned were that close communication between persons involved in the Project-type Technical Cooperation and the Grant Aid Cooperation allows activities to be carried out more effectively, and that it is important to clearly describe the role of the Project-type Technical Cooperation in the basic design of the Grant Aid.

2. Collaboration with JOCV group dispatch programs

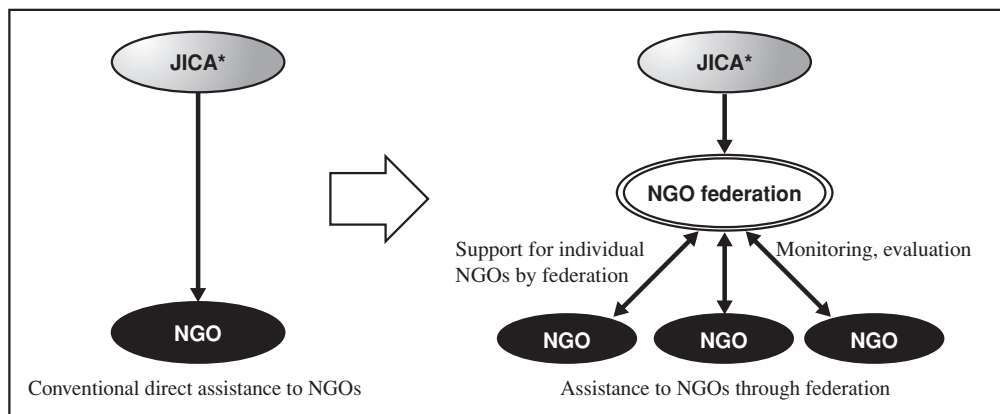
Since 1994, JICA's JOCV secretariat has been conducting Front Line Initiative (FLI), dispatching groups involved in the population and family planning field. JOCV volunteers, who come from various occupational backgrounds, have been dispatched so far to Laos, Bangladesh, the Philippines and Tanzania (JOCV, JICA 1994). As of May 2001, JOCV had dispatched six individuals with nursing or public health nurse qualifications to Region III of the Philippines, where the project fields overlap, two each to Zambales and Bataan Provinces, one to Bulacan Province, and one acting as senior coordinator. These volunteers were assigned to rural health units to transfer technology to their counterparts in the fields of nursing and family planning, and other fields.

In the regions where they were assigned, the volunteers were jointly involved in carrying out the activities conducted by the Project-type Technical Cooperation, such as the provision of equipment and collaboration with NGOs, and maintaining good cooperative relations with the projects. The detailed and accurate information provided by the volunteers, who were closely involved with the local areas, was very useful for the Project-type Technical Cooperation. At the same time, volunteers needed the wide-ranging information concerning the Department of Health which the Project-type Technical Cooperation officials had. There were, thus, valuable opportunities for both sides to exchange information in regular meetings.

3. Collaboration with community empowerment program

Using its 1998 supplementary budget, JICA initiated community empowerment programs, contracting with local foreign NGOs to delegate the work of directly assisting beneficiary residents. In the program's first year, the Philippines was selected as one of the target countries, and the JICA office in the Philippines requested Project-type Technical Cooperation officials in all fields to recommend suitable NGOs. The five NGOs which were selected in the end were all involved in medical cooperation, and three of them had been recommended by this project. The first NGO was one operated by the University of Regina Carmeli (URC), a Catholic institution, which became involved through this project in improving medical services in local hospitals and conducting community maternal and child health activities (University of Regina Carmeli 2000). URC also supplied personnel to the health unit where a JOCV volunteer (Ritsuko Inoue) had been assigned. The second NGO, operated by the Children's Medical Center, Philippines (CMCP), worked to improve medical care in clinics in rural communities and conducted public health activities. The third NGO was the Philippine NGO Council on Population, Health and Welfare, Inc. (PNGOC), the

Figure 2 Conceptual diagram of types of NGO support



Note: *indicates either JICA's local office or JICA Project-type Technical Cooperation, depending on the difference in schemes.

largest federation of NGOs in the field of population and reproductive health, which used the community's funds to hold various events, and develop education and education materials in this field.

The first two activities were significant attempts for NGOs. The NGOs conducted infant and child health checks, extension of Maternal and Child Health Handbooks and other activities, which had been done through public bodies such as provincial health offices and rural health units under this project. It was, however, difficult to sustain these activities as planned initially because of changes in NGO personnel and policies. As the activities themselves were carried out under contracts directly between the JICA office in the Philippines and local NGOs, the project's role as Project-type Technical Cooperation became unclear. Consequently it was concluded that it would be difficult to continue this type of involvement. The lessons learned here were applied to the development of NGO federations which will be described below.

4. Use of Grant Assistance for Grassroots Projects
Grant Assistance for Grassroots Projects, instituted in 1989 as a form of assistance capable of responding sensitively to varied needs at the grassroots level, is issued to NGOs and local governments and others through the Japanese embassies abroad. The Japanese Embassy in the Philippines is one of the few that employs a staff member on a contract basis who is knowledgeable about local NGOs and experienced in NGO activities. However, only limited funds were available to allow this individual to travel to local areas to select NGOs and to monitor grassroots aid activities. Since the counterparts involved in Project-type Technical Cooperation are usually government organizations, it is difficult for a Project-type Technical Cooperation project to actively provide financial assistance to local NGOs. Collaboration with NGOs, however, is unavoidable if a Project-type Technical Cooperation project is to support community-level ac-

tivities. Thus, the project recommended to the person in charge of the Grant Assistance for Grassroots Projects, the NGOs worthy of financial support. In exchange, the project proposed to undertake periodical monitoring of the NGO's activities (for a contract period of one year or less) conducted through the Grant Assistance. In other words, the interests of the person in charge and the project coincided. In this way, nearly ten NGOs, including SACOP (Social Action Center of Pampanga), obtained Grant Assistance for Grassroots Projects through recommendations of the project, and they continue to conduct health care activities at the community level.

5. Collaboration with NGOs

This project marked the first time that a Japanese NGO took part as one of the domestic steering committees of JICA's Project-type Technical Cooperation in the medical field. The NGO in question was the Association of Medical Doctors of Asia (AMDA). In addition to assigning doctors on a continuing basis as long-term experts to the project, AMDA also accepted counterparts to receive training in community health activities. Further, as is clear from the fact that many of the sub-programs of the "community activity support program" were created through collaboration with NGOs, from the beginning this project was undertaken in close collaboration with Philippine local NGOs (Hanada 1996).

The advantage of NGOs is that they are highly mobile and can respond flexibly and sensitively to residents' needs. Project-type Technical Cooperation, on the other hand, has on occasion been plagued by the unpredictability within NGOs in rapid staff turnovers and changes in basic policy, and so on. To address this shortcoming, the project nurtured NGO federations and attempted to indirectly support individual NGOs through such federations.

Aid organizations such as USAID (United States), AusAID (Australia) and CIDA (Canada) ac-

tive in the Philippines for many years have directly assisted NGOs. Beginning in the early 1990s, however, a shift occurred from direct aid to individual NGOs to assistance to federations (JANIC 1995). This shift took place for the following reasons:

- (1) Supporting federations can do away to some extent with the unpredictability involved in working with individual NGOs.
- (2) Through federations, support can be extended to weak NGOs as well.
- (3) Federations' abilities to monitor and evaluate the activities and finances of the NGOs under them can be strengthened.
- (4) The burden of donors having to deal with individual NGOs is lessened.

Using these prior examples as reference, in 1999 the project had 13 NGOs involved in maternal and child health band together as Luznnet (Luzon NGO Network), and assisted its development (Figure 2). Up to the present, in addition to Project-type Technical Cooperation, the following forms of assistance have been provided:

- (1) The Luznnet office was built on the premises of member NGO, IMMFI (Innocencio Magtoto Memorial Foundation, Inc.) through Grant Assistance for Grassroots Projects.
- (2) JICA's funds for monitoring grassroots projects were distributed, which improved the monitoring abilities of Luznnet member NGOs.
- (3) Within the community empowerment programs apportioned to the above-mentioned URC, Luznnet members received training to improve their management skills.
- (4) Nutrilinc, a Luznnet member NGO, became the organizer and launched a Community Empowerment Program.

6. Cooperation for In-country-training and collaboration with international organizations

With the role of women in development and population issues increasingly in the spotlight, the Philippines Population Committee sponsored local training for population measures officers all over the country under the theme of "gender and development towards the improvement of women's health and family welfare," which started in 1995 with 5-year period (JICA 1994). The project provided technical support, determining a curriculum reflecting the results of the project, and selecting lecturers, and so on.

Additionally, a range of coordination was maintained between this project and the United Nations Population Fund (UNFPA) in such activities as giving advice concerning JICA's provision of special equipment related to population and family planning, and mutual visits between experts on both sides.

Conclusion

Over the past few years, JICA's cooperation in the field of health and medical care has been shifting from an emphasis on hospitals, research centers and other facilities-oriented aid to primary health care and other community support activities. In the case of Project-type Technical Cooperation, which targets community level activities while covering a wide area, the method of administration through combining section allocation and segmentation of duties employed in this project may be useful in the future. Another important factor would be aid donors having an active attitude towards the demand-side approach in pursuing project planning that involves community participation.

JICA is currently in the process of developing an new assistance approach called "program support cooperation," where various schemes could be combined flexibly, as part of its strategy to reinforce its country approach. JICA's country approach working group defines "program support cooperation" as "the comprehensive activity of operating, supervising and evaluating various aid schemes which can be implemented by JICA for the purpose of achieving specific development goals, by combining the most effective and efficient ways, and by specifying clear-cut aims, inputs and scheduling." In other words, it defines "program support cooperation" as an efficient, effective and systematic combination of various types of assistance, centering on Project-type Technical Cooperation.

The case described in this paper, where a project and other various aid schemes were carried out in conjunction with the Project-type Technical Cooperation, can provide valuable lessons today when formulating such "aid programs." One difference with these programs is that the project in question employed not only JICA aid schemes, but also those implemented by the Japanese Embassy in the Philippines and Japanese NGOs (AMDA, etc.). Accordingly, the term "multi-schemed approach" was used to include aid schemes other than those of JICA. The multi-schemed approach described here was not something that was envisaged from the outset, but was something that evolved. As the scope of cooperation broadened during the process of operating Project-type Technical Cooperation, schemes were added. This approach also differentiates the project from other programs that attempt to combine various schemes in a planned and systematic manner from the beginning. Nevertheless, the experience with the multi-schemed approach adopted in this project can be considered a pioneering effort as far as "aid programs" are concerned.

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CASE STUDY

Management of Infectious Disease Control in a Decentralized Organization

— The Case of the Japan-Guatemala Project for Chagas' Disease Control in Guatemala —

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Disease control programs have been criticized for their vertical structure which is in opposition to the current trend toward decentralization of health systems. From the disease control point of view, drastic decentralization of an institution and personnel often results in a loss of operational capacity. A realistic adjustment of an organization is crucial for the process of decentralization as well as for the successful control of diseases.

This report describes the organizational management of the Japan-Guatemala Project for Chagas' Disease Control in Guatemala. The aim of the Project was to interrupt the vectorial transmission of disease by diminishing house infestations by triatomine bugs in the pilot area. The vector control personnel were distributed to Health Areas (HAs) and supervised by medical officers in charge who usually had limited experience in vector control. In order to assure the quality of the campaign, the vector control operators continued to require technical supervision from central staff.

Three different groups of people were sent from Japan to revitalize the supervisory channel between the central and HA levels. Four volunteers (Japanese Overseas Cooperation Volunteers: JOCVs) were assigned to the four HAs where the initial pilot campaign was envisaged. They assisted the vector control operators of each HA in terms of planning, monitoring and data management. A long-term expert joined the vector control staff at the central level to support the supervision of the decentralized campaign. Two short-term experts maintained contact with decision makers in the Ministry of Health and the Pan American Health Organization (PAHO).

While the short-term experts were chosen from experienced medical entomologists, the long-term expert and the volunteers were chosen for their managerial capacity rather than for specific expertise in health or entomology. In order to give them necessary knowledge and skills, a training component was incorporated into the Project. Pre-service training was given both in Japan and in Guatemala, followed by on-the-job training. Local universities offered lectures and conducted basic studies in exchange for manpower support by the Project. Partnership with PAHO was especially important in strengthening the political position and international recognition of the Project.

This case demonstrates that the dispatch of generalists from Japan can be useful in filling the gaps in decentralization when these generalists are involved in the international partnership.

Introduction

The health sector in most developing countries has been decentralized since the 1980s. This occurred in Latin America in the late 1980s through the initiative

of the Pan American Health Organization (PAHO). The member countries adopted the Local Health System (*Sistema Local de Salud, SILOS*) and divided the national territories into jurisdictions, also called *SILOSs*. The Local Health System (SILOS) was later

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renamed for each country. In Guatemala the system was called *SIAS* (*Sistema Integral de la Atención en Salud*, or Integral System for Health Care) and the national territory was divided into 27 *Areas de Salud* (Health Areas, HAs).¹

The main objective of decentralization was to locate the organization and resources closer to the community for more appropriate services. Although this is a reasonable idea for the long run, the transition from a centralized structure to a decentralized one sometimes created confusion. The most common shortcomings of rapid decentralization were the lack of skilled human resources in the periphery, and their lack of capacity in dealing with the local political power (Bash 1999).

Disease control programs were among the targets of decentralization because of their traditional "vertical" organization. Drastic change from a vertical to a decentralized structure often resulted in loss of operational capacity and subsequent failure in the control of diseases. Liease et al. (1991) conclude through analysis of cases from the Philippines, Brazil and China, that the best management for disease control is a combination of decentralized operations, centralized supervision, and quality control. Supervision and quality control are especially important for the programs toward eradication of the pathogens from the earth, or elimination of either transmission or public health problems.² Melgaard et al. (1998) list five health system elements (policy and strategies, organization, financial resources, human resources and health service delivery) and conclude that the implementation of disease eradication or elimination programs potentially presents both opportunities and threats to the health systems.

This paper describes the organizational planning and management of the Japan-Guatemala Project for Chagas' Disease Control in Guatemala, with special reference to the coordination between the central and decentralized health systems.

I. Background of the Project

Chagas' disease, or American human trypanosomiasis, is one of the major tropical diseases in the world. Nearly 20 million people in Latin America are estimated to be at risk for infection (WHO 1997). Chagas' disease is transmitted by blood-sucking bugs of the order Hemiptera, family Reduviidae, subfamily Triatominae, which live in rural houses, hiding in the cracks of mud or *adobe* (raw brick) walls, or in the plant materials for thatching. Because of the strong association of the triatomine vectors with human housing, their long life cycle (6 months to one year), and

high susceptibility to pyrethroid insecticides, Chagas' disease is considered eliminable by a combination of chemically controlling the vectors, housing improvement, and screening blood for transfusion. Transmission has nearly been interrupted from Uruguay, Chile Argentine and Brazil (Moncayo 1997).

The fifty-first World Health Assembly endorsed a plan for eliminating the transmission of Chagas' disease from the entire American continent by the year 2010 (WHA 1998). The specific target of vector control in Central America was to eliminate *Rhodnius prolixus* (an exotic vector species in Central America and Mexico) and to diminish house infestation of *Triatoma dimidiata* (an autochthonous vector species living also in a wide range of natural habitats). The total cost for Guatemala was estimated at US\$18 million (PAHO 2000).

Since 1991, JICA has collaborated with the government of Guatemala (GOG) in researching the tropical diseases including Chagas' disease. After extensive countrywide surveys, *T. dimidiata* was reported from 16 of 22 administrative departments, while *R. prolixus* was only reported from six departments in the eastern territory (Tabaru et al. 1999). The research team confirmed the efficacy of the pyrethroid insecticides against both vector species (Tabaru et al. 1998).

Based on these findings, the GOG made a vector control plan in eight departments with high risk of transmission, and solicited the government of Japan (GOJ) for a grant in aid amounting to US\$ 1.4 million for spraying insecticides in 231,000 houses.

In response to this proposal, JICA dispatched several missions to study the feasibility. One of the major concerns for the Japanese side was the operational capacity of the vector control personnel of Guatemala under the newly decentralized organization.

II. Organizational Plan

1. Stakeholders in the Ministry of Health of Guatemala

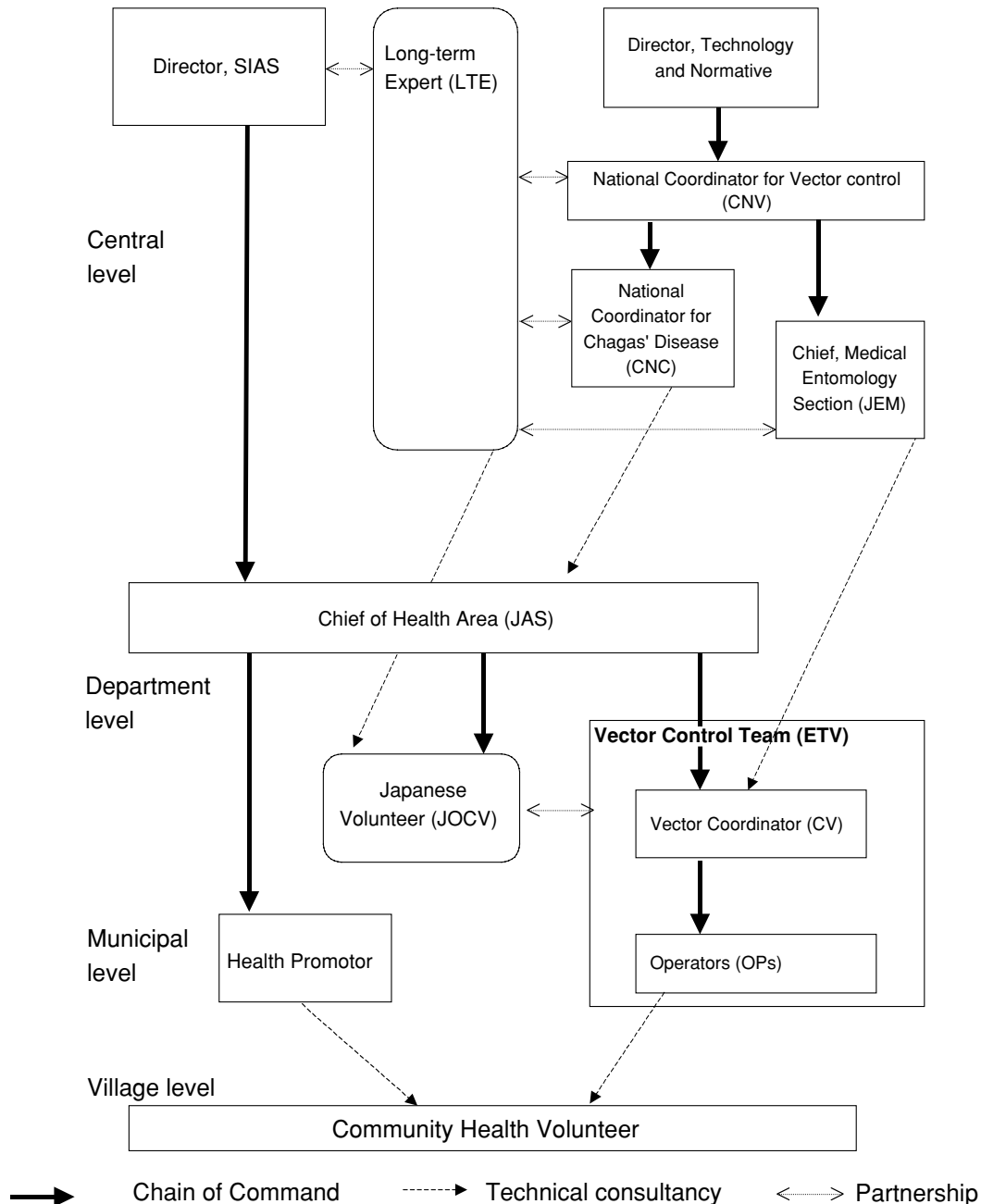
Figure 1 shows the organization of a part of the Ministry of Health (*Ministerio de Salud Pública y Asistencia Social, MSPAS*) of Guatemala relevant to Chagas' disease control as of August, 1999.

The vector control operators of the former National Malaria Eradication Service (*Servicio Nacional de Erradicación de la Malaria, SNEM*) had been decentralized since 1995 to the level of the administrative departments. Each decentralized vector control team (*Enfermedades Transmitidas por Vector, ETV*) consisted of one Coordinator (*CV*) and about 20 operators (*Operarios Polivalentes, OPs*). Under the *SIAS* policy implemented in 1999, the vector control

1. Guatemala consists of 22 administrative departments (*Departamentos*) and 27 HAs (*Areas de Salud*). Most HAs coincide with the departmental territories, while the densely populated Guatemala metropolis and the geographically wide departments of Petén and Quiché are divided into two to three HAs each. The variety of SILOS by country is described in PAHO (1995).

2. The term "eradication" is defined as "eliminating the microorganism itself or removing it completely from nature, as in the case of the smallpox virus". Elimination is defined as "control of the manifestations of a disease so that the disease is no longer considered a public health problem". See CDC (1993) and Dowdle (1998).

Figure 1 Organization chart at the time of planning (August, 1999)



team (ETVs) were to report to the medical officer in charge (*Jefe de Area de Salud, JAS*) who generally had little experience in vector control.

The central staff relevant to Chagas' disease control consisted of the following three staff members: National Vector Control Coordinator (*Coordinador Nacional de Enfermedades Transmitidas por Vector, CNV*), National Chagas' Disease Coordinator (*Coordinador Nacional de la Enfermedad de Chagas, CNC*) and Chief of the Medical Entomology Section (*Jefe de la Sección de Entomología Médica, JSE*). Among the staff, the JSE maintained his strong traditional connection with CVs as technical consultant.

At the time of the formulation of the Project,

we were concerned about the uncertainty of the operational capacity of the decentralized ETV, and the commitment of the JASs in controlling Chagas' disease.

2. Recruitment and training of human resources in Japan

In order to strengthen the operational capacity of ETV and to secure the commitment of JASs, we planned to dispatch experts and volunteers from Japan: one long-term expert (LTE) who was to be stationed in MOH; two short-term experts (STEs) who were to be dispatched to the Project when their specific consultation support was required; and a total of eight volunteers (JOCVs) who were to be sent in two batches for two

years each to eight priority health areas (HAs).³

The JOCVs' major task was to support CVs in the management of the information system necessary for the monitoring and surveillance of the operations. They were also expected to unofficially monitor the usage of materials and vehicles.

The major task for the LTE was to form a consultant team together with the CNV, the CNC and the JSE. The team had two specific targets of consultation: the CVs for operational consultation and monitoring, and the medical officers in Chagas (JASs) for advocacy of the Project. The LTE's status in the Japanese team was as a technical and managerial advisor to the JOCVs, not as an administrative supervisor. In the organizational chart of the MOH, the LTE was placed between two directors, i.e., the Technology and Normative Director and the SIAS Director, in order to have technical influence with the former and administrative influence with the latter.

For the recruitment of these personnel, selection was made based on managerial and communicative capacities rather than specific knowledge of health or entomology. The prospective LTE had worked in Guyana as a Junior Professional Officer for UNICEF for two and a half years. He had later joined JICA as Junior Expert (*Junior Senmon-in*) for three years, and was experienced with JICA administration. He was also exposed to the primary health care activities in the Philippines for three weeks through a training course funded by JICA. After being selected as a prospective LTE for the Chagas' Disease Control Project in Guatemala, he was shifted to the Central America and Caribbean Section of JICA supporting projects in the sub-region. After receiving the routine pre-dispatch training course for two months including a basic Spanish course for three weeks, he received an additional two-month Spanish course in Cuernavaca, Mexico. As a whole his preparation was minimal and he needed further OJT in Guatemala.

Among the four JOCVs in the first dispatch, only one had educational training in the health field. The other three were selected because of their experience in tourism management, market research and media programming. This experience was considered potentially useful for needs surveying, data analyses and Information Education and Communication (IEC), respectively. In addition to the ordinary three-month training course and basic Spanish, the JOCVs received a specially planned training course on the design of the Project, the transmission cycle of Chagas' disease, vector biology and map reading. Further training in practical skills was to be given in Guatemala.

3. Coordination with PAHO and universities

After the above mentioned organizational plans, we still recognized political and technical weaknesses in

the Project, which had to be addressed through coordination with third parties.

From a political point of view the involvement of PAHO was considered crucial, because PAHO was the principal actor in the Chagas' disease elimination initiative in Central America, and only PAHO/WHO had the authority to issue a certificate for the "interruption of transmission" of Chagas' disease. PAHO had strongly suggested that the Ministries of Health of the participating countries put priority on Chagas' disease control, and had called for annual technical meetings. It was important for the Project staff to attend the annual meeting not only to obtain technical consultancies especially for the inexperienced Japanese staff, but also for the sub-regional recognition of the Project. One of the STEs (Yamagata) visited PAHO HQ in Washington D.C. to explain the plan for sending Japanese human resources as managerial assistance, and asked PAHO to invite those human resources to the meeting on Chagas' disease control organized by PAHO.

In order to reinforce the operational capacity of Japanese and Guatemalan sides in research and evaluation, one of the Japanese STEs (Yamagata) visited the Center for Disease Control and Prevention (CDC) in Atlanta and its branch at the University of Valle, Guatemala (UVG/MERTU) to ask for complementary support to the Project. Informed that CDC was planning to conduct a base-line survey of vector infestation rates and serological prevalence in all the four health areas (HAs) of Phase I, the STE offered to suspend the Project's control operations in the villages which were targeted by the CDC's survey, until it finished. In return, CDC/UVG/MERTU offered to train the Japanese expert and volunteers.

The University of San Carlos of Guatemala had collaborated with JICA on the Tropical Diseases Research Project (1991-1998). The vehicle and laboratory equipment donated by the government of Japan were still operational. The Faculty of Biology showed willingness to work with the Project if it would spare manpower for the field work. In return for the Project's collaboration, the university provided training for the Japanese expert and volunteers.

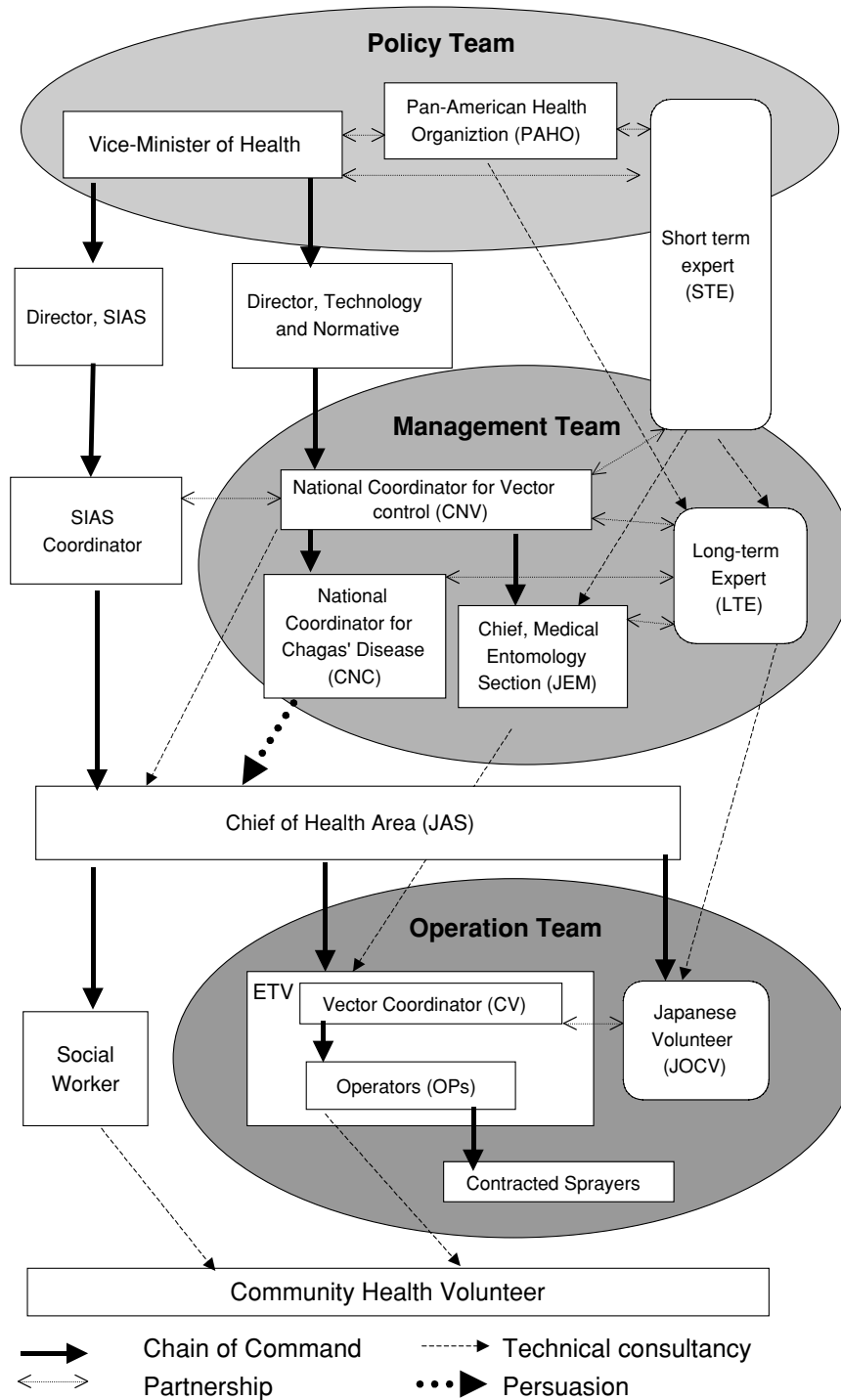
UNICEF, EU and local NGOs were listed among possible collaborators especially in the field of IEC.

III. Role of the Japanese Human Resources

In January 2000, just after the change in the Guatemalan administration, one of the authors (Nakagawa) was sent to Guatemala as the long-term expert (LTE) for two years. Although the top decision makers of the MOH and most of the medical officers in charge (JASs) had been replaced since the time of planning, Chagas' disease control remained one of the priority

3. Phase I of the Project (April 2000- March 2002) was conducted in four HAs from which *R. prolixus* had been reported, namely Zacapa, Chiquimula, Jutiapa and Santa Rosa. Phase II was planned to cover two other HAs positive of *R. prolixus* (Jalapa and El Progreso) as well as two HAs with high infestation of *T. dimidiata* (Alta Verapaz and Baja Verapaz). The other HAs with reportedly lower risk of transmission were to be taken care of by a Guatemalan initiative.

Figure 2 Organization chart at the time of implementation (August, 2001)



programs of MOH. In April 2000, four Phase I volunteers arrived in the HAs of Zacapa, Chiquimula, Jutiapa and Santa Rosa in the eastern part of Guatemala for terms of two years. Following vector surveys in the villages, house spraying started in August 2000. Two of the authors (Yamagata and Tabaru) were alternately sent to Guatemala as short-term experts (STEs) for one to two months a year.

Figure 2 shows the organization developed by August 2001. Some important changes have taken place from the time of planning in 1999 in the present

organization. The most important difference from Figure 1 is that the LTE had virtually no access to the Director of SIAS.

The human resources from Japan formed three different levels of management. The STEs formed the Policy Team together with the Vice-Minister of MOH and the representative of PAHO; the LTE formed the Management Team together with the national vector control coordinator (CNV), the national Chagas' disease coordinator (CNC) and the chief of the Medical Coordinator Section (JSE); the

JOCVs formed the Operational Teams together with the coordinators (CVs) and operators (OPs). The function of these teams and the relationship between them are described below.

1. JOCV and the Operational Team

The JOCVs were involved in the ETV to form operational teams. Although the volunteers were nominally counterparts to the CVs, their task differed. While CVs maintained the initiative as the chief commanders of ETV, the JOCVs were given the task of keeping records and analyzing data. The CVs' capacity to plan and monitor improved thanks to the visual presentations prepared by the JOCVs.

The extent of decentralization of the health sector varied between HAs. Most of the OPs remained at the HA offices instead of being posted at the Municipal level. About 5 to 15 sprayers per HA were contracted with the SIAS budget.

In the second year of their assignment, some JOCVs started to work on IEC. One of them (Ken Hashimoto) assisted by another JOCV (Michio Kojima, education program manager) organized seminars for school teachers using a grant from UNICEF. Another JOCV (Takeo Nonami) extended his assignment by six months and produced teaching materials for trainers.

2. Long-term expert and the Management Team

The LTE formed a management team with three counterparts. Most administrative work was done with CNV and CEC. The latter was also in charge of diagnosis and treatment. At the Medical Entomology Section, the LTE worked with the JSE to coordinate the vector control operations. All the entomological results were stored here and the operational maps were updated on a monthly basis.

Having little access to the Director of SIAS, the management team had to directly address the JASs to solve local problems such as the management of vehicles and the status of JOCVs.

3. Short-term experts and the Policy Team

One of the major functions of the STEs was to indirectly influence JASs through the Vice-Minister of MOH. The involvement of the Vice-Minister was crucial because he supervised the Director of the SIAS as well as the Technology and Normative Director. Taking the opportunity of paying courtesy calls to the Vice Minister, the STEs discussed issues such as the management of donated vehicles, recognition of the JSE as a counterpart to the LTE, contracts for the men who sprayed, and the status of the volunteers, etc. The management team usually accompanied the courtesy calls, and updated the Vice-Minister on the progress of the Project. The representative of PAHO and the Chagas' disease coordinator of PAHO in Guatemala sometimes joined the meeting.

4. Link between the different teams

The relation between the above-mentioned three teams was not a strict chain of command but a loose chain of consultation. The existence of the Japanese personnel facilitated a flexible relationship among the different levels in the health sector.

The JOCVs needed managerial consultation and political backup when they detected abuse of the donated vehicles by their supervisors or colleagues. One of the JOCVs, trying hard to control the abuse by his supervisor, faced complications at his work place. The management team then went to the HA and informed the JAS that the Vice-Minister was concerned about any scandal that could block the continuation of the Project to the second phase. After several incidents of inappropriate use of the vehicles, JICA Guatemala Office established a monthly reporting format for the daily use of the vehicles, which was duly signed by JAS, CV and JOCV and sent to the JICA representative in Guatemala. This arrangement alleviated the psychological burden of the JOCVs to some extent.

JOCVs had almost weekly contact with the LTE for technical guidance. The format of reporting the entomological data was jointly developed by LTE, JSE and JOCVs, along with the technical consultation of STEs. The electronic mailing system was fully utilized for communication.

JSE maintained his traditional authority over the decentralized ETV personnel. CVs felt free to phone or fax JSE to ask for his technical or logistic guidance. JSE called the CVs to trimester workshops for the purpose of planning and monitoring the operations. JSE also chaired the workshops on the project design, mapping and GIS, etc. Some workshops were held at the HAs especially when STE was available. This kind of visit by the central personnel and foreign staff raised the self-esteem of the ETV.

IV. Discussion

1. Status of ETV in the decentralized health system

The consultation network among the different teams of the Project may oppose the rule of a single chain of command. The solid vertical arrows in Figure 2 show the administrative chain of command, while the broken inclined arrows show that of the technical consultation. However, this double standard was necessary for the operations during the transitional to decentralization. In addition, the intervention of JICA was of a temporary nature because Chagas' disease is eliminable.

On the other hand, the vector control team (ETV) should stay in the decentralized health system to work on malaria, dengue fever and leishmaniasis even after the likely elimination of Chagas' disease. Most coordinators (CVs) welcomed, in this context, the introduction of new knowledge and skills. They were especially enthusiastic about learning map reading.

In a one-day session on the Universal Transverse Mercator (UTM) coordinates, all of the CVs learned to locate the villages using the UTM grid to a precision of 1km. This enabled them to compare the data between adjacent HAs, which had been impossible with their conventional hand written sketch maps (*croquis*). One CV commented that he was proud to have a modern map so that he could show the other health staff that ETV was the group with the best geographic knowledge of the area.⁴

The National Malaria Eradication Service (SNEM), the antecedent to ETV, had been one of the pioneer teams of community health in the 1970s. The SNEM workers were among the very few people who were allowed to enter most rural houses even during the civil war. They had regular contact with the voluntary collaborators who played an important role in detecting malaria cases and the subsequent treatment of the identified patients. Community participation will be also important for the consolidation phase of Chagas' disease control. The future role of ETV in the decentralized health system should be closely linked with their specific capacity of geographic and community reconnaissance.

2. Managerial expertise for technical cooperation

It is generally agreed within JICA that a person in charge of technical cooperation (given the title "expert") should have managerial and communication skills as well as technical expertise. Conventionally, recruitment has been based mostly on technical specialties, while it has been expected that management and communication skills be acquired during service. This study tried a reverse methodology, i.e., recruiting "experts" for their communication and managerial skills rather than their technical skills, presuming that the latter could be acquired during service. In fact, some of the entomological skills in the universities and MOH of Guatemala were transferred to the Japanese personnel through the job.

Although JICA recruits experts to cover diversified cooperation fields, those who serve as general managers are limited in number. This is partially because the traditional concept of technology transfer does not place much importance on the role of persons who has excellent management ability but has no specific technical skills. The Japanese translation for expert ("*senmonka*") is misleading because *senmonka* literally means "specialist." More specialized people have therefore been recognized as the better *senmonka*. The marked preference for specialists has been observed in JICA's "medical cooperation," where the priority has been to recruit medical doctors and nurses, giving few opportunities to

scholars in development studies, business studies, etc.

This case proves, however, even unskilled volunteers are useful as intermediaries between the central and peripheral levels of health systems.

3. International partnership

Partnership is the current trend in the donor community. Partnership in this case can be classified into three categories as follows.

- 1) *Resource sharing*: The Project was built on a tripartite agreement with GOJ, GOG and PAHO. The clear policy and strategy presented by PAHO was the basis of the agreement. PAHO also shared technical standardization. MOH of Guatemala shared the institutions, human resources and a portion of the consumables. JICA offered another portion of the human resources, managerial support, equipment and consumables. Local universities shared their latest theories and scientific findings. Each part was equally indispensable to the Project's performance.
- 2) *Mutual monitoring*: An advantage of the tripartite relationship was that, when one party showed reluctance to contribute, the other two could tag to consolidate the tripartite partnership. From JICA's point of view, the fact that GOG had pledged to PAHO to eliminate the transmission of Chagas' disease by the year 2010 served as political leverage. PAHO also watched the Project's performance through the annual meeting of Central American countries on Chagas' disease control.
- 3) *Mutual capacity building*: The annual meeting sponsored by PAHO gave the Project staff an excellent learning opportunity. International recognition also strongly encouraged the Project staff. The faculty members of the Guatemalan universities, who trained the Japanese personnel were regularly invited to seminars held by the Project, and informed of the operational progress. All of these kinds of meetings helped to consolidate the relationship between the policy makers, operators, managers and researchers.

The Project developed international partnership faster than JICA's usual procedure. The speed with which this was achieved is attributable, at least partially, to the experts' experiences of working in international communities, as well as their experiences in Guatemala.⁵ This may be another aspect of "expertise" to be recognized for international cooperation.

Acknowledgement

We thank the many people in both Guatemala and Japan involved in the Project. We are especially grate-

4. During the first workshop on mapping, the CVs plotted on two sets of maps in the scale of 1:250,000 the villages from which the triatomine vectors were reported. After completion, the CVs took one set for their field office and left the other in the Medical Entomology Section of MOH. The CVs were also trained to locate villages using the Universal Transverse Mercator coordinates. Thereafter the CVs sent new records of vector distribution to JSE by fax using the UTM coordinates. Thus updated maps of vector distribution became powerful tools for the Project's promotion.

5. Yamagata worked for four years in WHO's Onchocerciasis Control Programme in West Africa as an entomologist. Shimoda worked for 3.5 years in Nigeria as Junior Professional Officer (JPO) of UNDP. Nakagawa worked for 2.5 years in Guyana as JPO of UNICEF.

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NOTE

Possibility of New Cooperation by JICA in the Field of Basic Education

— A Case Study of Basic Education —

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Since the 1990s, the worldwide trend in development assistance has been oriented toward basic education. As part of that current, there is increasing awareness in Japan of the need for a new approach to international cooperation that will enable effective promotion of local community participation in order to enhance cooperation in this field. Particular attention has been given to applying "Development Study," one of the major cooperation schemes by JICA, to assistance in this field. The first project under this scheme was the Regional Education Development and Improvement Project (REDIP), implemented from March 1999 to September 2001. This paper presents an overview of the REDIP, demonstrates the effectiveness of Development Study in basic education through an analysis of the factors determining its success, and identifies challenges to be taken.

Since the Indonesian government's new education policy, which is based on decentralization, was introduced, development of a practical project model for effective reform of junior secondary education (equivalent to lower secondary level education) has been an urgent task. The REDIP was implemented as an empirical Development Study aimed at formulating such a model. The process began with detailed base line surveys. Based on the findings of the survey, pilot projects were planned and implemented for schools and local organizations, which were thought to be effective vehicles of the planned reforms. After their completion, the effects and the feasibility of the various activities involved were analyzed and identified through post-pilot evaluations. These evaluations were then compiled into a final proposal. The REDIP was found to have achieved the initial objective of presenting a project model that could function effectively.

In the nature of the cooperation and the process by which it was provided, the REDIP represented a new attempt of cooperation in the field of basic education, and the approach applying the Development Study can be said to have opened up new possibilities for cooperation in the field. It is evident, for example, that the nature of the Development Study greatly facilitated the elaboration of activities by the schools and other local actors, and the implementation of the detailed base line surveys and post-project studies, which were key determining factors in the study's success. As cooperation of this kind increases, Japan will be able to play a more diverse role in this area as well as aid coordination with other donors.

In order for such cooperation to produce even better results in the future, further improvements should be made, such as more in-depth deliberation toward concrete and practical measures for developing full-scale projects after studies are completed.

Introduction

In 1990, the World Conference on Education for All was held in Jomtien, Thailand, and it was widely re-

affirmed that basic education is, in addition to being a fundamental human right, an important factor in solving various developmental issues, such as poverty and health problems. As a result, the trend of development assistance from the 1990s onwards has

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confirmed the importance of basic education. In the midst of this trend, Japan International Cooperation Agency (JICA), Japan's principal implementation agency for technical cooperation, compiled a report in January 1994 titled Study on Development Assistance for Development and Education. This report recommended a large-scale quantitative expansion centered on basic education as a principle in education cooperation, and pointed to the necessity of a new aid approach that addresses such issues as community participation in order to put the principle into practice.

In the past, Japan's assistance in basic education focused on two activities: dispatch of science and mathematics teachers under the Japan Overseas Cooperation Volunteers (JOCV) program, and the construction of educational facilities by Grant Aid Cooperation, which has rapidly increased since the latter part of the 1980s. However, as noted above, the need has now shifted to increased assistance for basic education, particularly in "software" such as knowledge or capacity building.

One measure to attract interest in this regard is the application of Development Studies.¹ In October 1997, JICA compiled *Kyoiku Enjo nikaakaru Kiso Kenkyu Hokokusho: Kiso Kyoiku Bunya o Chushin Toshite* [Report of Basic Research on Education Aid: Focus on the Area of Basic Education], in which it proposed the early implementation of basic education cooperation through Development Studies. In December 1998, it published *Kyoiku bunya ni okeru Kaihatsu Chosa Gaidorain* [Guidelines for Development Studies in the Area of Education], where practical application methods for Development Studies were discussed.

Growing out of these developments in education cooperation, the Study on Regional Educational Development and Improvement Project (REDIP), JICA's first foray into Development Studies in the field of basic education, was implemented from March 1999 to September 2001.

This paper provides a general overview of the REDIP, analyzes the reasons for its success, points out the effectiveness of Development Studies in the field of basic education, and identifies related challenges still to be addressed.

I. Overview of REDIP

1. Background to Cooperation

Like Japan's, the Indonesian education system has a 6-3-3 structure of school years and levels. Because of the Suharto administration's strong top-down policy of promoting primary education,² the enrolment rate at primary school went from 64% (total number: 13 million students) in 1971 to 100% in 1983, and in 1984 primary education was made compulsory. Since 1994, the Indonesian government has been striving to make junior secondary education compulsory as well, and the 9-year universal education has remained its top priority in the field of primary and secondary education to this day.³

However, because of the rapid advance of democracy since the collapse of the Suharto regime and the increasing drive toward decentralization, the approach to establishing a system of nine years of compulsory education has markedly altered. The previous centralized, top-down system of education administration had a certain degree of success in broadening educational opportunities. However, it lacked the mechanism to reflect the sociocultural diversity of the local communities and the needs of individual schools in the system of education administration. This gave rise to discrepancies between local needs and the education services provided, causing schools and local communities to lose initiative and commitment over their own education services.

Awareness then grew that this gap represented a major impediment to educational reform in Indonesia.⁴ In 1998 the government introduced a policy of promoting education by establishing a bottom-up system based on decentralization. In particular, school-based management and community participation were made fundamental to the decentralization of education administration along with putting this education policy into practice as its top priority.⁵

Under these circumstances, the REDIP was launched to develop clear-cut policies (reform plans) to reform junior secondary education. That is, the aim of the REDIP was to study, examine, and make concrete recommendations on how best to put into practice the above two principles as policies within the framework of decentralization, and to determine what sort of mecha-

1. Development studies are among the technical cooperation activities undertaken by JICA. Originally they were aimed at formulating development plans in such fields as road construction, harbor construction, communications, irrigation, and electric power. The studies are classified into different types according to their content, such as "master plans" for formulating comprehensive development plans and "feasibility studies" to determine the viability of proposed projects. These studies are carried out by consultants.

2. The distribution of regional subsidies for the improvement of primary education (INPRES SD) started in 1973/74. By 1992/93, more than 146,000 primary school buildings and over 166,000 classrooms had been constructed, and more than 300 million textbooks had been printed and distributed.

3. In 1999/2000 the junior high school gross enrolment ratio was 71.9% and the net enrolment ratio was 45.0%.

4. For example, although in general in rural areas the proportion of junior high school graduates who went on to high school was low, the junior high school curriculum was formulated on the premise that students would proceed to high school. This meant that the needs of the majority of students, who hoped for a practical education emphasizing skills acquisition at school, were not met, making junior high school an unattractive option. In response to this problem, teaching hours for local contents (school content determined at the discretion of local community authorities) was incorporated into the existing curriculum (established in 1994), providing a certain amount of flexibility. However, with the added problem that all schools remain short of funds, this approach has not yet been fully applied. There have also been reports of mismatches, such as the sending of experimental equipment and material to schools that do not have a laboratory.

5. The climate of education in Indonesia has recently undergone rapid change, from the introduction of compulsory junior secondary education in 1994 and the effects of the economic crisis since 1997, to a shift toward decentralization in 2001. The authors have described these changes in detail in two study reports (JICA 1999 and 2000), which they participated in as committee and task force members.

nism will allow them to function effectively, in order to successfully promote quantitative expansion and qualitative reform of junior secondary education.

2. Overview of project

1) Implementation of the pilot project⁶

The most distinguishing feature of the REDIP was that it incorporated not merely the analysis of education data, but also a pilot project as one facet of the study in order to determine what activities would be functionally effective.⁷

The pilot project activities (hereafter referred to as pilot activities) were conducted for about eleven months, from January to late November 2000, in ten sub-districts in Central Java Province and five sub-districts in North Sulawesi Province.⁸

The pilot activities consisted of two components. One, common to all sites and known as Component A, was the formation of Sub-District Junior Secondary School Development Committees (Tim Pengembangan SLTP Kecamatan: TPK). Organized on a sub-district-by-sub-district basis, these committees were made up of local stakeholders (regional education administrators, sub-district chiefs, junior secondary school principals, religious leaders and representatives of business and parents' associations) and their main function was to plan and carry out various activities to increase local community concern in education. These committees carried out such activities as seminars to advocate the importance of education, local campaigns to encourage school attendance, and interschool sports festivals and other contests.

The second component, known as Component B, was made up of five activities: a) developing the administration abilities of school principals, b) improving teacher pedagogical skills through revitalization of subject teacher study groups, c) securing textbook distribution with better management, d) encouraging parents' association activities, and e) providing school subsidies. One of these activities was carried out in each test group. As each activity was thus conducted separately, their respective results could be measured comparatively at the end of the pilot activities. Each of the five sub-districts in North Sulawesi conducted a different activity, while two each of the ten sub-districts in Central Java conducted the same activity. In addition, fifteen other sub-districts were established as control groups.

Table 1 shows the activities that were carried out. These were conducted using a proposal method, whereby each sub-district and school drew up an activity plan and put it into effect based on their own problem analysis performed by each of the schools. This was done with a view to encouraging active participation by school staff and local residents right from the project formulation stage.⁹

Furthermore, in addition to regular junior high schools (sekolah lanjutan tingkat pertama: SLTP), which come under the jurisdiction of the Ministry of National Education (MONE), Indonesia has numerous Islamic junior high schools (madrasah tsanawiyah, commonly called *madrasah*), which come under the Ministry of Religious Affairs. Until now there have been scant links between the two types of schools because of differences between the two ministries, but under the REDIP all junior high schools in the sub-districts concerned were treated equally.¹⁰

Local consultants also played a large role as facilitators in the planning and implementation of pilot activities at each site. In the project, nine local consultants (one of whom served as overall coordinator) and eight junior consultants were employed, and they provided day-to-day advice concerning activities at the sites.

2) Overall project flow

Figure 1 shows the overall flow of the REDIP. As it shows, a number of studies were undertaken before and after the pilot activities. The first step was a preliminary study of educational conditions in all districts of the two provinces targeted by the REDIP.¹¹ In the study, data on school attendance, advancement to higher levels of education, and average grades obtained in the national examinations conducted at graduation from junior high school were gathered. The educational level of each district was revealed by the collected data, and on this basis target districts were selected in such a way that districts with high, average and low education levels were all represented. Next, similar surveys and analyses were conducted for each sub-district in the target districts,¹² and fifteen sub-districts were selected for the pilot activities. Fifteen other sub-districts were also selected as control groups.

A detailed baseline study was then conducted at all the junior high schools in the target sub-districts.¹³

6. In this paper, the term "pilot project" refers to experimental activities carried out as part of Development Study programs in order to assess the feasibility, efficacy and expansion potential of development models and systems.

7. This type of Development Study, which verifies the results of a pilot project and formulates development plans on that basis, is known as an empirical Development Study.

8. In Indonesia, sub-districts (kecamatan) are administrative divisions within provinces (propinsi) and districts (kabupaten), and are made up of a number of villages. While the size of sub-districts varies from place to place, generally speaking each has a population in the range of 10,000 to 100,000 people and between five and thirty junior high schools. Whereas other donors usually stipulate districts as the entry point for local community participation, the REDIP operated at the sub-district level in an effort to promote greater community participation.

9. Prior to the REDIP, in 1997 JICA initiated a cooperation program to conduct training in the formulation of community- or school-led education planning (COPSEP: Community Participation for Strategic Education Planning) in the two provinces. JICA has confirmed that this approach significantly increases the motivation of participants.

10. In this study, there were 148 junior high schools in the test groups and 47 in the control groups.

11. These were 35 districts in Central Java Province and 7 districts (currently 5 districts) in North Sulawesi Province.

12. These were 81 sub-districts in 5 districts in Central Java and 34 sub-districts in 2 districts in North Sulawesi.

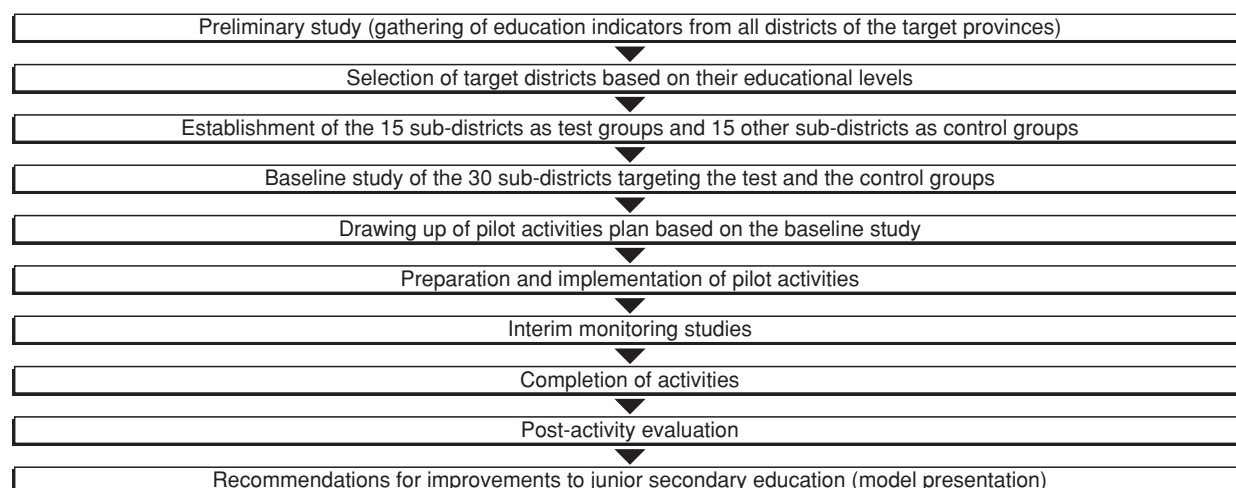
13. This study was undertaken to determine the actual conditions in the areas concerned before the project activities began.

Table 1 Pilot activities

	Activity	Participants	Aims	Actual cases
Common to all sub-districts	Sub-district junior high school development committees (TPK)	Stakeholders in each sub-district	To promote local community awareness of the importance of and participation in education	<ul style="list-style-type: none"> • Convening of education workshops for local residents • Campaigns to promote school attendance • Sports festivals and art contests at junior high schools in each sub-district
Sub-districts-specific	Developing administration abilities	School principals	To improve the management skills principals need for autonomous school management	<ul style="list-style-type: none"> • Convening of regular meetings of all junior high school principals as a forum for exchanging ideas and information • Analysis of problems faced and formulation of plans for improving problem-solving abilities by each principal • Inspection tours of model schools to promote problem-solving
	Revitalizing subject teacher study groups	Teachers	To foster communication among teachers and improve classroom teaching methods through skills enhancement	<ul style="list-style-type: none"> • Information exchange among teachers, and weekly curriculum seminars for all sub-district teachers to improve teaching methods • Development and application of more effective teaching materials, teaching methods, evaluation methods, etc. (including guest lectures and lesson observation)
	Securing textbook distribution with better management	Each school	To eliminate textbook shortages (provide copies of all main texts to every student) and improve management methods	<ul style="list-style-type: none"> • Distribution of textbooks based on surveys of each school's needs • Problem analysis of textbook management methods, and the implementation of new methods based on the findings
	Encouraging parents' association activities	Parents	To promote participation in school activities by strengthening the role of parents' associations	<ul style="list-style-type: none"> • Observation of lessons, home visits, planning and implementing parents' association activities • Cooperation in locally devised lessons and extracurricular activities • Planning and implementing school activities such as sports festivals • Publication of school newspapers
	Providing school subsidies under the matching funds method*	Each school	<ul style="list-style-type: none"> • To implement educational reforms based on each school's own plan (provide funding) • To promote the provision of community resources (funding, labor, etc.) 	<ul style="list-style-type: none"> • Problem analysis/plan formulation by the principal, teaching staff and parents of each school • Improvement of facilities, purchase of teaching materials, etc., based on the above plan (including provision of labor by parents, etc.) • Campaign activities to secure matching funds through donations, etc.

* The matching funds method requires the recipient of funding to provide an agreed proportion of the total aid in cash, labor, or other resources.

Source: JICA 2001.

Figure 1 Flow Chart of Overall REDIP Study

Source: JICA 2001.

These data thus collected were not used merely as information indicating the conditions before the commencement of the pilot activities; rather, they were used to identify the factors or a series of indices which would greatly influence educational output.¹⁴ The results of the analysis showed that the important factors were school principals, teaching staff, educational processes including school curriculums and school budgets.¹⁵ The proposals for the six pilot activities described in I.2.1) were devised on the basis of this analysis.

Monitoring studies were carried out frequently while the activities were under way,¹⁶ and after their completion a post-activity study along the same line as the baseline study was carried out. By comparing the results obtained, the effectiveness of each activity was analyzed and the final recommendations were formulated. This way of carrying out the study in stages, and feeding back the results into the next stages of activities lent the overall REDIP process a sound structure of logical progression.

3. Results of pilot activities

Table 2 summarizes the monitoring and post-activity evaluation of the pilot activities, focusing on the results of monitoring.¹⁷ As can be seen from the table, ultimately each activity succeeded to some extent as a strategy for education reform involving school-based management and community participation. However, some differences of degree were apparent in their effectiveness. Activities considered to have been effective were "sub-district junior high school development committees," "enhancing activities of subject teacher groups," and "providing school subsidies." Meanwhile, although "improving school management abilities" and "encouraging parents' association activities" were considered by the participants to be as impor-

tant as the other activities, they did not manifest any concrete results. "Textbook distribution" was rather sluggish even with a certain degree of quantitative improvement, because teaching staff and others involved generally considered textbooks to be of relatively low importance.¹⁸

In terms of concrete impact, increases were observed, for example, in the promotion rate from primary to junior high school—from 87% to 92% in the Kupil Sub-district, Central Java, and from 44% to 68% in the Kujajar Sub-district, Central Java—and in the number of students enrolling in junior high school, which rose from 1,021 to 1,209 in the Banjarhajo Sub-district, Central Java, and from 208 to 306 in the Rikpan Sub-district, North Sulawesi. There were also decreased drop-out rates, such as in the Kupil Sub-district, where the rate fell from 15% to 5%. Finally, in nine out of 15 sub-districts, the residents began raising funds for activities of the sub-district junior high school development committees, scholarships, and other purposes on their own initiative.

4. Factors behind the success of pilot activities¹⁹

While several factors can be considered as having contributed to the overall success of the pilot activities, perhaps the greatest of them is that the policy of participant-led action was thoroughly adhered to. The key to this was the adoption of the proposal method. That is, although the framework of each activity centered on a team of Japanese consultants, the actual activity proposals were conceived, discussed, analyzed, formulated, and carried out by local residents and schools concerned on their own initiative.²⁰

The preliminary allocation of pilot activities to each sub-district was also decided not by the Japanese consultants but by the sub-districts themselves in consultation with one another. This approach of

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14. In this study, nine areas were chosen as indices of actual educational output: students' achievement levels, promotion rate to higher school levels, rate of continuity, drop-out rate, level of student satisfaction, level of teacher satisfaction, level of principal satisfaction, level of parent/guardian satisfaction, and level of community satisfaction.
 15. In the baseline study, from the 200 or so indices on which data were collected, 56 independent variables were selected and nine dependent variables (the output indices mentioned in note 14 above) were each subjected to regression analysis. The 56 independent variables were divided into 13 index groups (student's temperament, family environment, community environment, school facilities and resources, school principal, teaching staff, non-teaching staff, school budget, curriculum, the state of school's organizational management, parent-school relationship, parent-child relationship, and school-community relationship). The results of the regression analysis showed that for each dependent variable, the respective coefficients of the 56 independent variables was yielded. These coefficients were analyzed, those which were significant and showed correct sine relationships were selected, and from these, the top five with particularly high coefficient values (those indices which exerted a large degree of influence over dependent variables) were selected for each dependent variable. This showed which independent variables exerted a major influence over the dependent variables (desirable outputs). The results showed that the four independent variables of school principal, teaching staff, curriculum and school budget exert a particularly strong influence. In this way, the four index groups were identified.
 16. Monitoring studies were carried out by Japanese consultants a total of seven times, some covering all sites and activities, and others covering each project component. In each case, counterparts from the relevant provincial office of the MONE also took part. Studies were also carried out by the Advisory Committee. Monitoring involved visits to the project sites and inspection of the conditions of the activities, as well as hearings using prescribed questionnaires.
 17. In regard to post-activity evaluation, whereas in the overall picture it may be concluded that the project's impact in the test groups was large, the expected results were not attained in all respects. From comparisons with the baseline study and with the control groups, although clear improvements were noted in 14 indices, eight indices showed the opposite result. In addition, improvement was observed in eight indices in both the test groups and the control groups, but a clear difference was seen between the two groups. This is attributed to powerful external factors. Furthermore, because no consistency was found in the post-activity survey data for national graduation test scores, drop-out rates, attendance rates, and so on, the results could not be applied in an adequate comparative analysis. It is surmised that the short duration of the pilot activities and the fact that they commenced in the midst of the academic year were factors in the failure to observe clear differences in the quantitative analysis. It is necessary to consider ways to improve the survey methods and topics of future baseline studies and post-activity studies.
 18. According to a predictive study of textbook effectiveness conducted in the groups where textbook distribution was carried out (a survey of the academic levels of a sample of students), in the comparison of average test scores before and after the activity, on the test of English language the test groups showed a 4.52 point improvement while the control groups showed a 3.66 point increase. On the physics test, the improvements were 3.76 points and 2.46 points, respectively, and in geography 4.83 points and 3.46 points, respectively. In every case, the test groups showed a greater improvement than did the control groups.
 19. It was found that, albeit to varying degrees, all the pilot activities had some degree of impact (i.e. various changes were effected in the behaviour of the local people who were regarded as the main actors in the project), and participants in many sites committed to continue the activities at their own expense after the completion of the REDIP (particularly the TPK, curriculum study group, and fund-raising activities). The pilot activities may therefore be regarded as successful overall.
 20. Final assessment and approval of funding for action plans were carried out by the Japanese consultants. Local consultants also acted as facilitators in the formulation of action plans.

Table 2 Summary of monitoring/post-activity evaluation of pilot activities

Activity	Observed changes
Sub-district junior high school development committees (TPK)	In addition to raising parents' and local community awareness of the importance of education, the TPK activities alleviated feelings of psychological distance/alienation. They established a framework for cooperation among the stakeholders; specifically, results such as community-led fund-raising activities, provision of scholarships, and construction of school buildings were observed. Furthermore, as a result of local campaigns, there was a large increase in the number of enrollments, as well as a decline in the rates of drop-outs and absenteeism. During the monitoring, many TPK commented that this activity was very effective and that after the completion of the REDIP they intended to raise their own operating funds so as to continue the activity independently.
Developing school administration abilities	Through regular school principal meetings, a regionwide network of principals was established that promoted information exchange and problem sharing. Particularly successful was the establishment of cooperative ties between the SLTP and the <i>madrasah</i> . Although opportunities were provided for training in problem-solving to improve school administration, and the importance of such skills was acknowledged, no results in the form of practical methods of improving school administration were observed. Participants commented that they wished to continue this activity independently after the completion of the REDIP.
Revitalizing subject teacher groups	Through subject-specific study meetings attended by all teachers in the region, teachers forged links among themselves, pooled knowledge and information, and honed their problem analysis abilities. As a result, teaching methods were improved, teachers' confidence increased, students' levels of understanding increased, and average test scores improved. Particular improvements were seen in the skill levels and knowledge of teachers without formal qualifications (numerous among English-language teachers), resulting in marked improvements in skill and motivation. Participants commented that they would conduct these activities on their own even after the completion of the REDIP.
Securing textbook distribution with better management	In the past, much class time was taken up by students copying the teacher's notes from the blackboard into their books. As a result of this pilot activity, however, more classroom time has been made available for explanations by the teacher, questions from the students, and discussion. The setting of homework also became easier, and students came to devote more time to private study. An evaluation of the effects of textbook distribution confirmed that average test results after the distribution were clearly higher than before the distribution in comparison with the control groups. However, the level of interest in and priority given to textbook distribution in the schools was low, and the results did not meet expectations.
Encouraging parents' associations	Through regular parents' association meetings, parents' school visits, school competitions, and so on, communication was improved within schools, among parents and guardians, and in the community as a whole. Furthermore, as a result of the increased interest of parents in school activities, their wishes and expectations were reflected in the content of education to a greater extent than before. Assistance given to students by their parents and teachers also increased. However, because the period of the activity was short, participation by parents was limited and their awareness of education issues was not markedly improved.
Providing school subsidies	The process of formulating and implementing proposals for solving problems provided a great incentive to the participants. Additionally, the learning environment was improved through actual renovation of school facilities and provision of teaching resources, and significant results were observed in terms of increased student numbers, heightened teachers' enthusiasm, and improved teaching methods. The interest of local communities also increased, and many schools were able to attract more donations, volunteer work, and so on than expected. This activity area thus served to generate "seed money." However, at some schools the quality of the proposals was poor, resulting in poor results and in some cases lack of transparency in accounting.

Source: JICA 2001.

having the participants take the initiative right from the stage of formulating activities gave them a strong motivation and sense of responsibility.²¹ This may be regarded as a significant factor contributing to the vigor and success of all the activities.

The REDIP report describes the following four points identified through interviews as factors contributing to the activities' success:

(i) Making the administrative unit of the sub-district the basis of the activities was appropriate as a foundation for community participation.

(ii) By conducting the same activities at all junior high schools in the sub-district, including *madrasahs*, networking and communication among schools and teachers were promoted and the activities were vitalized.

(iii) Combining the common activities for communities (the sub-district junior high school development committees) with the five kinds of activities for individual schools generated mutually enhancing effects among those activities.

(iv) There was strong involvement by such associ-

21. When the monitoring studies were conducted, for example, participants commented that the REDIP approach was a fresh one because it involved them centrally in the selection and planning of the details of activities, and that they had a strong sense of responsibility in implementing the activities because they had selected them.

ated counterparts as staff of the provincial offices of the MONE.²²

Conversely, the following were identified as factors hindering or restricting the activities:

- (i) Due to schedule constraints, insufficient time was allocated for activity preparation, and initially the participants did not have an adequate understanding of the details and thrust of the activities. Furthermore, no training was provided in such areas as budget management, report writing, or proposal formulation, which were integral aspects of each activity, except on-the-job training.²³
- (ii) Insufficient time was allocated for the selection and training of local consultants, with the result that some local consultants' activities were inadequate and inappropriate.
- (iii) Because the period of the activities was short and they were implemented in a highly concentrated manner, some disruption was caused to the daily routines of school principals and teaching staff.

5. REDIP recommendations

On the basis of the above analysis, the REDIP proposed a future action plan for reform of junior secondary education reform under the policy of decentralization. In essence, it recommended that, the sub-district should be made the basic unit of community participation as in the case of the REDIP, and activities consisting of two components should be implemented for all junior high schools in the sub-district under a more flexible proposal system. In order to encourage initiative-taking participation by those directly concerned, and to improve the quality of the activities, it recommended that sufficient time be spent at the activity preparation stage, that the principle of competition be introduced into the activities, and that a system be adopted for adjusting the duration of the activities depending on their results.

II. Effectiveness of Development Studies

The REDIP had achieved its initial aim of empirically delineating a practical model for school-based management and community participation in line with the government's policy of decentralization. The project objective of creating an empirically feasible model, and the series of processes undertaken to achieve it are both new in JICA's cooperation in the field of basic education, and this experience has broadened the potential of the Development Study for such assistance. In short, the REDIP has demonstrated the

effectiveness of Development Studies in cooperation in the basic education development.

The REDIP's effectiveness is illustrated in verifying the usefulness of the prescribed indices through the broad-based and detailed baseline surveys and post-activity evaluations carried out before and after implementing the pilot activities. The approach not only lent objectivity to the results of the project, but also held great significance in the current results-oriented trend in aid management. Baseline surveys are the forte of the Development Study approach. It should be noted that participant-led and proposal-based activities as described in I.4, as well as the six types of pilot activities undertaken in the project, would have been difficult to implement under the traditional "direct management" method²⁴ of educational cooperation. It was precisely because of the nature of the Development Study approach that these activities could be implemented smoothly.

In basic education cooperation, given that many other donors employ similar approaches as the REDIP in basic education, our experience through the Development Study go beyond simple exchanges of information, and enable us to share with them the lessons learned, which could be applied directly to similar projects and programs. For example, the Asian Development Bank has decided to incorporate the REDIP proposals into a new basic education project in Indonesia. This means that the lessons learned in the REDIP can be directly applied in the Asian Development Bank's program in the field.

If cooperation with a similar approach as the REDIP increases in the future, Japan may take on an even more diverse role than it has so far in aid coordination, which is becoming increasingly important in recent years in basic education. That is, Japan can be expected to make active contributions in the future not only in the form of "hardware" cooperation such as the construction of facilities, but also "software" cooperation such as the provision of information and expertise. In line with this trend, JICA recently started its support in such areas as school mapping²⁵ and the elaboration of national education development plans, and the potential for assistance through the Development Study in basic education is now expanding.

III. Challenges Ahead

As has been described, the REDIP capitalized on the features and strengths of the Development Study

22. The strong commitment of such counterparts is attributed to two factors. One is that this project was a pioneering effect aimed at demonstrating a practical model for decentralization, which meant that enthusiasm among these counterparts was extremely high from the outset. The other is that developing activities centred on local communities required that many activities be undertaken by the relevant provincial offices of the MONE. For example, the ministry's provincial offices played an important role in providing appropriate advice on the activities at the pilot sites from an administrative point of view, and in coordinating all relevant activities in the province. Having these offices conduct such activities on their own initiative as cooperative partners was a major reason for the strong counterpart commitment.

23. The monitoring of the school subsidy program showed that the quality of the proposal had a significant influence on the program's success.

24. This is the method of implementing cooperation projects through direct technical guidance by JICA experts and others at the project site.

25. This involves describing the actual conditions of education in spatial and geographical terms by plotting the location and description of schools in the target area on a map, and is used in the formulation of education plans.

approach, and the project demonstrated the effectiveness of such projects in basic education. However, its implementation also revealed some issues that need to be addressed. Among these is the utilization of study results after the completion of the Development Study. How to apply the project model formulated by an empirical Development Study is a question for the host government to decide. However, as other donors also find many projects fail to get off the ground after the project model is provided, due to the host government's difficulties in instituting the financial measures required for the project's full-scale development. Accordingly, in order to provide truly effective cooperation, the empirical Development Study must also go beyond the mere presentation of a model, proposing at an early stage pertinent follow-up activities after the study has been completed.

In cases where the study results are to be put into practice as policies of the host government, for example, it is essential to start lobbying the relevant authorities while the study is still going on, and to examine the financial measures that are feasible as a part of the study itself. Similarly, in cases where linkage with other forms of Japanese cooperation or other donors' aid activities is anticipated, it is important at an early stage to carry out the necessary proposal preparations and briefings to the parties concerned.²⁶

Since the Indonesian government put decentralization in basic education into practice from January 2001, the very framework of basic education administration upon which the REDIP model was premised has radically changed.²⁷ More effective junior secondary edu-

cation reform to conform to the new education administration system has become an urgent task. For this reason, a follow-up cooperation project based on the Development Study approach as well (the REDIP Phase II) started in January. In the RREDIP Phase II, close study is also expected to launch the full-scale development of the project after the completion of the study.

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26. In the REDIP too, consideration of how to apply the study results began immediately after the study commenced. Initially, consideration was given to developing a full-scale project through a yen loan, but this plan failed to be realized because of the financial climate on the Indonesian side.

27. In particular, because decentralization has made districts the main actors in administration of basic education, it is essential to analyse and address stakeholders at the district level as well as at the sub-district level.

Study Report

Rethinking Poverty Reduction: PRSP and Japan

— published in April 2001 —

1. Background and objectives of the study

The problem of poverty has remained unsolved in recent years, and interest in provision of aid funds has tended to wane. Under these circumstances, development assistance has focused on poverty reduction that is based on a commitment to utilize limited development resources more effectively. It has also become important to more efficiently employ funds that are obtained through the Heavily Indebted Poor Country (HIPC) Initiative aiming at debt reduction.

At the Joint General Meeting of the World Bank and the International Monetary Fund (IMF) held in September 1999, it was decided that each developing country would be requested to prepare a national Poverty Reduction Strategy Paper (PRSP), which would serve as means to obtain information needed for decisions concerning application of the HIPC Initiative and IDA loans. The PRSP is a three-year socioeconomic development strategy that focuses on poverty reduction, and it is prepared based on the ownership of the recipient country with the participation of a variety of development partners. Most of donors have indicated their approval of the PRSP process, and have been making greater efforts to coordinate their activities with it. It has therefore become increasingly important for Japan as well to consider its response to international collaborative efforts towards poverty reduction, such as the PRSP.

This study discusses how Japan should deal with these trends of international aid coordination including PRSPs, and showed the basic points useful for aid workers.

2. Structure of the study group

The study group headed by Takeshi Nakano, the then JICA Senior Advisor, was established with the participation of JICA staff members and senior advisors, and external consultants to study the issue.

3. Overview of the report and summary of the recommendations

1) Overview of the report

Chapter 1, "Relationship between PRSPs and Japan's ODA Country Policies, JICA Country Programs and Project Request Surveys" covers historical review and

the commitment made by Japan's ODA and its principle aid agencies towards poverty reduction. This clarifies how the PRSPs should be taken into account in Japan's aid, especially JICA's operations.

An important aspect of the PRSP is that developing countries and their development partners, such as aid agencies and NGOs, should establish a collaborative approach (Partnership) to the reduction of poverty. Based on the recognition that assistance and collaboration have been extremely important elements, chapter 2, "PRSP and aid coordination" summarizes recent trends, major discussions on the aid modalities, and the ways to deal with these issues. This chapter studies the relation of the PRSP with closely linked frameworks such as the Comprehensive Development Framework (CDF) and the HIPC Initiative, while making a holistic review on the basic concept and contents of the PRSP.

Chapter 3, "Project aid and program aid - Considerations regarding the Implementation of 'program aid' by JICA" studies where to position the PRSP in Japan's aid policy and JICA's cooperation activities, how to proceed with aid coordination, and how to deal with the "program aid" which is attracting increasing attention in the discussion of aid modalities. The chapter also discusses the relationship with "project aid," as well as the possibilities for JICA's activities.

Chapter 4, "Perspective on considering the characteristics of each country" examines the important characteristics of each country, based on the recognition that the dimension and aspects of poverty vary among countries, and poverty reduction efforts, therefore, need to be promoted on a country-by-country basis.

2) Summary of the recommendations

The recommendations were made on how to deal with these international collaborative trends, including the preparation of PRSPs. Specifically the following three areas should be focused: (a) active participation in the preparation, monitoring, and evaluation of the PRSP, and provision of assistance to developing countries in the preparation and implementation of their PRSPs, (b) identification of the relationship between the PRSP and Japan's ODA country policies and JICA's country programs, and reflection of Japan's aid policy on the PRSP, (c) the greatest possible response to new aid modalities, such as program aid.

The new aid modalities are based on the concept

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that donors should be able to provide assistance more effectively through coordination. These modalities include program aid, Common Funds, improvement of the predictability of aid, and harmonization of procedures. Japan, which has opposed the introduction of a unified aid modality, has proposed, instead, that donors should provide developing countries with various means from which they can select the ones most suitable to their situation. Through close coordination with concerned donors, it is necessary to discuss future measures for providing more efficient and effective assistance.

* The full text of this report is available on JICA's website.
[<http://www.jica.go.jp/english/publication/studyreport/topical/poverty/index.html>]

Study Report

Research Study on Peacebuilding

— published in July 2001 —

1. Background of the study

Japan's cooperation toward peacebuilding covers each one of the reconstruction stages after a conflict: from conflict prevention to critical post conflict management, recovery and takeoff for development. The peacebuilding process accompanies a variety of intertwining complex factors and there is a possibility that conventional development assistance might have a negative impact on the process. In this context, JICA is required to work quickly to formulate a basic policy on peacebuilding and engage in systematic and strategic cooperation. JICA, therefore, established the Study Group on Peacebuilding in October 1999 in order to elaborate proposals on Japan's possible commitment to peacebuilding.

2. Structure of the study group

Under the advice of an advisory group consisting of primarily external academics, a task force headed by Satoru Kurosawa, Director of the Global Issues Division, Planning and Evaluation Department, JICA, and formed by staff members and associate experts of JICA proceeded with the study.

3. Content and scope of the study

The Study Group examined various understandings of peace building now existing in the international community, and defined the concept of peace building from JICA's point of view. Based on the defined concept, various issues that hindered peacebuilding process were analyzed. The group also selected specific countries (Cambodia, Bosnia-Herzegovina, and Kenya) to conduct case studies on the peacebuilding efforts made to date. The study group made practical proposals to support further peacebuilding activities.

4. Outline of the Report

Chapter 1, "The Concept of Peace building and Legal Frameworks" analyzes the legal frameworks and security management of peacebuilding which are required to support its concept and help undertake practical operations.

Chapter 2, "Basic Issues Related to Peacebuilding" discusses the basic issues concerning peacebuilding such as humanitarian emergency relief, conflict sensitive approach in development assistance, and en-

Study Report

Information Revolution in Development Assistance
— published in June 2001 —

hancing the implementation mechanism.

Chapter 3, "Proposals for Future Support of Peacebuilding" elaborates proposals on what Japan should undertake for peace building based on chapter 1 and 2. The proposals cover the following 5 issues: (a) deepening the understanding of and consideration to peacebuilding efforts, (b) enhancing direct assistance for peacebuilding, (c) training and securing personnel, (d) improving aid cooperation, (e) improving security countermeasures and establishing a compensation system. In addition to the principle objective of the study group of seeking for a possible commitment of JICA to peacebuilding, the group examined a wide range of issues related to peacebuilding and other basic issues including the Peace Keeping Operation (PKO), with the understanding that JICA's sole effort is not sufficient to deal with the peacebuilding issues, and that a review of the relationship with the PKO is indispensable in pursuing the Japanese Disaster Relief (JDR) activities.

* The full text of this report is available on JICA's website.
[<http://www.jica.go.jp/english/publication/studyreport/topical/research/index.html>]

1. Background of the study

At the G8 Kyushu-Okinawa Summit in July 2000, the utilization of information and communication technology (ICT) was discussed as one of the principle agendas and the "Okinawa Charter on the Global Information Society" was adopted. In the Charter, ICT was defined as one of the most powerful driving forces in shaping the twenty-first century as well as a means for human beings to fulfill their potential capability. The Charter urged the commitment of all parties concerned, including the private sector, to clarify their roles in realizing a global information society where every one of us can enjoy the benefit brought about by ICT.

In its efforts to fulfill what the Charter aims at, Japan announced a comprehensive framework for cooperation to bridge the international digital divide with a commitment of a total of 15 billion dollars over the next five years. These efforts are intended to (a) make an intellectual contribution toward promoting the recognition that "ICT is an opportunity" and toward establishing policies and systems for ICT, (b) develop human resources through training programs, (c) assist in the building of telecommunications infrastructure and networks, and (d) support active utilization of ICT in actual development assistance operations.

The research report intends to provide practical recommendations useful for Japanese aid agencies (JICA) to work in the premise of ICT development along with the country's policy.

2. Structure of the study group

The report has been prepared through the hard work of a task force headed by Koichi Miyoshi, JICA Senior Advisor (the then Deputy Managing Director of the Planning and Evaluation Department of JICA), and formed by external experts, senior advisors and staff members of JICA, and outside consultants.

3. Overview of the report and outline of the proposals

1) Overview of the report

This research report examines the role of development assistance with focus on the ICT revolution, and proposes concrete directions for development assis-

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tance agencies in this area of ICT development.

Under the theme of "Direction of Japan's Future Assistance for ICT Utilization," chapter 1, "Purpose of Assistance for ICT Utilization" defines the concept of ICT discussed in the context of the report and studied its characteristics and the significance and purpose of assistance for ICT utilization. In order to overview the political discussions of ICT taking place around the world, the research covers the issues discussed in major international meetings, the global view on ICT, and the recent ITC policies in different countries including how these policies are carried out.

Chapter 2, "Direction of Assistance for ICT Utilization" discusses the importance of ICT strategies and the development of telecommunications to support ICT provision. The key technical and institutional issues in conducting development assistance are identified, and ICT utilization in various sectors such as education and training, healthcare, governance, poverty reduction and the environment is proposed.

Chapter 3, "Toward a Global Information Society" attempts to answer the following questions: What are the fields and methods adopted for assistance that employ ICT? What are the ideas or concepts governing the implementation of such assistance? What aspects should be taken into consideration in carrying out assistance by Japan?

Chapter 4, "Need for the Reform of JICA's Assistance System" seeks how to reorient JICA's operations to realize "Japan's comprehensive assistance policy to bridge the international digital divide" announced at the Okinawa Summit and the possible strategies for it. In this chapter, the following measures are cited: fast and flexible decision-making, effective cooperation between aid agencies, reform in accordance with the actual state of the ICT industry, establishment of knowledge databases and information dissemination through websites, cost structures, and raising people's awareness.

2) *Outline of the proposals*

The following practical proposals were designed to encourage aid agencies to adopt themselves to the need for ICT development: (a) formulation of ICT strategies, which requires comprehensive and well coordinated strategies, and the revision of international trends in ICT application, especially in Asian countries; (b) development of telecommunications as the foundation of ICT application, which should be

made through the telecommunication infrastructure development, human resources development and policy and institutional support; (c) ICT utilization in various sectors, which would enable smooth gathering, accumulation, emission and joint usage of the information, as well as indirect remote cooperation and follow-up activities. The research was also made to identify possibilities for assistance in ICT application.

Although the quality of assistance to developing countries can be improved with ICT, its introduction does not automatically lead to desirable results. ICT should be applied carefully, and full consideration of the following factors that are common to all fields is required: (a) establishment of well designed contents and systems that are easy to use, (b) reliability of information, (c) human resources development and recognition of the need for reform, (d) operation/management systems and user support systems, (e) economic feasibility and selection of appropriate media, (f) system improvement and maintenance, (g) security and privacy protection, (h) intellectual property rights, (i) considerations for people who do not have access to ICT, (j) brain drain, (k) human resources development in Japan, (l) private sector participation and cooperation with universities

* The full text of this report is available on JICA's website.

[http://www.jica.go.jp/english/publication/studyreport/topical/ir_dev/index.html]

Study Report

Participatory Evaluation and International Cooperation

— published in July 2001 —

1. Background of the study

In recent years, the participatory approach has attracted growing attention in the field of development aid. For example, in December 1989, the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) issued its "Policy Statement on Development Cooperation in the 1990s," which cited participatory development as the foremost issue of the 1990s. The DAC also stresses the importance of developing countries' ownership of cooperation and of participatory and sustainable development processes in its policy paper "Shaping the 21st Century: The Contribution of Development Cooperation," adopted in May 1996.

Under these circumstances, an emerging concept is that developing countries should be involved as leading participants not solely in implementation but also in the entire series of project activities, which range from planning to monitoring and evaluation. Project stakeholders of developing countries are expected to raise their sense of ownership by improving their implementation management capacity throughout this process.

As for the theory of evaluation, since the 1980s it has been proposed that stakeholders should improve their evaluation capacity through participation in the evaluation, and that such involvement should in turn increase their ownership of cooperation. This is why more donors, including the United Nations Development Programme (UNDP), are attempting to incorporate the participatory approach into their evaluation schemes.

Based on the above, research was conducted to study the ways in which the Japan International cooperation Agency (JICA) could utilize participatory evaluation in its activities.

2. Structure of the study committee

In conducting the research, the study committee headed by Koichi Miyoshi, JICA senior advisor (the then Deputy Managing Director, Planning and Evaluation Department, JICA), was established consisting of researchers at universities and research institutes, JICA staff members, associate experts and outside consultants.

3. Overview of the report and outline of the proposals

1) Overview of the report

In chapter 1, "What is Participatory Evaluation?" the questions of why participatory evaluation is needed is examined. At the same time, the position/meaning of participatory evaluation in the evaluation theory and other institutions is summarized, and the question of what is participatory evaluation and what are the important points in such evaluation are studied.

Chapter 2, "Present Status and Issues of Participatory Evaluation at JICA" reviews the present status of evaluation at JICA from a "participatory" standpoint in examining key issues. In addition, the present status and issues of participatory development and participatory evaluation at JICA are analyzed based on the results of the questionnaire survey on participatory evaluation for JICA staff and consultants.

Chapter 3, "Introduction of Participatory Evaluation into JICA" studies the question of how to introduce such evaluation into JICA focusing on the direction and issues of such introduction.

2) Outline of the proposals

This research defines participatory evaluation as "evaluation conducted by a wide range of stakeholders, including final beneficiaries. Thus, stakeholders participate in the design of evaluation plans; the provision, gathering and analysis of information; the revision of initial project plans; and other project activities." It also cited the following objectives: (a) building of management capacity, (b) development of ownership, (c) promotion of effective feedback, and (d) improvement of accountability. Building management capacity is an objective unique to participatory evaluation that has not been recognized in conventional evaluation. Furthermore, another salient feature of participatory evaluation is that it attracts importance to feedback and accountability not only to donors but also to beneficiaries and aid recipients.

Issues and considerations pointed out in implementing participatory evaluation include the following: (a) clarification of the relationship between participatory development and participatory evaluation, (b) continuous participation from ex-ante evaluation to ex-post evaluation, (c) expansion and clarification of the targets of evaluation, (d) nurturing of facilitators, (e) promotion of un-

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Study Report

Development Assistance for the Environment : Phase II — published in August 2001 —

derstanding of the participatory approach, (f) establishment of methods for feedback, (g) improvement of the evaluation system, (h) balance with evaluation conducted by outsiders, and (i) securing the budget. In order to improve management capacity and promotion of ownership, employing the participatory evaluation only at the evaluation stage is not sufficient. Participation must be pursued throughout the aid process: from preliminary surveys to ex-post evaluation. In other words, participatory evaluation should be incorporated as an activity of projects themselves.

* The full text of this report is available on JICA's website.
[<http://www.jica.go.jp/english/publication/studyreport/topical/participatory/index.html>]

1. Background of the study

JICA established an aid study committee on the environment in 1988 to discuss the basic policy on Japan's assistance in the environmental field. The committee submitted a report with recommendations on environmental cooperation in developing countries. Ten years after since the publication of the report, environmental needs of developing countries as well as the approaches in financial and technical cooperation of aid agencies have considerably changed. Under these circumstances, the Second Aid Study Committee on Environment was established to identify Japan's future basic cooperation policy in environment-related fields and envisage a direction to promote more effective and efficient environmental ODA, aiming at more consistent coordination of organizations concerned and more integrated and effective environmental cooperation.

2. Structure of the study committee

The study committee chaired by Hisakazu Kato, Professor of the Graduate School of Law, Nagoya University, was established consisting of eight committee members and the task force, and held 15 meetings since October 1999.

3. Overview of the report and summary of the recommendations

1) Overview of the report

The original report which is written in Japanese is divided into the following five chapters: I. Changing needs of developing countries in environmental economic cooperation and the donors' responses; II. Environmental conditions and needs by region; III. Environmental issues by sector; IV: Overview of Japan's environmental cooperation; V. Recommendations for Japan's environmental cooperation.

Since the original Japanese report totals about 400 pages, a summary version in English is provided with a focus on the original chapter 4 and 5 in the Japanese version cited above.

The English report consists of five chapters including chapter 1, "Introduction." Chapter 2, "Summary of the original Japanese report" summarizes the Japanese report, chapter 3, "Strategies for Japan's fu-

ture environmental ODA" discusses the strategy of Japan's environmental ODA, chapter 4, "The features of Japan's environmental cooperation: its track record and policy agenda" features Japan's environmental cooperation, and chapter 5, "Practical tactics for JICA's technical cooperation in the environmental field" discusses what tactics JICA can take for effective technical cooperation in the environmental field.

2) Summary of the recommendations

The required basic measures are stated as follows: (a) contributions to the communities, (b) support to global environmental measures, (c) assistance with an integrated and comprehensive framework.

- (a) Contributions to the communities: Many of the environmental issues stem from local problems. The support to region-specific problems should be made with such considerations as securing communities' autonomy, attention to the home life improvement of the people in developing countries, and assistance that could benefit as many beneficiaries as possible.
- (b) Support to global environmental measures: Multinational environment treaties are concluded to deal with global environmental problems such as desertification and ozone layer protection, and a lot of developing are member countries. The important task for us is to support these countries to observe the provisions stipulated in the treaties.
- (c) Assistance with an integrated and comprehensive framework: In implementing cooperation in the environment, an integrated and comprehensive support plan should be prepared. More specifically, for solving environment related problems it is important to formulate a project targeting a wide coverage of people, by standing on a long-term viewpoint and gaining cooperation from a wide range of aid organizations, etc.

In addition, the report recommends the directions that our country's technical cooperation could take emphasizing the following points: (a) as mere research and studies on the environment will not lead to the direct solution of the problems, support measures that specifically focus to solve the environmental problems should be taken. (b) as every region and every country has its own problems and solutions, the needs by region and country should be thoroughly studied based on the regional characteristics. (c) Appropriate policy and technology to each recipient country should

be applied. (d) In planning support measures, the situation of the recipient country should be accurately studied to formulate a detailed project design, and scope of the recipient country's responsibility should be confirmed in a written form. (e) the project planning should be made by qualified experts.

* The full text of this report is available on JICA's website.

[<http://www.jica.go.jp/english/publication/studyreport/topical/environment/index.html>]

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Study Report

Government Decentralization Reforms in Developing Countries

— published in March 2001 —

1. Background and objectives of the study

The wave of decentralization of governments throughout the world has fostered decentralization as a theme of political importance in many developing countries. Today, European and US aid agencies tend to bypass inefficient central governments and to give direct assistance to local governments or local non-governmental organizations.

Considering that even central governments in most developing countries are still in the process of becoming established, such an approach does not seem to be the only way to improve the efficiency of local governments. Rather, decentralization should be oriented towards cooperation between the central government and local governments to increase their respective capabilities and to assist them in sharing the public duties they are responsible for carrying out. With regard to this, the history of Japan's central-local government relations since the Meiji era may provide valuable insight and lessons that can be shared with the developing countries which are on the quest for government decentralization reforms.

The study team conducted case studies in Thailand, the Philippines and Indonesia to understand the process of these countries' decentralization reforms. The primary objective of the study was to examine the issues related to decentralization and to recommend future directions for Japan's development assistance.

2. Structure of the study

The study team chaired by Michio Muramatsu, Professor of the Graduate School of Law, Kyoto University was with six members composed of external experts in finance, administration and regional studies. The team held ten meetings in total from April 2000 to February 2001.

3. Overview of the report

Chapter 1, "Background and Purpose of the Study and the Participants" overviews the background and purposes of the study and the structure of the study team. Chapter 2, "Trends towards Decentralization in Developing Countries" introduces a detailed report of each country of Thailand, the Philippines and Indonesia on the reforms of local institutions. Chapter

3, "Characteristics of Decentralization in Developing Countries from Case Studies" analyses the cases of the decentralization stated in chapter 2, with a special focus on the present state of Thailand's fiscal decentralization.

Chapter 4, "Lessons for Future Assistance Concerning Local Capacity Building in Developing Countries" discusses the future assistance to support local capacity building in developing countries. Based on the Program for Local Administrative Capacity Building in Thailand implemented by JICA, the following measures are pointed out as important with the understanding that the support for decentralization, which affects diversified stakeholders and issues, requires the multilateral commitment of many ministries of the central government as well as various local governments: (a) policy dialogues with various organizations in the recipient country and other donors and aid agencies should, (b) "project programming" for gathering a wide-ranging sources of information, (c) for project sites selection, objectivity and transparency in procedures and selection criteria, considerations in regional differences, the initiative taken by the recipient country. To conclude the chapter, more specific proposals are made: (a) support for construction of residents information management system and monitoring system for institutional frameworks related to local government, (b) support for compilation of cooperative institutional frameworks between local, (c) need of additional detailed research on local finances and subsidy of local governments.

Chapter 5, "Decentralization in Developing countries: Concluding Remarks" concludes that Japan's fiscal and administrative system can be useful for developing countries currently embarking on decentralization, judging from the analysis of Japan's experience in the reform of local government systems. More specifically, Japan's integrated fiscal and administrative system including "agency delegation functions" assigned from the central government to local governments, subsidy system, fiscal allocation system to prefectures, and central-local governments' personnel exchange system has been useful to support the improvement of local governments' capacity, coordinate policy and interest-related conflicts between the central-local governments as well as between local governments, and make a common national criteria of public services for a better redistribution of public resources. Japan's decentralization

Study Report

Development Assistance to the Kingdom of Cambodia: From Reconstruction to Sustainable Development — published in March 2002 —

process was carried out based on mutual cooperation of the central and local governments to enhance the capacity of both sides while clarifying the role of each side. Such experience of Japan, therefore, is recommended to be advantageous for the developing countries in formulating their decentralization policy and improving the capacity of local governments, compared to those of western countries, where there is a preference for the separationist decentralization model.

* The full text of this report is available on JICA's website.
[<http://www.jica.go.jp/english/publication/studyreport/topical/decentralization/index.html>]

1. Background of the study

Cambodian political disorder and conflicts from the 1970s finally came to an end with the Paris Peace Agreements held in October 1991. Since then, Cambodia has advocated its efforts on restoration and reconstruction with assistance from various countries and multilateral donors. In July 1998, the general election was held by Cambodians themselves and a new government of Hun Sen was established. In April 1999, It gained a membership status of ASEAN. Such events illustrate that Cambodia has achieved political stability and rejoined the international community. However, damages and losses brought by a long period of disorder in economic and social foundation as well as in human resources were so tremendous and profound that serious obstacles still remain in various aspects of their development process.

Japan has taken a central role in support for Cambodia, based on the recognition that Cambodia's sustainable stability is essential for the peace, stability and further development of Asia-Pacific region.

As Cambodia has started full-scale nation building and moved into the development phase from the reconstruction phase, the future direction of Japan's assistance needs to be reviewed and redirected towards newly envisaged goals. With the aim of contributing to Japan's effective assistance to Cambodia, the Japan International Cooperation Agency (JICA) organized the Study Committee on Country Study for Japan's Official Development Assistance to Cambodia in August 2000.

2. Structure of the study committee

The study committee chaired by Yukio Imagawa, Professor of the Faculty of Law, Kantogakuen University, was established with the participation of 24 academics. The report was compiled through the discussions at the meeting, which was held seven times with participants from NGOs, etc., and based on the outcomes of two field studies.

3. Structure of the report

The report consists of two parts: "Part I: Summary of Current Condition and Recommendation for Japan's assistance," and "Part II: Current Condition and Prospects."

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Part I summarizes the background and the current state of development in Cambodia, which briefly covers the transition from the peace making phase to the reconstruction phase and current development efforts. It suggests the direction of Japan's basic policy on assistance to Cambodia over the next five years, as well as on the goals and focus of the assistance.

Part II is subdivided into two chapters: Chapter 1 outlines and analyzes the country's politics, economy, society, history and culture, as well as the development policies of the Cambodian government and trends in international assistance to the country. Chapter 2 looks at specific issues such as 'the promotion of good governance' and the 'the creation of an environment conducive to industrial development,' to identify challenges and problems related to each issue specifically.

As one of appendices, this report also includes the perspectives from NGOs, including recommendations.

4. Summary of the recommendation

The study committee identified major development challenges in Cambodia as follows: (a) need for foundation-building toward sustainable development, including reconstruction of a state system and recovery of physical infrastructure, (b) rejoining the international community and the regional community to promote sustainable development by alleviating poverty prevalent in rural areas, expanding the size of the economy to absorb a rapidly growing population, and recovering natural resources and the environment as well as restoring and conserving the cultural heritage, (c) strengthening of Cambodia's ownership and establishing of partnership with the international community.

Based on the above understanding, recommendations were made along with the following basic perspectives on Japan's assistance to Cambodia, (a) a period of about five years should be viewed as Cambodia's 'foundation-building period' which prepares self-sustaining development to catch up with neighboring countries, (b) the primary objectives of Japan's assistance is defined as helping to reconstruct Cambodia's state institutions, to build the foundations for mid and long-term sustainable development and to alleviate the country's extreme poverty, (c) Japan should lead international coordination efforts to strengthen Cambodia's ownership in its development

process, respecting the country's absorptive capacity.

The committee recommended the following considerations to be taken in assistance planning and implementation. In the planning stage, (a) Japan should make efforts to strengthen Cambodia's ownership, which needs time and can be only achieved along with progress in other development issues (poverty reduction, economic growth and the reinforcement of fiscal and human resources, etc.) through a policy dialogue with the Cambodian government, (b) to form a better partnership between Cambodia and donors, Japan should actively involve in the discussions on desirable partnership from the standpoint that respects and strengthens Cambodia's ownership in its development activities, and (c) in order to overcome constraints on Japan's ODA resources in terms of know-how, personnel, budget, etc., coordination and cooperation with multilateral donors, donor countries, and NGOs should be recognized crucial.

In the implementation stage, (a) to achieve a specific target, closely related issues should be approached simultaneously, and to make monitoring of outcomes and their feedback easier, an adequate size of the geographical area subject should be identified based on Cambodia's absorptive capacity and administrative systems, (b) the assistance operations should be cross-sector, result-oriented, and should correspond flexibly to such changes as scale, scheme and timing of assistance, considering various stakeholders involved and their needs, (c) to secure monitoring and feedback on outcomes, it is desirable to establish the evaluation method for integrated approach through trial and error in the field, and (d) assistance activities need to be expanded to rural areas, where poverty alleviation through agricultural promotion and rural development, strengthening of human resources, restoration of the natural environment, and reinforcement of administration capacity are urgent issues

* The full text of this report is available on JICA's website.

[<http://www.jica.go.jp/english/publication/studyreport/country/cambodia/index.html>]

Study Report

Japan's Official Development Assistance to the Republic of Cuba

— Soft Landing to a Market Economy and Democracy Coexistent with Social Fairness —

— published in March 2002 —

1. Background and objectives of the study

While maintaining a communist one-party regime, Cuba has been carrying out economic reforms since 1993. These can potentially lead the country to an eventual transition to a market economy. However, there has been no noticeable improvement in the human-rights record, although the Cuban government released some political prisoners when the Pope visited Cuba in January 1998. EU countries and Canada have provided Cuba with various forms of cooperation including direct investments in the hope that "exposing Cuba to the world wind" may contribute to encouraging democratization in Cuba; while the U.S. government has reduced economic sanctions to some extent in consideration of the mounting demand for relaxation from its business community.

Japan has thus far extended its assistance to Cuba mainly in the form of technical cooperation such as the acceptance of trainees, in addition to limited financial assistance called "Grant assistance for Grassroots Projects" and "Emergency grant aid." In October 2000, JICA sent to Cuba a Project Identification Mission to discuss the future of bilateral cooperation with the Cuban government. Concurrently, it conducted two Project Formulation Studies, one on the environment and the other on agricultural and rural development, and decided to station a Project Formulation Advisor in Cuba for a long-term assignment. Requests made by the Cuban government are currently under study and consideration.

However, reflecting the past history of limited mutual interactions, Japan has scarce information and data on Cuba. In order to analyze the current status and development challenges of Cuba, the Country Study Committee for Japan's Official Development Assistance to Cuba was established in November 2001. The committee was expected to make policy recommendations on Japan's ODA to Cuba, particularly on JICA's assistance policy in the near future.

2. Structure of the study committee

The Study Committee chaired by Keiichi Tsunekawa, Professor of the Graduate School of Arts and Sciences, University of Tokyo was formed with seven committee members and resource persons. The study report was compiled based on the outcome of three study meetings and the findings of a field study.

3. Structure of the report

The report provides the result of the research and discussion by the study committee. The first chapter summarizes the current status and problems of Cuba. The chapter gives us a wide range of information useful to understand the real situation of the country, including its evolution and reforms during the 1990s, policies and diplomacy, and economic and social conditions.

Chapter 2 discusses the proper direction and major challenges for medium-term development of Cuba, giving basic perspectives and proposing a preferable course of development. The chapter also states the major challenges Cuba faces in the quest for development.

Chapter 3 presents policy recommendations on Japan's ODA to Cuba that the study committee believes more appropriate, discussing the significance of expanding ODA for the country and its basic policy.

A matrix is attached to illustrate the current status and major development challenges of Cuba as well as principal tasks for Japan's assistance to Cuba.

4. Outline of the recommendation

The report recommends that Cuba should advance towards a "soft landing to a market economy and democracy coexistent with social fairness." Cuba needs to quicken its transition to a market economy, responding to the challenges such as the elimination of the dual economy and the alleviation of the hard currency bottleneck.

Japan can assist such Cuban efforts through expanding its ODA. The transformation of Cuba, in turn, is beneficial for Japan for various reasons. The assistance measures recommended by the report are (a) promotion of sustainable development, (b) assistance to Cuba's efforts for political and economic liberalization, (c) cooperation to reform Cuba's policy for the socially weak, and (d) combination of Cuba's human resources with Japan's technical resources to help third countries.

* The full text of this report is available on JICA's website.

[<http://www.jica.go.jp/english/publication/studyreport/country/cuba/index.html>]

JICA
Japan
International
Cooperation
Agency

was established on 1 August 1974 as an official aid agency of Japan under the supervision of the Ministry of Foreign Affairs. In order to help promote the economic and social development of the developing world, JICA extends various kinds of cooperation including technical cooperation, grant aid, dispatch of Japan Overseas Cooperation Volunteers (JOCV) and disaster relief.

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For
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Cooperation

was established on 1 October 1983 as one of JICA's affiliated organs. Its purpose is undertaking recruitment of senior advisors, training qualified Japanese experts, research and study, and collection and dissemination of information of technical cooperation.

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