

A STUDY ON URBAN PLANNING /URBAN TRANSPORTATION ISSUES IN SOUTHEAST ASIAN COUNTRIES AND JAPAN'S TECHNICAL CORPORATIONINS

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Abstract: In recent years, with the rapid economic growth and concentration of the population into urban areas, some unregulated developments have been conducted in urban areas in Southeast Asian countries, so that their governments are under the pressure of necessity to develop an adequate operation of urban planning systems. Not all of the Southeast Asian countries, however, always have appropriate technologies for the urban planning project. Therefore, in this context, Japan, with practical experience in urban planning, is expected to transfer its technology and know-how to such a planning. This paper analyzed the backgrounds and urban planning/urban transportation issues in the Southeast Asian countries and proposed a technical cooperation model in response to requests arising from those countries.

Key Words: Southeast Asian countries, Urban Planning/Urban Transportation, Technical Cooperation, ODA (Official Development Assistance)

1. BACKGROUNDS AND OBJECTIVE OF THE STUDY

In Southeast Asian countries, urban areas have been developed unsystematically in recent years with their rapid economic growth and expansion of urban population, creating seriously aggravated living environments. Figure.1 shows a trend of urbanization process of industrialized countries and that of Southeast Asian countries. A negative impact of motorization, industrialization and economic growth in Southeast Asian countries accelerate urban service deterioration and accordingly generate serious urban issues, such as traffic congestion, traffic accident, air/water pollution, and sprawl phenomenon in the central district of the city. These countries lack a well-established urban planning system and necessary technology and proper experience.



Photo 1. Bangkok, the capital city of Thailand

To alleviate those of severe condition and improve their environment, Japan has dispatched technical experts (hereinafter referred to as "JICA experts") to developing countries from the Japan International Cooperation Agency (JICA), of which sole Japanese governmental agency in charge of bilateral technical cooperation and grant aid projects, in the view of a part of international cooperation, widely known as definition of Official Development Assistance (ODA).

JICA conducts an extensive technical cooperation program covering such subjects as the institution of various legal systems, establishment of technical standards, human resources development through technology transfer, and planning of individual projects. Japan's

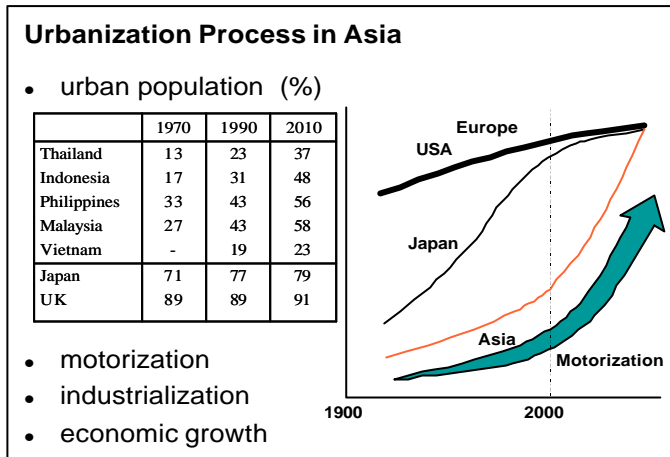


Figure 1. Urban Process in Asia Countries

major cities in the four Southeast Asian countries, especially differences among their capital cities, on the basis of knowledge gained through the JICA experts sent to those countries, and to discuss the need for preparing a new technical cooperation system in the field of urban planning.

The study comprised (1) an analysis of reports compiled by the JICA experts, (2) a questionnaire based survey of urban planning experts currently on assignment to the four countries, (3) interviews with former JICA experts, and (4) an examination by an ad-hoc committee made up of a professor, experienced urban planners, representatives of administrative organizations, and ex-JICA experts.

2. PREVIOUS STUDIES ON URBAN PLANNING SYSTEMS IN SOUTHEAST ASIA

The City Planning Review Special Issue of Papers compiled by the City Planning Institute of Japan contains more than 60 papers dealing with urban planning issues in Southeast Asia, many of which covered Thailand, Indonesia, and the Philippines. However, a few of these papers discuss comparative issues relating to housing development, development regulation, public transport, and technical transfer in these Southeast Asian countries.

For instance, Kawanaka et al., in their studies, compared urban and housing measures in Indonesia and Thailand, pointed out interferences common to both countries, and examined proposals and the need for promoting inter-governmental cooperation in the field of planning techniques covering the developing nations as a whole. Hosaka's study focused on the planning process for housing site development and Kidokoro treated private sector development restraints.

"Urban Planning in Asia" is a work summarizing the urban planning actualities in seven Asian countries. "Managing Fast Growing Cities" overviews planning and managing urban development in fast growing cities of developing countries, and presents some case studies in success. Furthermore, the World Bank Group (WB), Asia Development Bank (ADB), and United Nations Human Settlement Programme (UN-HABITAT) have plenty enough resourceful fact surveys and research papers for project promotion. However, there has been no comprehensive study so far on technical cooperation based on comparative analysis with respect to the urban planning systems of various Asian nations from the common points of view. The present study focuses on these points.



Photo 2. Express Highways, Jakarta

international cooperation in the domain of urban development has focused on four Southeast Asian countries, namely the Philippines, Thailand, Malaysia, and Indonesia and has set up a substantial track record of technical cooperation. A rapid urbanization process is going on in the four countries, which are undergoing different stages of economic developments with various urbanization issues and specific legal frameworks. It is, therefore, important to have a clear understanding of these differences in order to perform its technical cooperation program efficiently. This study targets to bring into focus the urban planning/urban transportation legal frameworks of

3. JAPAN'S TRACK RECORD OF TECHNICAL COOPERATION IN URBAN PLANNING

3.1 International Cooperation Systems and Japanese Cooperation in Urban Planning

Japan's ODA consists of multilateral and bilateral assistance. In bilateral assistance, the technical cooperation program is implemented by JICA and the project loan scheme is executed through the Japan Bank for International Cooperation (JBIC). International cooperation associated with the urban sector consists primarily of financial and technical cooperation with respect of roads, rivers, waterworks, sewerage, and other elements of infrastructure. Japan's technical cooperation scheme in the domain of planning including urban planning, and urban area development as typified by land readjustment projects has been implemented chiefly through such programs as training program, dispatch of experts, and other programs illustrated in Figure 2.

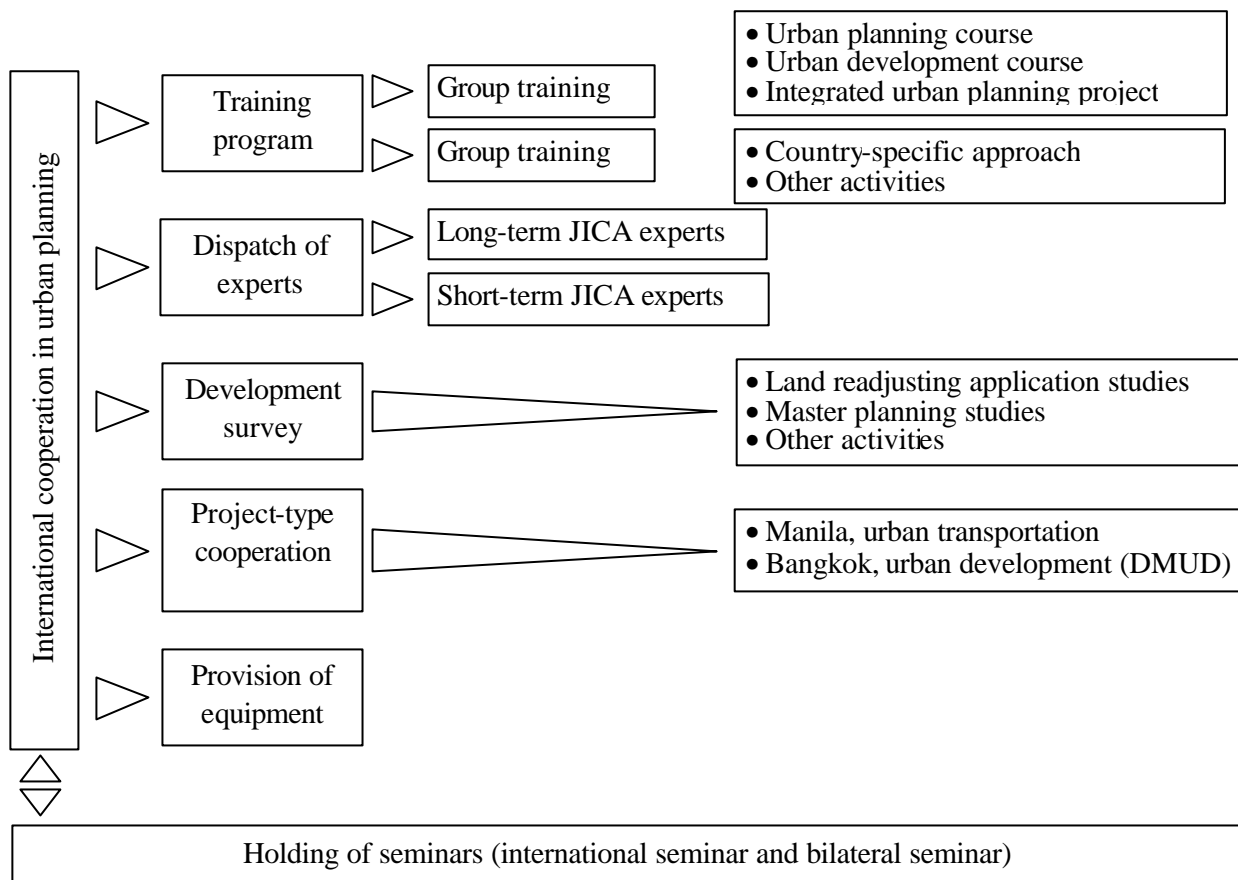


Figure 2. Japan's International Technical Cooperation System in Urban Planning

3.2 Actualities of JICA Expert Dispatching Program

In the field of urban planning, a total of 37 JICA experts were sent to the Philippines, Thailand, Malaysia, Indonesia, and Nepal during the period of 1981-2001 for the purpose of technology transfer in urban development, urban transportation, land readjustment, and other associated subjects. Currently, nine long-term JICA experts are active primarily in the Philippines, Thailand, Malaysia, and Indonesia.

Table 1 Performance in JICA Expert Dispatching

Country	Organization where assigned	Total number
Philippines	Ministry of Environment and natural Resources; Metro Manila Development Authority (MMDA)	7
Thailand	Department of Town and Country Planning (DTCP), Ministry of Interior; Bangkok Metropolitan Administration (BMA)	13
Malaysia	Ministry of Housing and Local Government (JPBD); Kuala Lumpur City	9
Indonesia	Ministry of Housing and Regional Infrastructure (DGRD); National Land Agency (NLA)	7
Nepal	Housing and Urban Development Department, Ministry of Public Works Planning	1

(1981-2001)

4. FACT FINDING SURVEY OF URBAN ISSUES

4.1 Survey of Study Reports from JICA Experts

Approximately 50 JICA study reports on urban issues in the four Southeast Asian countries and periodical reports compiled by JICA urban planning experts during the last decade were analyzed. The study reports contained valuable information acquired by the JICA experts during their periods of assignment, which averaged two years. The information included reports on the activities of the experts in the countries of assignment and their socioeconomic situation. For example, Yuri reported on the function of the recipient organizations of the JICA expert, his cooperation activities and achievements while remaining on assignment, and the actualities of urban development and organizations for planning and controlling urbanization projects in Indonesia. Tozawa reported on the urban planning system in the Philippines and summarized the database on urban areas in the Manila Metropolitan District.



Photo 3. Traffic Congestion, Manila

4.2 Questionnaire to JICA Experts

The questionnaire outlined below was sent to the present and former JICA urban planning experts via e-mail.

(1) Purpose of the Questionnaire

- Understanding the actualities of urban planning in the country of assignment.
- Understanding the need for urban planning and development in the country of assignment.
- Identifying problems with the existing JICA experts dispatching system.

(2) Urban Planning Experts

The questionnaire was addressed to a total of eight present and former JICA urban planning experts: one present and two former experts to the Philippines (MMDA), two present (DTCP and BMA) and one former experts to Thailand, and two present experts to Indonesia (DGRD and NLA). At the time of sending the questionnaire, no JICA expert was active in Malaysia (a JICA expert currently remains on assignment in Malaysia.).

(3) Details of Questionnaire

Specific questions contained in the questionnaire were primarily as follows:

- Tasks and problems in the urban planning system and urban development as perceived by technical cooperation counterpart personnel (mainly of developing country government)
- Tasks and problems in the urban planning system and urban development as perceived by JICA experts.
- Details of requests from the government of the country of assignment for Japanese aid within the framework of our technical cooperation.
- Desires of the government of the country of assignment with regard to assistance services of JICA experts.

(4) Survey period

February 2 to May31, 2000

(5) Responses Received

Responses to the questionnaire were received from all of the eight experts.

4.3 Interviews with Former JICA Experts

Four former JICA experts (one to Thailand, two to Malaysia, and one to Indonesia) were interviewed in Japan to obtain further detailed information. Questions posed to them were intended to confirm the background information about the results of the questionnaire survey and supplement them.

4.4 Establishment of Ad-Hoc Committee

An ad-hoc committee was established to verify the results of this study so as to permit undertaking comparative studies of the urban planning systems of the four Southeast Asian countries and identifying development problems as much objectively as possible. The committee consisting of 13 members was made up of a professor, specialists, representatives of competent Ministries and other government agencies concerned (Ministry of Land, Infrastructure and Transport, Ministry of Foreign Affairs, JICA, etc.), and former JICA experts. The authors of this paper were also members of the committee.

In this paper, based on the actuality survey of urban planning systems in southeast countries conducted by the committee (corresponding to Chapter 3 and 4), the authors further extended the discussion on the later chapters, undertaking comparative analysis of the system of each country and the relations with technical cooperation.

5. ACTUALITIES, PROBLEMS AND TASKS IN URBAN PLANNING SYSTEM

Through an examination of the JICA experts' responses to the questionnaire, data from interviews with former JICA experts, and study reports of the present and former experts, the actualities, issues, and tasks in regard to the urban planning systems of the Philippines, Thailand, Malaysia, and Indonesia were analyzed comparatively.

5.1 Actualities of Urban Planning Systems

Table 2, consisting of 11 items in total, was prepared in order to analyze urban planning systems in the capital cities in the four Southeast Asian countries, from viewpoints of (1) organization of urban administration, (2) relations between of urban plan and the superior position plan, (3) taxation system and financial resources, (4) master plan, (5) land use plan and regulation, (6) urban area readjustment project and (7) urban transportation plan. Law, ordinance, plan, organization, and project for each item are the latest versions.

Qualitative evaluations had to be made of the legal systems of the four countries, the scopes of application of the relevant legislation, and its regulatory powers. With a view to obtaining as much objective study results as possible, exchange of questionnaire information among the

Table 2 List of Development Status of Urban Planning Issues in the Four Southeast Asian Countries and Japan

Item		Japan	Philippine		Thailand	
Capital		Tokyo	Manila Metropolitan District		Bangkok (MBA)	
Area (km ²)		Ward: 616 km ² ; Metropolitan: 2,187 km ² (2000)	636 km ²		1565 km ²	
Population (ten thousands)		Ward: 7.92 millions; Metropolitan: 11.74 millions (2000)	9.45 millions (1995)		Census Population 6.36 Millions (2000); Estimated Nighttime Population 8.09 millions (2000)	
Population density (persons/km ²)		Ward: 12,848/km ² ; Metropolitan: 5,368/km ² (2000)	14,858/km ² (1995)		4,063/km ² (2000)	
GNP per capita (US\$)		\$71,700 (1995)	\$2,650 (1999)		\$5,482 (1988)	
Urban administration scheme (City)		Special ward (23); Metropolitan Tokyo consists of special wards and cities/groups of islands (26 cities, 4 towns and 8 villages).	City (8) and Town (9); (Metropolitan District Chieftain Council consisting of chieftains of 17 cities and towns and Manila Metropolitan District Development Agency were established.)		Bangkok Metropolitan Administration (BMA); Bangkok Congress (Elected for each ward, Ward Congress (36)	
Urban planning structure		Act for Planning the National Land; Tokyo Metropolitan Development Plan; General Plan of Land Use; Urban Planning	Structure Plan		Town Planning Act (1975); General Plan; Specific Plan (Not prepared)	
Financial resources for taxation system and urban development		Fixed Assets Tax, Special Land Holding Tax; General Account, Road Special Fund	Fixed Assets Holding Tax		Local Tax (Housing Lease Income Tax; Local Maintenance Law); Government Subsidy (General, Special)	
Urban Planning Law		Urban Planning Law	×	None	Town Planning Act (1975)	
Master plan		Vision 2001 for New Urbanization in Tokyo; Ward Master Plan		“Toward Global Metropolis with Warm Heart” Frame Work Plan (1996-2016)	General Plan; Comprehensive Plan (Consisting of three plans of the road network plan, the land use plan and the green park plan)	
Specific Zone Detailed Plan		Regional Planning Law		Subdivision Condominium Act (1982) (Development promotion of private companies and deregulation measures for business)	Subdivision Regulation (simple permission procedure)	
Land Use Plan		General Plan of Land Use		Master Plan to be applied	Comprehensive Plan (Land use plan)	
Land Use Regulation	Use Regulation (zoning)	Zone Restrictions (Land use is restricted for each restricted zone)		Zoning Regulations (1981)	Ordinance of Ministry of the Interior, Local Ordinance	
	Building Regulation (building coverage, floor area ratio)	Building Standard Law (Building construction authorization system)		Building Standard Law and Structural Standard	Building Control Act (1979); Ordinance of Ministry of Interior	
Urban Area Development Project		Development Permission System (Measures to regulate and guide measures private development)		Urban Development and House Law (1992) (Various regulations and guidance for urban area)	×	Establishment of Development Maintenance Law by Specific Plan is possible (No applied examples)
Land Readjustment Project		Land Readjustment Law	×	Model projects are under planning	×	Proposed bill is under deliberation at Diet
Transportation Plan		Tokyo Metropolitan Legal Urban Planning (Transportation System); Vision for New Urbanization in Tokyo (Transportation Facilities)		MP related to overall urban transportation system in Manila Metropolitan District (Manila Metropolitan Development Agency, 1999)		Each transportation organization such as DOH, OCMLT, BMA, and ESDB has its own master plan (Comprehensive M/P is to be developed by OCML).

(The table is continued to the next page)

Table 2 List of Development Status of Urban Planning Issues in the Four Southeast Asian Countries and Japan

Item		Malaysia	Indonesia
City-Capital		Kuala Lumpur (KL)	Jakarta (DKI)
Area (km ²)		243 km ²	661 km ²
Population (ten thousands)		1.37 millions (2000)	9.1 millions (1994)
Population density		5,637/km ² (2000)	1,138/km ² (1994)
GNP per capita (US\$)		\$5,028 (2000)	\$1,407 (1999)
Urban administration scheme (City)		Kuala Lumpur City Hall; Kuala Lumpur is under the direct control of the National Government and it has no sub-administration area.	Area (5); County (36); District (265)
Urban planning structure		Urban and Local Planning Law (1976)	Space Planning Law (1990) (State, provinces, prefectures and cities establish space plans based on the law.)
Financial resources for taxation system and urban development		Basically disbursed from the general account (80% of revenue is local tax). Part of infrastructure development is covered by subsidy by the Federal Government).	Land and Building Tax, Local Subsidy
Urban Planning Law		Urban and Local Planning law (1976); Federal Planning Law for the City of Kuala Lumpur (1982)	Space Planning Law (1990)
Master plan		Structure Plan (Local development objectives, structure of detailed plan and guide plan for development regulation, etc.) (1984)	RUTRK (Urban Overall Plan)
Specific Zone Detailed Plan		Local Plan (Detailed plan and implementation program of land use)	RDTRK (Detailed District Plan); Kampung Improvement Project (targeted to low income persons)
Land Use Plan		Structure Plan and Local Plan	Land Basic Law (1960)
Land Use Regulation	Use Regulation (zoning)	Local Plan and development Permission System	Urban Planning Ordinance (1948), Urban Planning Regulation (1949)
	Building Regulation (building coverage, floor area ratio)	Building Standard Law, Building coverage, and floor area ratio are specified in the Local Plan.	IBM (Building Ordinance) (Regulations within traditional residence area are weak.)
Urban Area Development Project		Development permission system (Measures to regulate and guide measures private development)	Development Permission (A clear institution has not been established.)
Land Readjustment Project		× Model projects are under planning	Land Readjustment Law
Transportation Plan		Overall Urban Transportation MP	Jakarta Metropolitan Overall Transportation Plan (National Development Agency)

(As of March 2002)

JICA experts involved, information exchange between ad-hoc committee and the JICA experts, and comparisons with the Japanese systems were undertaken repeatedly. Consequently, the relevant legal systems of the five countries were classified into three categories based on the following criteria:

[]: Planning the relevant items of the legal system is obliged by laws or ordinances, and it is recognized that the institutional function is operated properly at the same precise level compared to the system in Japan.

[]: Legal systems exist, but it is recognized that the institutional function is not operated properly at the same precise level compared to the system in Japan.

[×]: Legal systems do not exist. This also includes the status where the national assembly or competent Ministries are studying bills for the establishment or introduction of legal systems for urban planning.

It is not hard to distinguish [×] and the other categories. However, in some cases, distinction between categories [] and [] is difficult. Therefore, verification of the development level was carried out, comparing it to the Japanese system as the standard. Specifically, the authors of this paper and other people categorized the systems into three groups based on (1) confirmation with reports, books and (2) analyze of JICA experts.

The verification results showed that the basic system relating to urban planning methods and master plan formulation remained in operation in three of the four Southeast Asian countries surveyed, but that regulatory measures for land uses and development guidance measures were not fully operative (land use regulation was in force in one of the four Southeast Asian countries).

5.2 Problems in Urban Planning System

Problems in the urban planning systems in the four Southeast Asian countries were analyzed in the light of the fact that these systems do not work properly. Paying attention to land use regulation and urban area development in particular, the analysis was pursued from the standpoint of the problems (1) in the legal systems and (2) in the administrative systems and financial resources. Tables 3 and 4 present the problems in the urban planning systems as perceived by the JICA experts and compiled in terms of legal systems and administrative capacity and financial resources.

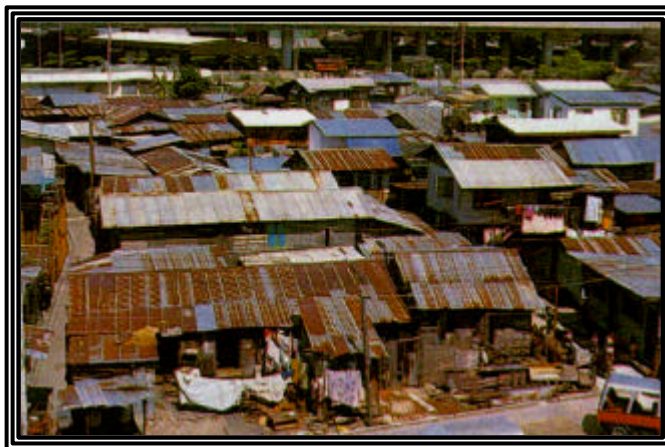


Photo 4. Squatter Housing, Thailand

A) Problems in Legal Systems

The urban development systems in the four Southeast Asian countries are not well established. As seen in the case of the “Land Use Regulation” of Manila, although a zoning ordinance and a development permit issuing system are in existence, the formulation of a master plan as a vision of the future city is not linked properly with the organized operation of relevant laws and regulations. For example, urbanization projects of private sector developers have been pursued on a large scale and in an unregulated way with the result that inferior urban areas have been created. Thus an appropriate legal system is needed which allows proper land use regulation and development guidance.

B) Problem in Administrative Capability and Financial Resources

In all of the Southeast Asian countries surveyed, urban planning and land use planning are under the jurisdiction of the respective local governments (Table 2), but their capability to

undertake urban planning is not adequate because of their shortages of necessary budget and experienced capable personnel. As seen in the example of Jakarta's "urban administrative capability," there lacks a smooth transfer of experienced personnel from central government agencies to the local government. Moreover, urban facility development is a major problem in all of the four countries surveyed.

5.3 Tasks for Urban Development System

In order to solve problems extracted in 5.2, the tasks urban planning experts should tackle from now on are mentioned:

A) Development of Legal Systems

(1) Support for Systematic Urban Planning Systems

In four countries studied in this paper, there is no established supreme position plan such as Plan for Comprehensive Development of the National Land or Metropolitan Plan in Japan (Table 2). Considering the concentration of population into capital regions or the expansion of urban areas, the supreme position plans based on the nation-wide views are highly required. Also, in addition to the supreme position plans to the urban plans, the guarantee of the projects is required; organically linking the lower plans, physical development plans, and infrastructure development plans. The establishment of the rational and systematic institution is also required.

(2) System Guidance Support of Urban Developments

As shown in the example of "Urban Development Project" in Manila, in recent years private sectors play significant roles in the urban development in Southeast Asian Countries. The administrative side needs to develop the institution system such as incentives to guide private potentials as well as to develop a master plan, regulate land use, and develop infrastructures.

Also it is recognized that the method to clearly show a develop guideline (for instance, Development guidelines or Land Readjustment Planning Standard) is valuable for private sectors. For example, as shown in "Land Use Restriction" in Jakarta, a relatively smooth execution of the project is possible for a large-scale development. However, the method to improve densely populated areas or slum areas is an issue. In these areas, as it is difficult to expect improvement by only relying on financial resources of the development body (often by private sector), the aggressive action taken by the administration side is required.

B) Development of Administrative Capability and Financial Resources

(1) Support for Capacity Buildings of Urban Administration Organizations

In the four Southeast Asian countries, an organization for urban planning (Table 1) and an organization for project execution are separated respectively. As shown in "Urban Administrative Capability" in Bangkok, both organizations are uncooperative. In order to promote projects, also for technical cooperation, a comprehensive and a unified package of cooperation are desired, viewing execution of each project and management as well as support for planning. Also in this case, as shown in the case of Bangkok, information acquisition by each country is not enough and no organic and systematic structure is established in order to utilize the data. From now, development of the information utilization manual using a computer or GIS is required, and the priority should be placed on technical cooperation on these matters.



Photo 5. Requiring more Infrastructure, Bangkok

Table 3 Problems in Legal Systems of Capital Cities of Four Southeast Asian Countries

	Land Use Regulation	Urban Area Development Project
Manila Metropolitan District	A zoning ordinance exists in the system. However, it only follows the existing land use patterns. As there is no urban planning, the development policy of urban transportation facilities is not guaranteed as an implementation plan, and it does not have a mortgage right to guide land utilization. For this reason, consensus development for project or project coordination is difficult.	Infrastructure development cannot catch up with the expansion of urban area developed rapidly by private sectors. As a result, following problems have occurred: a generation of bottleneck of local transportation, slum development, deterioration of the environment due to lack of sewage discharging system, and deterioration of urban views.
Bangkok (BMA)	As for floor area ratio and building coverage, a regulation is established by the ordinance of Ministry of the Interior based on the building standard law to restrict high-rise buildings or large-scale buildings that exceed a certain height or floor areas. However, not all buildings are restricted and the restriction is very loose.	A detailed area plan incorporating development guidance measures can be prepared in accordance with Specific Plan; however, no such a plan has been prepared so far. Although the subdivision condominium law was regulated by the ordinance in order to promote the development of private sectors and mitigate restrictions against the project, it is not a general regulation like in Japan.
Kuala Lumpur	Local governments will conduct land use control providing development permission in accordance with the local plan. However, since the local plan that specifies the control by nature is under development at present, consequently, the control is specified in accordance with the structure plan that is a superior position plan.	Public sectors have been conducting development of new town areas, obligating construction of public facilities, low price housings, and compliance with the high level planning criteria when allocating the development permission. As public sectors have been continuously conducting urban development and transportation development under a relatively clear policy, while relying on development by private sectors, it can be evaluate that the public sectors have succeeded in urban modernization. For the background, the consecutive administrative actions can be pointed out.
Jakarta (DKI)	Detailed area plans are established over all city areas and a large-scale development of residential area is regulated in accordance with the planning map and the building ordinance. However, there are quite a large number of developments of informal housings within Kampon (traditional residential area). Therefore, controlled developments are limited to only those of higher income groups.	A clear institution is not established for development permission. It is only recognized as a part of a series of permission procedures by relevant organization and the government service.

Table 4 Problems in Administrative Capability and Financial Resources of Capital Cities of Four Southeast Asian Countries

	Urban Administrative Capability	Urban Development Financial Resources
Manila Metropolitan District	Revision of the past land use plan, which is already far apart from the actual situation, is behind schedule, and the guidance to development by local authorities is not being conducted adequately, where high-rise buildings have been constructed among low-rise housing zones.	Most of the institutional systems of urban planning are undeveloped, and there is a problem of the lack of financial resources to institutionalize and implement them. Due to the situation, some local governments express objection to land use plans of their local government level.
Bangkok (BMA)	As Department of City Planning (DTCP, etc.) and Project Implementation Organization (Department of Housing; DOH, etc.) are separate, and there is a lack of mutual communications or coordination capabilities. Especially, the Planning Department has less capability. The lack of development of various data (mapping information, social static document) at the planning stage prevents establishment of valuable planning.	As the financial resources for urban development is not secured, the government cannot conduct urban development. Financial powers of private sectors are stronger than public sectors, and the development of the public facilities such as trunk or sub-trunk roads financed by tax revenues are behind compared to the expressway invested by private resources.
Kuala Lumpur	Urban modernization was succeeded by unique and strategic measures such as land control and partnerships between the government and private sectors under relative population size and urbanization pressures. For the background, the consecutive administrative actions can be pointed out.	Cities do not have financial resources for urban development. Therefore, projects are to be conducted by the local tax and subsidy given by the state. Regarding large-scale buildings, although there is also a system to subsidize parking development, the use is not an objective tax but allocated to compensate labor cost, etc.
Jakarta (DKI)	The main body of urban development is shifting from the central government to local governments reflecting a decentralization trend. However, the execution capability of the local government for urban administration is relatively low due to lack of human resources. Vertical administrative structure and lack of cooperation of the central government agencies cause confusion in the local government.	As a tax collection system is not established, lack of budgeting in the local government is the most serious problem to project execution.

(2) Support for Staff Training

In order to improve administrative capabilities to plan and execute urban plans, staff training and systematic development of urban information are issues. It is significant not only to further enhance the trainings currently undertaken but also to conduct OJT (On the Job Training) by JICA.

(3) Support for Urban Development Financial Systems

Financial resources for urban development in each country are very limited. Therefore, in order to promote the urban development, it is necessary to develop a strategy to invest in new development, bringing out activities of private sectors and absorbing a part of the development profit.

Also, in the development of infrastructures in local areas, securing financial resources is difficult, as the tax rate is low and the benefit assessment is not completely functional. Therefore, precise understanding of taxable items and their management, systematic development of taxation, or strengthening and supporting for the enforcement in terms of the special tax revenues are necessary.

6. TECHNOLOGY TRANSFER IN URBAN PLANNING AREAS

Based on the report and the questionnaire surveys, technical cooperation focusing on items listed in Table 5 is required in the future in order to address tasks of the urban planning system of 5.3.

Table 5 Proposals of JICA Experts on Urban Planning Institutions and Tasks

Proposed by	Proposal Content	Tasks
JICA Expert for Philippines and two others	Technical Transfer of Financing Method of Project	(1) (2)
JICA Experts for Indonesia and one another	Technical Transfer of Urban Development Method (Land Readjustment System)	(1) (2)
Former JICA Expert for Philippines	Technical Transfer of Information Management of GIS, etc.	(1) (2)
JICA Expert for Thailand and one another	Establishment of Staff Training System in Local Government	(2)

Remarks: Tasks (1) Development of Legal System; (2) Development of Administration and Financing)

Three of questionnaire-responding persons thought that a technical transfer on financing is significant. Two of them pointed out that a technical transfer on urban development method such as Land Readjustment is valuable for legal development to contribute to urban space development. In addition, the significance of information management technology necessary for urban planning as well as technical training and systems for local government staffs was identified.

As a specific example of proposals shown in Table 5, "Development of the Method of Urban Development (DMUD)" in Thailand can be presented. DMUD started in 1999 and will continue until 2003, aiming at improvement of urban development technology (Land Readjustment System, etc.) of associated local staff in order to address the trend of decentralization. This project is called Project-Type Technology Cooperation where JICA experts are dispatched as a bunch of group and a necessary budget is prepared so as to conduct technical cooperation through trainings, etc.

DMUD, the first trial in urban planning areas, is different from the previous dispatch system of JICA expert for each expertise field. The features can be outlined as follows: (1) Comprehensive and detailed technical cooperation can be performed by plural JICA experts (four persons for long term and six persons per year for a short term) unlike the previous dispatch system of JICA expert of each special area, (2) large-scale technical transfer for local government staffs in the country can be performed, (3) system establishment focusing on urban area development (Urban area development project) and staff training is both being conducted. Achievement of technical transfer by DMUD appears (1) training of planning specialists (2) execution of pilot project and (3) make a draft of relevant bills such as Land Readjustment Law. In the future, it will be desirable to apply the same cooperation scheme to other Southeast Asian countries that require a systematic urban development institution too.



Photo 6. Staff Training of DMUD

7. CONCLUSIONS AND FUTURE PERSPECTIVES

7.1 Conclusions

Conclusions derived in this study are as follows:

- (1) Through the study, it is identified that JICA experts are the significant information sources for the field of urban planning in Southeast Asian countries. As for the analysis of the actualities of the institutions and the problems, it is also identified that the questionnaire survey and interview methods used for the study are valuable for the information analysis.
- (2) Comparative studies show some differences in the actualities of the institutions and the problems in the four Southeast Asian countries, compared to the institutions in Japan. As a result, JICA Experts are able to obtain a wide spread of knowledge such as the institutions and the problems in the Southeastern Asian countries. Also, valuable findings for conducting technical cooperation are provided.
- (3) It is identified that the Project-Type Technical Cooperation undertaken in Thailand at present contains comprehensive proposals on technical cooperation that JICA experts are expecting.
- (4) On the other hand, more precise criteria to evaluate the institution development and the establishment of measures to conduct periodic update are future study tasks. For these purposes, promotion of information exchange and information sharing including not only JICA experts but also academic researchers are significant.

7.2 Future Perspectives

Current cooperative activities undertaken by JICA experts primarily aim to provide the specific counterpart with their policy advice on planning and execution of the urban planning institutions. The following considerations are required in order to achieve further contributions to the counterpart countries by these activities:

- (1) In Southeast Asian countries, cooperation between the planning department and the project execution department is not enough, and an institution to realize the plan is not well developed. Technical transfer methods to improve these problems are to be studied.
- (2) Also, in order to promote understandings of establishment and execution of the urban planning institutions, and to train the realizing capabilities, JICA is desired to involve deeply in the project from the preparation stage through the execution and the operation stages so as to bring out the potential capabilities of the JICA experts.

(3) Urban planning institutions need to introduce the specific system corresponding to the social maturities such as urban size, constraints and economic development stages of each city, based on social circumstances, culture, nature/climate, and so on, and for these a comprehensive approach is required. In order to facilitate technical transfer of urban planning institutions appropriate for the Southeast Asian countries, a staff training system in Japan is also required where other JICA experts can share knowledge and know-how gained by JICA experts dispatch systems in the past.

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NOTES

1. Distinction with [] [] and [×] of Table 2 was made based on study reports and questionnaire survey to JICA experts. As an example, the evaluation of the land utilize regulation in Thailand is shown as follows:

(1) Utilize Regulation (zoning)

Each area is regulated by the standing ordinances or the local ordinances based on the Building Standard Law. In some cases, features such as height and size of the building as well as utilize regulations are undertaken. Also, there are many exemptions and this is not a general regulation undertaken in Japan. Considering these facts, [] was given for this item.

(2) Building Standard Law (floor area ratio, building coverage)

This item is shown in the column of “Land Use Regulation” of “Bangkok” of Table-3 in this paper. Also for this item, considering that some buildings are not regulated and the regulations are very loose, [] was considered to be appropriate.

2. JICA technical cooperation style is can be defined as a JICA technical cooperation program where basically developing countries prepare buildings, land requirement and operation expense for technology transfer, and Japan organically links dispatch of JICA experts, training program, and provision of equipment for the technology transfer.

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