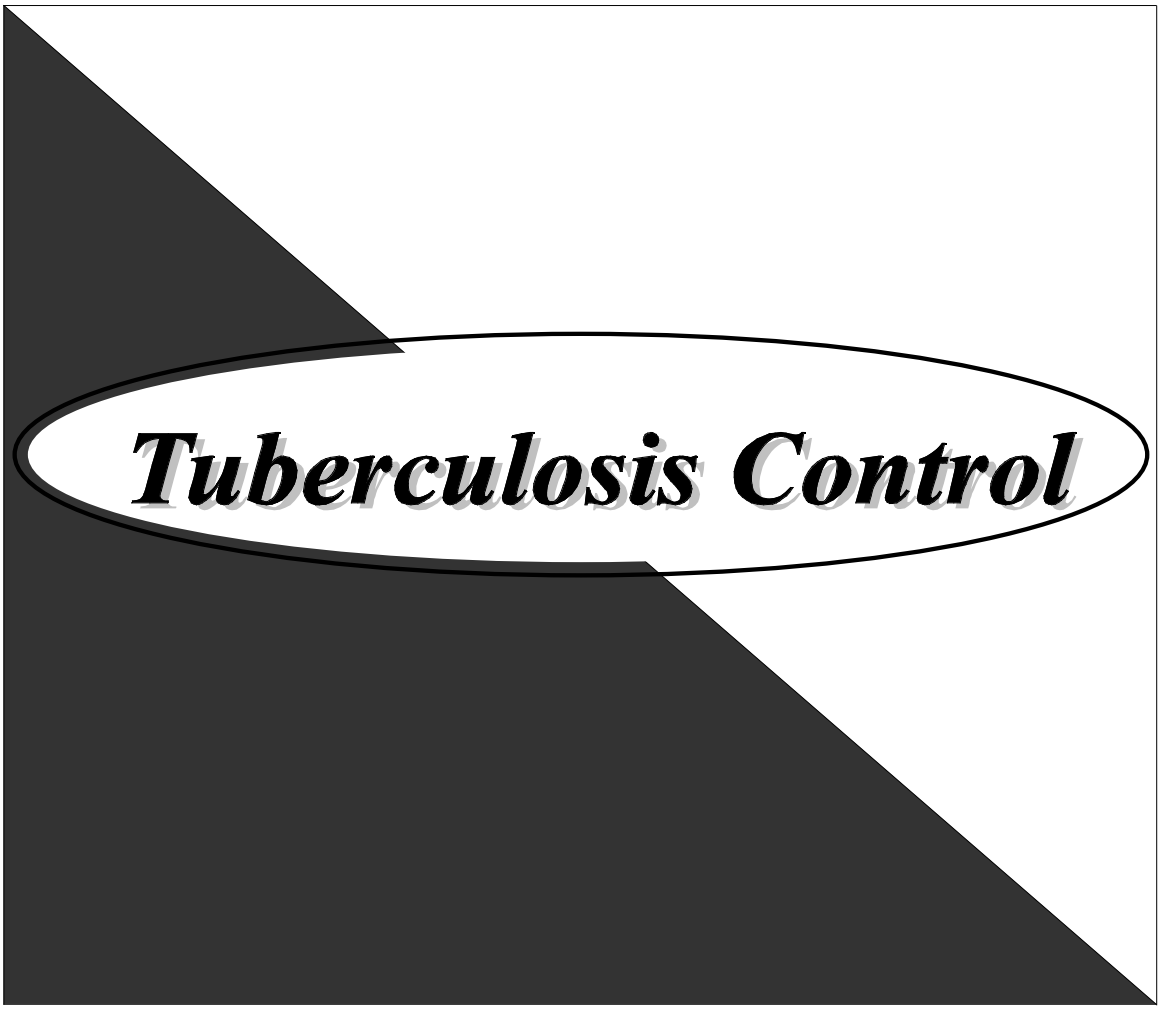
Policy and Strategies on



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JAPAN INTERNATIONAL COOPERATION AGENCY

Policy and Strategies of the Japan International Cooperation Agency (JICA) for Tuberculosis (TB) Control

Contents

1 Summary

This paper provides an overview of JICA's policy and strategies to work with partner government organizations and other bodies related to TB control in the context of international cooperation and assistance. Tuberculosis (TB), which is one of three major infectious diseases that present an urgent need for control, has been threatening the health of people in many developing countries. Since the G8 Okinawa Summit, the "Stop TB Initiative" and "DOTS: TB Cure for All" have become recognized as important slogans not only among health professionals but also various sectors related to development assistance.

TB epidemic is firmly rooted in places where dignity of people is limited. Socio-economic environment and other factors situated outside the sphere of health services must be fully considered if governments and health authorities intend to reduce the number of TB patients. This is particularly true for the most vulnerable and marginalized segments of the population in a given country. Integration of TB control into the concept of poverty reduction has been given high priority by JICA in the design and implementation of projects related to TB control.

DOTS (Directly Observed Treatment, Short-course) is defined as the most efficient and effective intervention package for TB control. It has 5 key components that must be implemented based on government initiative: (1) the government's commitment to sustained TB control activities, (2) case detection by sputum smear microscopy among symptomatic patients who report to health service points, (3) a standardized treatment regimen of six to eight months for at least all confirmed sputum smear positive cases, with directly observed therapy (DOT) for at least the initial two months, (4) a regular uninterrupted supply of all essential anti-TB drugs, and (5) a standardized recording and reporting system that allows assessment of treatment results for each patient who is treated under the TB control programme. The 5 components are designed to ensure a high success rate for treatment. It is expected that DOTS will be further expanded to reach as many patients as possible.

Logistics are also vital to sustain TB control to ensure sustainability of activities in the communities. Distribution of anti-TB drugs is one of the key issues to sustained DOTS in the community. It is therefore essential to ensure the efficiency of logistics related to drug procurement, storage, distribution and administration. Secured drug supply is also necessary to prevent the development of drug resistant TB.

TB control activities in JICA projects are designed with grass-roots orientation so that they are in line with capacity building for the various stakeholders in the recipient countries. Technical and managerial capacities are emphasized as the critical issue to ensure the sustainability of TB control with appropriate technology meeting the local demand. Planning and execution of DOTS are key subjects for the success of TB control. Capacity building has focused on human resources and institutions in order to ensure quality control in various JICA projects.

TB and HIV are serious risk factors for each other. TB tends to increase the fatality of persons infected with HIV/AIDS, while at the same time, HIV accelerates the development of TB and deteriorates its clinical course. In fact, it is said that TB is one of the most common causes of death for persons infected with HIV. Proper integration of countermeasures against HIV/AIDS has to be kept in mind at the planning and implementation stages of TB control projects.

Collaboration with other sectors such as education, community development and the environment should also be considered to maintain coherency with the task of poverty reduction for the vulnerable groups in society.

2 Context of TB and global efforts for its control

2-1 Introduction

TB, which is caused by *Mycobacterioum tuberculosis,* has been threatening the health of people in many developing countries as one of the three major infectious diseases. Infection is mainly caused by airborne transmission. The WHO estimates that approximately one-third of the world's 6 billion people is infected by the above-mentioned microorganism. It has also revealed that about 8 million people come down with TB, and that 2 million people die of the disease each year. Looking at developing countries, TB is an obvious target for control activities, as it makes up 25% of the deaths caused by preventable diseases in developing countries. In addition, it is important to be aware of the fact that 95% of all TB patients and 98% of all TB-related deaths occur in developing countries.

At the July 2000 G8 Okinawa Summit, TB was recognized as a disease that threatens the world economy and as a major infectious disease that must be controlled with priority. The Okinawa Infectious Diseases Initiative was announced with the objective of raising at least 3 billion US dollars for investment into infectious diseases control activities during a 5-year period starting in 2000. A professional meeting was also held after the Summit that set DOTS expansion to detect 70% of people with infectious TB, and to cure 85% of those detected, as a target for TB control.

The "Stop TB Initiative" was put forward as a means to strengthen collaboration between TB burden countries, donor countries and other important international organizations, as well as strategies for expansion of DOTS through activities grouped under "DOTS: TB Cure for All", which was highlighted as the main theme of World TB Day in 2001.

The Government of Japan commenced collaboration and task-sharing with other donors by developing new schemes, such as special grant aid for infectious diseases control, that are in addition to conventional modes of assistance. In addition, the Special Fund for Human Security, which was formulated in the United Nations, has been supported financially by the Government of Japan. These commitments are in line with the international consensus to stimulate global collaboration to tackle TB, as mentioned above. Furthermore, The Global Fund to Fight AIDS, TB and Malaria is an extremely important means of enhancing activities for vulnerable populations in the world.

2-2 Strategies and current trends of the WHO toward TB control

The DOTS strategy has been promoted by the WHO in 1995 as a cost-effective measure to fight TB. The concept of DOTS was developed after the WHO's declaration of a global TB emergency in 1993.

The DOTS strategy is defined as a package with 5 key components that must be implemented based on government initiative. These components are: (1) the government's commitment to sustained TB control activities, (2) case detection by sputum smear microscopy among symptomatic patients who report to health service points, (3) a standardized treatment regimen of six to eight months for at least all confirmed sputum smear positive cases, with directly observed therapy (DOT) for at least the initial two months, (4) a regular uninterrupted supply of all essential anti-TB drugs, and (5) a standardized recording and reporting system that allows assessment of treatment results for each patient who is treated under the TB control programme. The 5 components are designed to ensure a high treatment success rate. It is expected that DOTS will be further expanded to reach as many patients as possible.

The Regional Committee for the Western Pacific adopted a resolution entitled as "Stop TB in the Western Pacific Region", a special project of the Regional Office for Western Pacific (WPRO), in September 1999 in response to the fact that one third of the 8 million new cases of worldwide TB occur in the region alone. A Technical Advisory Group (TAG) meeting was thereafter held by the WPRO, and it recommended that member countries should expand access to DOTS so as to achieve a DOTS case detection rate of at least 70% of estimated smear-positive cases by 2005. The TAG meeting also concluded that the region could attain a 50% reduction in TB prevalence and mortality by 2010 if this level, among other indicators, were reached. Based on the above, a 5-year programme was formulated throughout 7 member countries where TB is one of the heaviest burdens in the health sector.

Thereafter, the Amsterdam Declaration on TB was put forward in a meeting of 20 countries having the highest TB burden in 2000. The delegates of the participant countries agreed upon the target of improving the TB detection rate to more than 70% by 2005 by making maximum use of DOTS.

2-3 Strategies of other international organizations for TB control

2-3-1 The World Bank

The World Bank is committed to responding to the global TB epidemic through policy dialogue/advice and country-specific lending for strengthening of health systems and disease control. TB control is among five public health priorities promoted by the Bank in the health, nutrition, and population sectors. The "Stop TB Partnership" is building partnerships for action against one of the world's most devastating diseases.

The priorities of the World Bank are to expand, adapt, and improve strategies to control and eliminate TB. The Bank aims to promote wider and wiser use of existing strategies to interrupt TB transmission by increasing access to accurate diagnosis and effective treatment, and also by accelerating expansion of DOTS to achieve the global targets for TB control. It is also crucial for the Bank to increase the availability, affordability and quality of TB drugs.

In addition to the above issues, the Bank emphasizes the additional important targets of 1) adapting existing strategies in order to address the challenges posed by emerging threats, for example, by developing an effective strategy and by preventing and managing multi-drug resistant TB, and 2) developing an effective strategy to reduce the impact of HIV-related TB. The Bank initiated a policy to strengthen the management capacity of the health systems of recipient countries through loans related to infectious disease control.

2-3-2 UNICEF

UNICEF has called tuberculosis *"one of the most seriously neglected and underestimated health, human rights and poverty problems of our era."* It has also said that only a concerted effort could conquer a disease that accounts for 2 million deaths a year, including those of over 250,000 children.

Children are especially vulnerable to the effects of TB, which is often difficult to diagnose in young children and therefore difficult to treat effectively. Children also suffer from serious social consequences when someone in their family has TB. They are withdrawn from school either to go to work to help their families bear the costs of TB care or due to the stigmatizing effects of the disease. UNICEF, however, supports the idea that TB can be prevented and cured, and it has expressed strong approval of the TB Initiative goal of increasing DOTS coverage to reach WHO goals: a 70% detection rate and 85% cure rate.

UNICEF recognizes that several countries in Asia, including poorer countries such as Cambodia and Vietnam, have developed model responses and are well on their way to effectively controlling the disease. The remaining challenge is to mobilize sufficient political will to attack TB and to build a social partnership that includes governments, the business and private sectors, concerned institutions, NGOs, and communities and families.

3 TB control in Japan for the past half century : Japan's experience

Current status of TB in Japan: developments and issues

Based on the TB Prevention Law passed in 1951, coherent countermeasures have been taken by the government to control TB throughout the Japanese islands. This law was formulated mainly due to a devastating outbreak of TB in the 1940s. During this time, the mortality rate of TB was as high as 200 per 100,000 people, and thus TB was named the most important health issue of the time.

TB control programme was therefore enhanced through the introduction of routine screening, immunization, and a case management system. And this, together with improvement in living standards and stabilization of political situations, has improved the TB situation tremendously.

There were various efforts involved, such as early case detection using periodical mass X-ray examination, commitment of public health nurses for home care, expansion of BCG vaccination, and subsidization of the medical fees for inpatient and outpatient treatment. TB control was finally standardized and established through the design and implementation of these activities as a package in Japan in the 1950s.

TB screening through periodical mass X-ray examination was particularly promoted by the government. This approach of "mass-screening" was extended to schools as part of annual compulsory health examinations for primary, secondary and tertiary school pupils. In addition, this practice was mandated to all public and private enterprises and local autonomies. It is obvious that TB control was a model for mass screening while at the same time being one of the fundamental components of periodical health examinations for the Japanese population. Health education was also combined with the above-mentioned screening in cases where public health nurses were mobilized in line with other community health activities.

TB control currently in operation in Japan is comprised of 5 main principles that incorporate top management of enterprises, schools, municipal governments and city councils as implementation agencies. These 5 principles are: (1) periodical health checks and vaccination, (2) provision of quality treatment for TB patients with medical fee subsidy, (3) case management and follow up of TB patients, (4) surveillance, (5)research and health promotion related to TB.

4 Policy and Strategies of JICA for TB control

4-1 Policy issues related to TB control

JICA places high priority on integration of TB control into the concept of poverty reduction when designing and implementing projects related to TB control. This is based on an understanding of the nature of poverty, particularly in developing countries, where people are vulnerable to TB. It is obvious that the socio-economic status of the people has a large impact on their access to preventive and curative services for TB. On the other hand, TB itself is a potential risk factor to individuals' economic status, and this endangers the daily lives of vulnerable groups in society.

TB control activities in JICA projects are principally designed from a grass-roots orientation, and they are in line with the concept of capacity building for the various stakeholders in recipient countries. Empowerment of community PHC activities and strengthening of mechanisms to sustain fundamental health services in the community are both keys to the success of TB control.

Well-balanced technical and managerial capacities are emphasized as the critical issue in ensuring the sustainability of TB control with appropriate technology that meets the local needs. JICA in particular supports the development of capability of organizers and decision-makers related to TB control in its group-training courses in Japan, which receive the full cooperation of the country's leading research and health service institutes.

Planning and execution of DOTS are key subjects for the success of TB control. In addition to building a stable supply system for anti-TB drugs and other materials related to laboratory examinations, capacity building in various JICA projects has focused on the human resources and institutions through which quality control of TB services must be strengthened in the respective countries.

4-2 Strategies for TB control

Since the issues of TB control are multi-factorial and diversified in each country, in close consultation with decision-makers, health professionals and other stakeholders of the recipient country, JICA works to prioritize and apply the following strategies based on local needs and feasibility.

4-2-1 Institution-building

Distribution of the services related to TB control that have proper standardization and quality control should be assured in every part of the country. It is also important to have a link with the existing health information system and programme monitoring/evaluation system. Appropriate networking of institutions and health human resources is therefore essential in addition to complete central government-provincial government collaboration in supervision, technical training, logistics, and information systems including clinical recording systems.

The importance of the link between nation-wide TB control activities and the existing PHC framework must be specifically emphasized because of the nature of this disease, which is strongly related to various socio-economic and environmental factors. The function and performance of primary health centres or equivalent facilities are therefore important, as these facilities are regarded as the front-line bases for case detection and treatment.

4-2-2 Human resource development through in-service training and refresher courses

Professional and conceptual skill development is one of the major issues in projects undertaken by JICA and its counterparts in many countries. Development targets vary due to demand. And requests range from those from central government officers to grass-roots level health volunteers. JICA stands on the belief that human resources are the most decisive factor in the success and sustainability of development projects.

There are two main streams in human resource development programme conducted through the collaboration of JICA and its counterpart organizations. The first is pre-service and in-service training. In this case, Japanese technical experts or advisors are assigned to the counterpart organizations for either short-term or long-term periods. These experts work with their counterparts as advisors, trainers and/or collaborators for the various training programmes. The second category is the provision of training programme in Japan for the key actors in the counterpart organizations. JICA sponsors various group-training courses related to TB control in Japan at centres having a distinguished record in this particular technical field. At this moment, 4 out of 52 training courses in the health sector are in this field. Training in Japan focuses mainly on improving managerial aspects, particularly planning and monitoring/evaluation related to TB control.

4-2-3 Capacity building of health systems related to TB control

a. Administration and management

Planning, monitoring and supervisory skills are of importance to ensure the managerial quality of TB control programmes. Technical and managerial training are often conducted in a manner that is parallel with other various facets of projects through in-service training. In the event that a new technique is introduced to the local health system, institution-building is necessary to disseminate this technique and to ensure its maximum utilization with reliable outputs.

b. Diagnostic skill

Reference laboratories must be developed properly so that they have the competence and technical reliability to provide services to the entire catchment area. Bacteriological examination for TB is the critical area for development of TB control. It includes sputum smear exams, culture, identification and susceptibility tests related to ***Mycobacterium tuberculosis***. The series of procedures should be properly standardized, be performed at a reasonable cost, and have reproductivity.

Access to chest X-ray examinations is expected to be available at middle-class health facilities in the referral ladder depending on local requirements. JICA has a system for providing equipment to selected health facilities where there is demand for X-ray examinations so that better access to this essential diagnostic modality for general health service and TB control can be secured.

Technical training related to the above-mentioned diagnostic techniques is indispensable to sustain effective case-finding systems. Efforts have been made by JICA to promote capacity building of counterparts to develop trainers' and learners' manuals together with training modules under the guidance of Japanese experts.

c. DOTS

DOTS is the key word for TB control throughout the world. It is a strategy with a monitoring component that extends from case detection to the completion of chemotherapy. It is extremely important to develop the capacity and implementation structure of DOTS in the community.

d. Regular drug supply

Supply of anti-TB drugs is one of the key issues to sustaining DOTS in the community. It is therefore essential to ensure the efficiency of the logistics related to drug procurement, storage, distribution, administration and utilization. Secured drug supply is useful also to prevent the development of drug-resistant TB. Managerial training related to drug supply is therefore necessary.

e. Operational research

Implementation of operational research on TB control is intended to reveal obstacles and negative factors to the commencement of TB control in communities where DOTS is employed in conjunction with PHC activities. The entire process of TB control, which includes case-finding, treatment, case-management and recording/reporting, has been analyzed carefully through operational research in JICA projects for TB control. The research process itself was a useful mode of capacity building and refinement of the TB control system.

f. Monitoring and evaluation (M&E)

TB control requires a well-designed monitoring and evaluation system, particularly because the treatment system is multi-factorial and also because a long time is required for complete treatment. Therefore, the entire health system related to TB control has to be the target of monitoring and evaluation. Careful design and construction of the managerial structure is essential to ensure tangible outputs. Also, proper supervision at every level of the referral ladder system has to be taken into consideration at the design and implementation stages. In this regard, JICA encourages that meetings for TB coordinators to improve the performance and effects of the programmes be held on a regular basis.

g. Health Information

It is obvious that baseline surveys are the foundation of programme implementation. Information related to existing case-finding, treatment, drug supply, health statistics, and management information of health care delivery systems has to be widely collected and analyzed prior to the commencement of a project. Simplification and standardization of information systems is also vital to guarantee smooth implementation with minimal financial pressure.

4-2-4 Importance of the support for IEC activities

The general public should have a firm awareness that TB is a life-threatening disease. Nation-wide publicity activities based on the initiative of government and health authorities are therefore important to increase the community's awareness of TB control programmes. IEC materials such as audio-visual materials must be provided to health facilities. And mass-communication media should be used to disseminate the message of health education to large populations. Health education activities at health centers through face-to-face communication are also essential.

4-2-5 Strengthening curative services

Preventive services do not function well if there is no proper collaboration with and support for curative services. To cure infectious TB cases, it is essential to eliminate TB from the community. After a patient is diagnosed as an infectious case, he or she must be sent to a reliable curative service with DOTS. This should be a core activity of a programme.

4-2-6 Anti-TB drugs

A reliable mechanism of logistics should be constructed for drug information, procurement, storage, supply, distribution and utilization by the government and related health authorities. Further elaboration of legislation and regulation of the supply system must be carried out to ensure timely supply to the community. Anti-TB drugs should be free for TB patients.

4-2-7 Tackling other social and health issues affecting TB Control

Improvement of environmental sanitation, nutritional status and fundamental health behaviors are influential to the progress of TB control, particularly in low-income areas. Proper integration of the countermeasures to HIV/AIDS and non-TB lung diseases has to be kept in mind at the planning and implementation stages.

Collaboration with other sectors such as education, community development and the environment should also be considered to maintain coherency with the challenge of poverty reduction for vulnerable groups in society.

4-2-8 Collaboration with other organizations, including UN organizations and international and domestic NGOs

An alliance of UN organizations, including the WHO, UNICEF, UNDP, UNFPA, and UNAIDS, has been working toward poverty reduction by maintaining common strategies based on collaboration between the health sector and other influential sectors as a means to improve social security. TB, which is an infectious disease having high priority, must be tackled through a multi-disciplinary approach to reduce its morbidity and mortality. It is therefore crucial for TB control programmes to be constantly sensitive to the activities of UN organizations. Utilization of existing domestic resources is also important, as is rational collaboration with external donor agencies. NGOs of various categories can be potential partners and collaborating agencies for TB control.

4-3 Examples of two ongoing JICA projects in Western Pacific Region

4-3-1 Public Health Development Project and TB control Project in the Philippines (1992～2002)

From 1992-1997, JICA implemented a technical cooperation project for the improvement of public health in Cebu Province of the Philippines. Because the Philippines was one of 23 high burden countries that make up 80% of all TB cases in the world, and because TB was one of the top 5 causes of death of the country, JICA took up TB control as the main target of this project based upon a request from the country's government. In collaboration with the Philippine Government and the WHO, the project developed a model area to test the feasibility and effectiveness of newly developed TB control guidelines that follow the DOTS strategy. The project took the initiative in formulating and disseminating new guidelines for TB control in collaboration with the Philippine government. Among various other activities, the project constructed the Cebu Reference Laboratory for TB control, which is providing tangible outcomes in the improvement of laboratory networks.

The project was a broad package that, apart from the above-mentioned activities, included capacity building for existing health personnel related to TB control. The capacity and mechanisms to coordinate different institutes toward a common objective was successfully developed through the project, which was highly appreciated by domestic and international donors as well as by the government of the Philippines.

The extension of these results throughout the entire country was the next goal. To achieve this, the JICA TB Control Project was formulated in 1997 as the second phase of the project. The focus was placed on TB control and management capabilities, which were particularly emphasized as being key to the success of the nationwide TB control programme. The management-oriented package of project activities was carried out, and due to the huge demand and complexity of this issue in society, the project was further extended for an additional 5 years. In addition, establishment of the Philippine National TB Reference Laboratory should be noted as cooperation from Japan that is working to enhance surveillance and research capacity for TB control.

4-3-2 TB Control Project in Cambodia (1999～2004)

JICA also commenced a technical cooperation project in Cambodia in 1999 with the specific objective of improving TB patients' access to DOTS and other related services. This ongoing project is also a complete package that combines a nationwide awareness programme, early detection, standardization of treatment, and managerial and technical training components. A grant aid project was also conducted in addition to the above capacity building package in line with the development target of TB control. Facility improvement at the National TB and Leprosy Control Centre was designed to strengthen its referral functions, thereby helping it to cope with the increasing prevalence of TB, which is growing at a rate of 5% per annum. This increase is occurring despite the fact that the government took countermeasures in line with the National TB Control Programme. In order to increase the level of TB control, development of human resources and stable implementation of DOTS would be anticipated through the project activities. It was also recognized that the spread of HIV/AIDS in the country hampered the effectiveness and efficiency of TB control.

5 Future perspectives of Japanese collaboration with developing countries and international organizations for TB control

5-1 HIV infection and TB control

Co-infection patients with TB and HIV have recently increased in number, particularly in low-income areas. This particular issue is also a topic that must be further elaborated by both TB control programmes and JICA's collaborative projects. Reference laboratories will be vital to ensuring support for community activities in terms of both case detection and early diagnosis.

5-2 Support for the supply of anti-TB drugs

Stable drug supply in the community health fields, both in rural and urban areas, is an essential part of TB control programmes. A mechanism to supply anti-TB drugs by governments in collaboration with donor agencies has to be constructed and maintained to ensure that patients have access to reliable health services, particularly DOTS. It is needless to say that establishment of sustainable and reliable drug supply systems is a target of JICA's collaboration in terms of both capacity building and management of TB control.

5-3 Preventing development of drug-resistant TB

Surveillance of drug-resistant TB will be an objective of JICA's collaboration with TB control programmes in developing countries. This is due to the significance of this issue in evaluating programme performance.

5-4 Regional approach

Inter-linked countermeasures for TB control among neighboring countries are absolutely necessary due to this infectious disease's ability to spread across borders. Strategies must be formulated that extend delivery of services related to TB control throughout the many countries in the region. Of course this is not an easy task for countries with different socio-economic conditions. However, calibration and exchange of information related to TB control among the respective countries is a must for networking in the region. In this context, health informatics and networking, for instance, are important issues both for health authorities in the target countries and external agencies such as JICA. There are various goals of capacity building that would be achievable through customized inter-regional training schemes that are supported by JICA experts.

5-5 Extension of JICA's cooperation in the immediate future

Indonesia, Myanmar, Pakistan and China are among the nations that have potential for collaboration in TB control with JICA in the immediate future. JICA is now planning substantial collaboration and assistance programmes with these countries that utilise thorough feasibility studies.

Annex 1 JICA's cooperation related to TB in various developing countries

Over many years, JICA has been involved in various activities in HRD, system/mechanism establishment, diagnosis, treatment and epidemiological surveys connected with TB control. Development of appropriate technology through cooperation with recipient counterparts and technical transfer on TB control are the important topics in every facet of activity to ensure sustainability. Various projects are introduced as summaries and the supportive descriptions.

1 Twenty-year effort to control TB in the diversified societies of Nepal (1987～1994、1994～2000、2000～2005)

Tuberculosis has been one of the most serious infectious diseases in Nepal, and Japanese NGOs have provided medical equipment to support Nepal's TB situation since the 1960s. In 1967, JICA dispatched a team of experts to survey the situation, and two years later, in 1969, the Central Chest Clinic Project started. JICA supported TB chemotherapy improvement by supplying X-ray machinery and maintenance persons, and by inviting trainees to Japan.

In 1973, the TB Control Project in the Western Region started. JICA supported improvement of medical and laboratory examination techniques, and provided instruction in TB prevention. JICA also introduced short course chemotherapy and BCG vaccination into the country, and conducted prevalence surveys until 1985.

In 1987, the TB Control Project was launched and followed by a regional project. The fundamental structure of the NTP was established as were the central institutions of the NTP.

In 1994, the National TB Control Project Phase Ⅱ was commenced, which enhanced the NTP and developed the pilot district in the western part of Nepal. The project assisted the central laboratory in establishing a nationwide laboratory network and quality control system. Essential TB drugs were provided and the DOTS logistic management system was improved.

In Nawalparsi, the pilot district, varieties of concrete measures to extend peripheral health facilities were introduced for developing DOTS. New aspects of TB control were suggested through these trials; for example, development of a cooperative system with local volunteers and establishment of a regional TB committee. The trials were successful as cure rates in the district reached a maximum of 85%.

Nevertheless, nationwide DOTS coverage still only reaches 30%. The Nepalese government is therefore asking JICA to provide further technical support.

After a one-year period of follow-up, JICA plans to contribute to the Nepalese health with a new project in autumn 2000. This project will work to improve the health system for not only TB but also for other respiratory diseases.

2 Countermeasures against natural and social obstacles to TB control in Yemen (1983～1992、1993～1998、1999～2004)

TB control programmes in Yemen have been conducted in selected areas based on the old TB Centres in San'a, Taiz, and Hodeida. The first TB project was implemented in 1983 based upon a request by the government of the Republic of Yemen (formerly North Yemen).

The project included: (1) establishment of the Central TB Unit of the Ministry of Public Health, (2) establishment of diagnosis/treatment centres that play central roles in local TB control activities, (3) preparation of a TB control manual, and (4) standardization of the report/registration system. These attempts were made for integration of TB programmes with general medical care. JICA trained medical professionals, provided medical equipment, and supplied TB drugs that were necessary due to disconnected financial support from neighboring countries. In 1986 and 1987, the National Tuberculosis Institute in the Sana'a and TB Centres in Taiz and Hodeida were constructed under Japan's grant aid programme.

However, low cure rates and regional gaps in TB incidence still remained. In order to improve this situation, the Tuberculosis Control Programme Phase Project was launched in 1993. The main goals of the project were to improve the entire TB control programme in the former South Yemen, and to train Yemenite personnel at the PHC level. Although the Phase project was interrupted by civil war, the results in the pilot districts that employed the DOTS strategy showed improved cure rates.

Later, the DOTS strategy was expanded to rural areas. Governorate TB coordinators (GTC) in charge of TB control were trained, and a quality control system in laboratory examination was introduced. In August 1999, Project Phase Ⅱ was commenced for further integration of the DOTS strategy. Currently, both the TB cure rates and case detection rates are approaching target points set by the WHO.

JICA is the only donor agency that supports TB control projects in Yemen.

3 Other countries

3-1 China

JICA has been using Japan's grant aid scheme as the major mode of cooperation to upgrade medical facilities and equipment related to TB control and also to provide anti-TB pharmaceuticals. From 1997-2002 JICA will extend a total amount of 103 million yen to China. China has been promoting DOTS under its own strategies. The death rate, however, remains high at 250,000 per annum.

3-2 Thailand

JICA dispatched a technical expert to Central Chest Hospital in 1967-1970 to conduct technical training and capacity building related to TB control.

3-3 Indonesia

Promotion of Health in North Sumatra was a technical cooperation project designed and implemented to strengthen the capacity of local health authorities with special emphasis on TB control. In the conceptual framework of the project, there were various technical training components included, among them: epidemiology, laboratory technology, personnel development and policy/strategy formulation. In addition to the above project, JICA implemented two similar projects in other parts of the country in the 1970s and 1980s.

3-4 Solomon Islands

The Primary Health Care Project conducted in 1991-1996 highlighted TB, malaria and health education as a triad of expected project outputs. The project activities were carried out as a package of the said three components with linkage with the existing primary health care network.

3-5 Afghanistan

JICA extended grant aid to the Afghanistan National TB Control Programme from 1974-1979 and assisted in implementation of epidemiological surveys and development of laboratory facilities and other hospital facilities at the National TB Research Institute and TB Centre.

3-6 United Arab Emirates

In 1960, surveillance was conducted by a Japanese mission to identify the prevalence rate of TB in the country.

3-7 Haiti

JICA extended grant aid (worth 600 million yen) to Haiti to construct a TB Control Centre in 1983 that was in line with Haiti's TB Control Programme.

3-8 Ghana

The infectious Diseases Control Project at the Noguchi Memorial Institute for medical Research, which has been in operation with the time frame of 1999-2003 defined TB as the one of prioritized targets.

3-9 Tanzania

JICA implemented the Tuberculosis Control Project as a technical cooperation project from 1974-1980.

3-10 Countries that received grant aid from Japan related to TB control

JICA extended grant aid related to BCG vaccination in 1997-2001 to many countries, including Peru, Angora, Palestine, Dip chi, Bolivia, Guinea, and the Central African Republic.

Annex 2 Tuberculosis control training courses

Training opportunities in Japan with the sponsorship of JICA

Capacity building of health personnel related to TB control is an essential part of JICA's development assistance in the area of infectious disease control. Technical and managerial training has been available in Japan since the 1960s in the areas of prevention, early detection and standardization of treatment for the benefit of trainees from developing countries. It was reported that the various courses organized by JICA provided training to 1503 trainees from 84 different countries and regions by the end of November 2001.

1 Provision of training opportunities related to TB control in Japan

The Research Institute of Tuberculosis (RIT) and Japan Anti-Tuberculosis Association (JATA) have been functioning as the main training facilities in TB control. Currently three group-training courses are being carried out.

Trainees learn about the National TB Programme (NTP), clinical TB management, WHO's programme for TB and related laboratory techniques. The goal of the training courses is to strengthen management capacity related to the implementation of DOTS. In these courses, a number of learning opportunities are available, including visits to public facilities, exposure to computer skills, and enrollment in leadership training classes, all of which are useful for capacity building in TB control.

A network of alumni of the above-mentioned training courses provides opportunities to share experiences with other trainees from various regions and countries. It also works as an important tool to stimulate the TB control programmes of each country.

2 Post-training follow-up conducted by JICA

The sustainability of training effectiveness is a crucial issue both for providers and recipients of training. JICA maintains its interest in achieving this through its post-training follow-up system. This system presents opportunities to support activities in developing countries by the professionals who completed courses in Japan. Fact-finding and planning for assistance is carried out by survey teams assigned by JICA to study the viability of assistance extended through the supply of necessary equipment and materials as well as alumni activities that stimulate the learning process of ex-trainers.

Monitoring and evaluation of the respective training courses is of course carried out on a regular basis through surveillance of course content, training methodologies, and demand in the countries that sent trainees to Japan.

3 Overview of the courses

3-1 Tuberculosis Control at the Intermediate Level

Group-Training Course in Tuberculosis Control: 1963～1989 (27 times)
Group-Training Course in Tuberculosis Control Ⅱ: 1990～1999 (10 times)
Tuberculosis Control at the Intermediate Level: 2000～2009 (10 times)

This course was created based on the initiative of JICA and the Japanese Ministry of Health and Welfare in collaboration with the WHO Western Pacific Regional Office (WPRO) in 1963. Medical doctors involved in TB control were the training target. Approximately 20 trainees per annum have been invited to Japan to learn the basics of TB control, which ranged from statistics to various approaches in public health and epidemiology. In total, 763 trainees from 67 countries had finished the course by the end of November 2001.

3-2 Leadership Training in Tuberculosis Programme Management

Group-Training Course in Tuberculosis Control for Administrative Medical Officers: 1973～1995 (20 times)
Group-Training Course in National Tuberculosis Programme Management: 1996～2000 (5 times)
Leadership Training in Tuberculosis Programme Management: 2001～2005 (5 times)

This course was designed for senior administrative medical officers running TB control programmes in their respective countries. It is regarded as an advanced course for officers who finished the course described in 3-1. During a period of 6 weeks, course participants are expected to learn about TB control, specifically managerial aspects and leadership. The course has provided training to 341 trainees from 61 countries.

3-3 Thoracic Surgery Course: 1966-1975

This clinical training course for thoracic surgeons providing curative services to TB patients was offered to 47 participants from 15 countries from 1966-1975. During this period, surgical intervention was one of the key issues in TB control. This course was terminated with the shift of training interests toward public health and other topics.

3-4 Group-Training Course in Tuberculosis Control Laboratory

Laboratory Work for Tuberculosis Control: 1975～1994 （20 times）
Group-Training Course in Tuberculosis Control Laboratory: 1996～1999 (5 times)
Group-Training Course in Tuberculosis Control Laboratory: 2000～2004 (5 times)

This three-month course provides training opportunities on laboratory technology related to TB for technologists or doctors working in this area as trainers and/or leaders. Bacteriological laboratory examinations are the major topics of this course. Quality control and managerial aspects of laboratory examinations received particular focus in the course content. Due to the nature of hands-on training

and managerial skills training, participants were limited to 8 for each course. Altogether 216 trainees from 51 countries had completed the course by the end of November 2001.

3-5 Custom-made Training Course on TB control

Apart from the above-mentioned 4 different types of group-training course, JICA allows planners to formulate custom-made courses to meet demand in developing countries in a flexible manner. In the course content, emphasis is given to planning, monitoring and evaluation was well as development of trainees' capability in these areas. 136 senior officers from 26 different countries have already completed the course.