

# JICA's Technical Cooperation and the Global Dissemination of Land Readjustment

*Takeo Ochi*

## The 1980s and the Internationalization of Land Readjustment

The land readjustment technique became internationally known in the late 1970s. The World Bank's strong interest in land readjustment projects conducted by the Republic of Korea (South Korea) led to the "First International Conference on Land Consolidation," which was held in 1979, co-sponsored by the Lincoln Institute of Land Policy (United States of America), the Land Reform Training Center (Taiwan) and the Agricultural Planning and Development Committee (Taiwan) (LRMEC 1996). 47 participants coming from Japan, South Korea, Taiwan, the former West Germany, the Commonwealth of Australia, the United States of America and the World Bank among others attended the conference. The conference provided technical information on land readjustment to the "Association of the Southeast Asian Nations" (ASEAN) that showed interest in the land readjustment technique as a method for urban development and decided to seek opportunities to hold similar conferences on land readjustment in Africa and in the South and Central Americas (Nakano 1993). According to Kiyotaka Hayashi, who attended the conference from Japan, the English term "land readjustment" to express this technique was first used in this conference. "Even though the conference had the name of land consolidation, the conference decided to change the term land consolidation into land readjustment after realizing a variety of land readjustment projects exposed in the conference" (Hayashi 2000).

The "Second International Conference" was held in 1982 in Japan, as a commemorative event to celebrate the completion of the postwar reconstruction land readjustment projects in Nagoya city. This conference highlighted the active implementation of land readjustment projects in Japan (LRMEC 1996). After that, several international seminars on

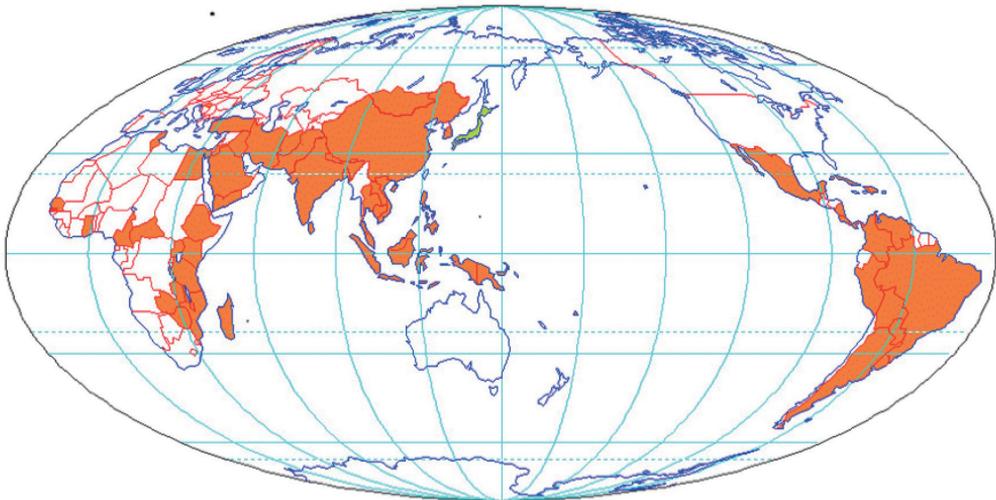
**Table 4.1. The History of International Conference / Seminar on Land Readjustment (1979-2000)**

Date (Month/Year)	Held in	Conference/Seminar Name
June 1979	Taiwan (Taoyuan)	The 1st International Conference on Land Consolidation
October 1982	Japan (Nagoya)	The 2nd International Seminar of Land Readjustment and Urban Development
October 1984	Colombia (Santa Fé de Bogotá)	Bilateral Seminar
March 1985	Japan (Tokyo)	The 3rd International Seminar of Land Readjustment and Urban Development
April 1986	USA (Fort Myers, Florida)	International Seminar
May 1987	USA (Honolulu, Hawaii)	International Seminar
December 1987	Philippines (Manila)	The 4th International Seminar of Land Readjustment and Urban Development
November 1989	Malaysia (Kuala Lumpur)	The 5th International Seminar of Land Readjustment and Urban Development
February-March 1991	Indonesia (Jakarta, Surabaya)	Bilateral Seminar
July 1991	Sweden (Rättvik, Dalarnas Län)	International Seminar
August 1991	Colombia (Santa Fé de Bogotá)	Bilateral Seminar
October 1991	Philippines (Manila)	Bilateral Seminar
November 1991	Thailand (Bangkok)	The 6th International Seminar of Land Readjustment and Urban Development
December 1992	Indonesia (Jakarta)	Bilateral Seminar
March 1993	Thailand (Bangkok)	Bilateral Seminar
March 1993	Philippines (Manila)	Bilateral Seminar
November 1993	Indonesia (Bali)	The 7th International Seminar of Land Readjustment and Urban Development
November 1995	Japan (Kobe)	The 8th International Seminar of Land Readjustment and Urban Development
November 1997	Thailand (Bangkok)	The 9th International Seminar of Land Readjustment and Urban Development
November 2000	Indonesia (Bali)	The 10th International Seminar of Land Readjustment and Urban Development

(Source: Ministry of Land, Infrastructure, Transport and Tourism and Infrastructure Development Institute 2002, Survey for Preparing Guidelines on the Transfer of Construction Technology, Land Readjustment, Report).

land readjustment were held in the ASEAN and other countries. The seminars held in the ASEAN countries were attended and supported by the former Ministry of Construction of Japan and the Japan International Cooperation Agency (JICA), and exerted significant impact on the urban development in Southeast Asian countries. The international seminar series came to an end in the year of 2000. In addition, JICA and the former Japanese Ministry of Construction started providing training courses on urban development in 1983, aiming to disseminate Japan's urban development and land readjustment techniques to developing countries. JICA continues to provide these training courses today. From the fiscal year of 1986 to the fiscal year of 2014, 363 participants from 68 countries attended these training courses (see Figure 4.1).

▼ Figure 4.1. 363 participants from 68 countries participated in JICA land readjustment training courses



From the 1980s to the 1990s, several Southeast Asian countries and the United States of America considered application of land readjustment as follows:

**Republic of Indonesia:** Indonesia's urban land consolidation projects were conducted mainly on the urban fringe where good urban planning was needed. They had five key objectives in implementing the projects, as outlined by Soeromihardjo (1989):

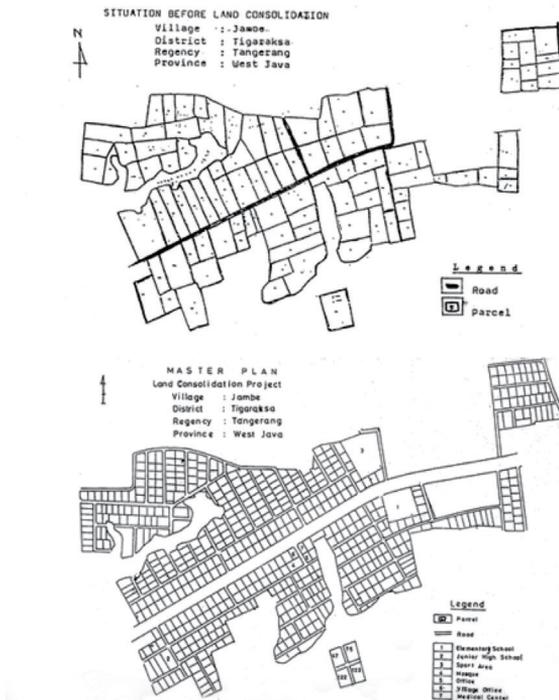
- a. To create a planned layout of roads and orderly parcel subdivision, and thus encourage gradual implementation of city planning in urban fringe areas;
- b. To obtain land required for the construction of roads and other public facilities at no cost to the government;
- c. To regularize parcel shapes and to provide road frontage for each parcel;

- d. To develop urban fringe lands and to improve the living environment; and
- e. To provide landowners with registered titles and certificates for their new land parcels.

Indonesia’s first urban land consolidation project was conducted from 1981 in Renon, Denpasar, South Bali, covering a total of 77.3 hectares and 261 parcels. From 1981 to 1991, while no laws and regulations on the implementation of land readjustment existed in Indonesia, several land readjustment projects were conducted with the landowners’ consent. During this period, 17,859 landowners participated in 58 projects covering a total of 3,196 hectares of land. These projects included redevelopment of slum areas created by squatters along rivers, using the land readjustment technique to provide the squatters with their own land parcels (Talkurputra 1993).

In many of the land readjustment projects in Indonesia the land contributed by the landowners was used for public purposes, such as the construction of roads, and the project’s construction was financed by the national budget. As a result, projects were often deemed “complete,” but leaving many roads unpaved and drainage facilities yet to be built, although the land for the facilities had been secured.

▼ Figure 4.2. Land consolidation project in Tigarang, west of Jakarta



Top: Before the project, Bottom: After the project

**Kingdom of Thailand:** influenced by the 1980s rising global interest in land readjustment, Thailand started to consider the application of the land readjustment method for the country's urban development. Aiming to answer this, from December 1987 to February 1989, Japan conducted "The Study on Applied Technology for Making City Plan," with the former Department of Town & Country Planning (DTCP) of the Ministry of Interior of Thailand, and specifically explained the land readjustment technique during this process. As a result, in 1992, the Thai cabinet decided to establish a "Land Readjustment Committee" to implement land readjustment and appointed the former DTCP as the implementation agency to officially establish a framework for this process.

**Malaysia:** in Malaysia, from the late 1980s to the 1990s, the Federal Department of Town and Country Planning played a central role in considering the application of the land readjustment technique in the country's urban planning processes, together with other related departments. No land readjustment project has, however, been conducted in the country to date. In those days, Malaysia had an urban planning framework in place, based on the one from the United Kingdom of Great Britain and Northern Ireland (the United Kingdom). Therefore, it was difficult for the country to consider the introduction of a new land readjustment framework that would be consistent with the existing one. On the one hand, in many countries that had faced difficulties in expropriating land for development, including lack of financial resources, attention was paid to land readjustment as an alternative method for urban planning.

On the other hand, since Malaysia's State Authority had a strong legal basis for land expropriation (the *Land Acquisition Act* (article 3(1)) states that "The State Authority may acquire any land, which is needed: (a) for any public purpose"), the country had relatively less difficulty in land expropriation than other countries. This is the major reason why land readjustment was not used in the country. In addition, the country's complex land ownership system was also a bottleneck to the implementation of land readjustment. In farmlands in the suburb of cities where the introduction of land readjustment was considered, replotting (conversion of land rights) was hindered by various tenures of land ownership, such as leasehold (land for a lease of 99 years, granted by the local State government that is responsible for land administration), freehold (land that has been alienated), and temporary occupation of land.

Furthermore, obstacles to the land ownership transfer in Malaysia included: (i) multiple land ownership inherited from ancestors, (ii) land with unknown owners (Arif 1989), and (iii) the "Malay Reserve System" (restrictions imposed on the transfer of land ownership from Malay to non-Malay citizens). In an interview with Hiroyuki Yoshimura, a JICA expert (1995-1998) dispatched to Malaysia, the point was raised that, "restrictions and limitations on Malay Reserve Land and its complicated aspects

have prevented the land from being developed." "Malay Reserve" is the designated land that can be owned only by Malays, and due to the Islamic inheritance laws, sometimes, 100 to 200 people may be registered as landowners to a single piece of land in urban areas.

In addition, according to Jun Katsumi, another JICA expert (1992-1995) dispatched to Malaysia, the country did not need land readjustment due to three reasons: (i) there was unused land in the outskirts of big cities (relatively large areas of low population density and plantations) and large-scale development was relatively easy; (ii) during the 1990s, the Federal Department of Town and Country Planning, that had been considering application of the land readjustment technique, shifted its focus away from land readjustment, that would involve difficult and complex tasks, to the development of Putrajaya, located in the outskirt of Kuala Lumpur, to which the government's administrative functions were to be moved, and Cyberjaya which was to be developed as the country's information and communications technology (ICT) hub; and (iii) there was a political issue concerning the location selection of a land readjustment pilot project: should it be in Chinese villages or in Malay villages?

*Republic of the Philippines:* in the first half of the 1980s, the "Metro Manila Commission" conducted a feasibility study on land readjustment for 49 hectares of land in Quezon city. That study was suspended due to the political instability in the country (Magat 1993; Nishiyama 2002) and land readjustment has not been introduced to the country to date.

*United States of America:* in the United States, during the 1980s, Hawaii, California and the city of Dallas considered using the land readjustment method. Also, the Lincoln Institute of Land Policy and the Florida Atlantic University/Florida International University Joint Center for Environmental and Urban Problems took an initiative to considering the application of the method. Especially, professor Frank Schnidman, the former visiting professor of the said Joint Center, made significant contributions to the introduction of the technique to his country.

Thus, the 1980s were a decade when land readjustment attracted the world's attention and the international community started to consider its application to urban planning. In this regard, Yasuo Nishiyama (1988) commented that, "perhaps, in the future, people will regard the 1980s as the beginning of the internationalization of Japan's land readjustment."

# Japanese Technical Cooperation Concerning Land Readjustment in Foreign Countries

## Two Approaches

Japan started to provide technical cooperation concerning land readjustment during the 1980s, and the former Ministry of Construction and JICA played a central role in this. Centering on the already mentioned international seminars on land readjustment and the land readjustment training courses, two approaches for the provision of technical cooperation were developed:

- a. A full set type that included dispatch of individual experts, conduct of training programs and implementation of technical cooperation projects (Thailand, Indonesia and Malaysia). In this approach, experts were dispatched to foreign countries to investigate the possibility of conducting land readjustment projects. More specifically, 10 individual experts were dispatched to two organizations in Thailand from 1987, 6 individual experts were dispatched to Indonesia from 1989, and 6 individual experts were dispatched to Malaysia from 1987. Along with the activities of these experts, feasibility studies on land readjustment were conducted in the three countries. Also, individual experts, specialized in urban development were dispatched to the Philippines continuously from 1988, though their focus was not solely on land readjustment. After dispatch of the individual experts, it was found that the possibility of the application of land readjustment was quite high in Thailand. So, Japan implemented some technical cooperation projects with Thailand to establish their land readjustment system.
- b. A training and follow-up type (Nepal and Colombia): where country-specific training courses were provided to help countries establish their respective land readjustment frameworks. JICA was responsible for these specified courses and shouldered the costs, while the former Ministry of Construction, Japanese universities and local governments oversaw the lecturers and the site visits. In addition, individual experts were dispatched to Nepal for two years (2001 to 2003), and to Colombia for three years (2000 to 2003) to follow up on the training provided.

In other developments, JICA explored the land readjustment technique in projects related to urban master plan studies for urban development. As a result, Mongolia and the Islamic Republic of Afghanistan have considered the application of the land readjustment method. Also, there is an ongoing dissemination of the method from Colombia to South American countries, such as the Federative Republic of Brazil. The follow-

ing sections will explore these approaches in Thailand, Nepal and Colombia.

## **Developments in Thailand**

Japan has offered technical cooperation to Thailand for more than the past quarter of a century through the dispatch of individual experts and the implementation of various technical cooperation projects to establish a land readjustment framework. From the 1980s to the present, the history of land readjustment in Thailand can be classified into 4 periods. The first of these was the introduction of land readjustment between 1980 and 1992:

- a. Thailand learned the concept of land readjustment through the “International Seminars on Land Readjustment and Urban Development,” and through training provided by JICA;
- b. Individual experts, specialized in urban planning and development, were dispatched for the first time to the “Bangkok Metropolitan Administration” (BMA) and the former DTCP, on a long-term basis; and
- c. In 1992, the Thai cabinet decided to study the application of the land readjustment method in the country and established a “Land Readjustment Committee.”

The second period (the establishment of the land readjustment framework, 1992 to 2004):

- a. A JICA-supported feasibility study on a land readjustment project in Thailand was conducted;
- b. The study developed into a large-scale technical cooperation project, called “The Project on Development of the Method of Urban Development” (DMUD); and
- c. In 2004, the *Land Readjustment Act* of Thailand was enacted.

The third period (the promotion of the Thai land readjustment model, 2004 to 2013):

- a. Laws and regulations related to the *Land Readjustment Act* were prepared to implement land readjustment projects;
- b. The “Land Readjustment Fund” was established;
- c. Ten pilot projects were commenced; and
- d. Two pilot projects were almost completed.

The fourth period (the dissemination of Thai land readjustment model, 2014 to the present):

- a. The Thai land readjustment booklet and a series of technical manuals were prepared;
- b. The study tours as a part of JICA's land readjustment training course have been organized by Thailand; and
- c. "One Project in One Province of Thailand" policy has been conducted.

In addition to individual experts' dispatch, three technical cooperation projects were conducted in the country. These technical cooperation projects, implemented over a period of 15 years and ended in 2014, were as follows:

"The Project on Development of the Method of Urban Development" (DMUD) (June 1999 to May 2005): this project helped the country to establish a land readjustment framework in Thailand (in the second period);

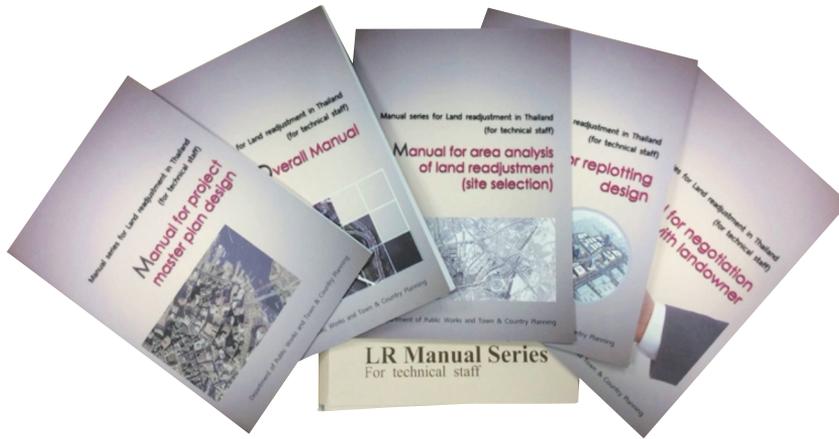
"The Project on Land Readjustment Promotion" (November 2005 to November 2009): this project helped the country conduct the actual land readjustment projects (in the first half of the third period);

"The Project on Self-Sustainability and Dissemination of the Land Readjustment System" (July 2010 to March 2014): this project helped completion of the pilot projects, presented the Thai model of land readjustment based on its experience, and disseminated this model at home and abroad (from the latter half of the third period to the early fourth period).

Two of the pilot projects are almost completed (as of April 2014). One, led by the Department of Public Works and Town and Country Planning (DPWTCP), is named the Phisnulok Land Readjustment Project (21 hectares of land and 82 landowners); and the other led by BMA is named the Rama 9 Park Land Readjustment Project (8.8 hectares of land and 32 landowners). The latter was implemented by a landowners' association. Not only the DPWTCP, but also the BMA actively made efforts to introduce land readjustment into the country, and to build up their experiences and expertise. "National Housing Authority" (NHA) also followed suit. To record and introduce the country's experience on land readjustment, DPWTCP, BMA and NHA collaborated on the production of an introductory booklet, videos and a series of technical manuals on the land readjustment framework in Thailand (see Figure 4.3). In July 2014, the Thai government started to provide a study tour in Bangkok on the Thai land readjustment model as part of JICA's land readjustment training course.

Figure 4.4 presents the chronology of the introduction of land readjustment in Thailand with Japan's cooperation.

▼ Figure 4.3. Manual series for land readjustment in Thailand (for technical staff)



▼ Figure 4.4. History of application of land readjustment to Thailand



## Developments in Nepal

Nepal established its land readjustment/pooling system based on what they learned from JICA’s country-specific training programs. The history of land pooling in Nepal can be classified into four periods just like that in Thailand. The first period (land pooling on a trial basis and the establishment of a legal framework, mid-1970s to 1988), originated from a road widening project in Pokhara at the end of the 1970s. Back then,

no such concept as “land pooling” existed. In the late 1980s, a land pooling project planned for the outskirts of Kathmandu needed the government to prepare a legal framework for its implementation. The *Town Development Act* enacted in 1988 stipulated that the “Town Development Committee,” a public entity, could implement three types of urban development projects, including land pooling projects (Ochi 2001). Land pooling was stipulated simply in the 1988 *Nepalese Act* that to commence a land pooling project, at least 75% of local landowners and tenants were required to give their consent to the project. Later in 1997, a third revision was made to the act to set forth more detailed formalities (the *Nepalese Town Development Act* of 1997).

The second period (the establishment of the framework and the development of land pooling projects in the Kathmandu Valley, 1988-2002), started in the 1990s. Land pooling projects were conducted in farmlands, in the outskirts of towns and cities in the Kathmandu Valley. A Japanese Overseas Cooperation Volunteer was dispatched to the former “Department of Housing and Urban Development” (DHUD), and briefed the department on Japan’s land readjustment method, which prompted Nepal to learn the Japanese technique. This led to the land readjustment training course for Nepal jointly conducted by the former Ministry of Construction of Japan and JICA, with cooperation from Obihiro and Nagoya city governments, in 1995 and 1996. A two-month course was offered, and a total of 12 people participated. These trainees conducted land pooling projects in Kathmandu Valley as the head of the project office, and took initiatives to revise the *Nepalese Town Development Act* and to integrate the Japanese land readjustment method into it. As of 2000, projects were completed in 3 districts, and were under way in another 8 districts. The total area of the 11 projects is 238.4 hectares.

The third period (the establishment of the land pooling technology and projects across the country, 2002 to early 2010s), saw a JICA expert being dispatched to DHUD from 2002 to 2003. An explanatory handbook for landowners and manuals for engineers were prepared. These documents have been updated and are still used in the country. Further land pooling projects were conducted across the country, and as of 2010 projects had been implemented in 17 towns and cities outside the Kathmandu Valley. Just in the Kathmandu Valley, 12 projects were completed, 6 were under way and 7 were being planned.

The fourth period (large scale infrastructure development and private development, early 2010s to the present), saw the land pooling projects in Nepal being increasingly characterized by residential area development targeting farmlands in the outskirts of towns and cities, and depending on the high appreciation of land values caused by the projects; not being dependent on money from the government. The rise of land prices and the land contribution ratio accepted by the landowners determined the level of

public facilities to be developed, and in areas where a big profit was not expected from the disposition of the reserve land, a project might be ended without paving roads or without constructing drainage facilities, though the land for those facilities has been secured.

A future issue concerning land pooling in Nepal is the expansion of its application beyond the development of farmlands in the outskirts of towns and cities, such as, for instance, the development of highways and areas along the highways, large scale new town developments, post-fire redevelopments or the improvement of slum areas (Subba 2010). Furthermore, Nepal’s land pooling is based on the *Land Expropriation Act*, which requires that the landowners transfer their land ownerships to the implementation entity and, then, the landowners receive the replotted land according to a replotting plan. Therefore, the implementation entity has to be a public entity that can expropriate land. The major challenge faced nowadays by Nepal is to conduct a wide variety of land pooling projects using financing schemes and technology of the private sector (Gorkhaly 2012).

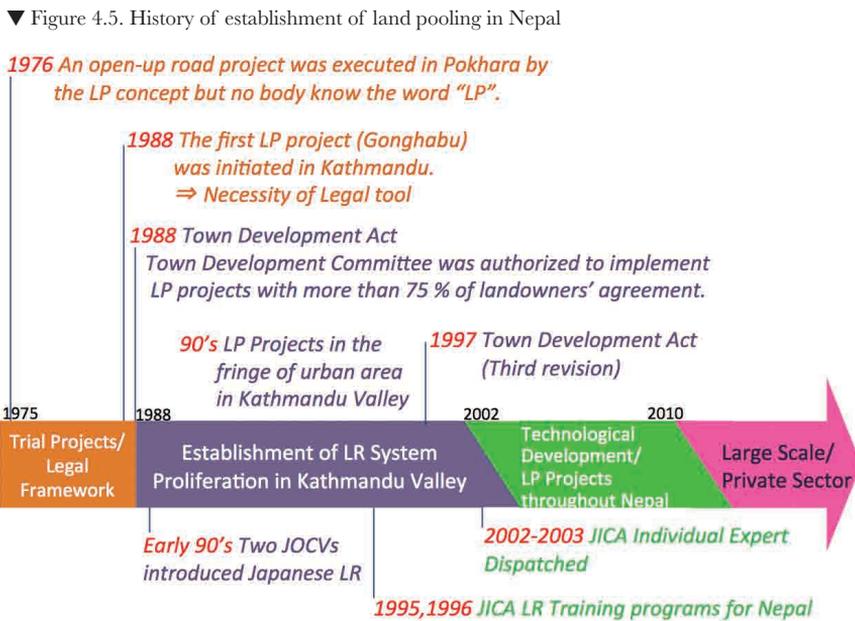


Figure 4.5 presents the chronology of the introduction of land readjustment into Nepal with Japan’s cooperation. Compared to Thailand where JICA dispatched individual experts over a period of 16 years and conducted three technical cooperation projects, Japan’s cooperation with Nepal was very limited. Against this background, there are two factors behind the Nepalese successful establishment of a land pooling framework:

- a. Nepal's legal framework is less complicated than Thailand's. The land pooling framework stipulated by the 1988 *Town Development Act* allowed land pooling projects to be conducted without further preparation of laws concerning land pooling projects.
- b. There was a huge demand for housing sites in Kathmandu Valley, and a land pooling project on farmlands, in the outskirts of towns and cities could be easily conducted without spending government funds. Therefore, the country could build up its experience in land pooling projects within a relatively short period of time.

## Developments in Colombia

Like Nepal, Japan conducted training for Colombia first:

- a. Country-specific training courses named "Land Readjustment Project Course" were conducted for five years (1998-2002) and were attended by 39 people in total;
- b. A JICA expert was dispatched for follow-up (2000-2003);
- c. Regional training courses named "Urban Planning, Land Readjustment Project" were conducted for five years (2003-2007), and were attended by a total of 64 participants of which 29 were from Colombia, and the rest were from four other countries in the Andes region; and
- d. A technical cooperation project named "Urban Planning and Land Readjustment Project" was also conducted for five years (2003-2008). In this project, unique efforts were made. The trainee candidates from the Andes region for the above training courses took pre-training from ex-Colombian trainees prior to their visit to Japan so that they could enter the training course in Japan smoothly.

In 1997, the *Law N° 388* was enacted in Colombia, which prompted all Colombian city councils to prepare an urban planning master plan called "Plan de Ordenamiento Territorial" (POT). Japan's 10-year cooperation contributed greatly to Colombia's efforts to build this new urban planning framework. The driving force of the country's urban planning was the former trainees from the country-specific training and the regional training courses, as mentioned previously. At the "National Council of Economic and Social Policy" (*Consejo Nacional de Política Económica y Social*, CONPES) – an equivalent to the cabinet council – held in August 2004, the government of Colombia proposed urban redevelopment projects, and asked for the participation of the former JICA trainees. This meant that JICA's support for capacity building in the areas of urban planning and land readjustment through country-specific training, and the subsequent technical cooperation project and regional training, were relevant to the Colombian government and its development policies, and the high level of the capacity building was recognized.

The major outcomes from these 10 years' period were (JICA 2008):

- a. The former JICA trainees worked in administrative institutions of important Colombian cities including Medellin, Cartagena, and Chia, and applied the urban planning and the land readjustment method they learnt. By 2013, land readjustment projects including urban redevelopment projects were conducted in 5 districts including Medellin, and projects using methods like land readjustment numbered about 50 all over the country; and
- b. Many former trainees held important positions in urban planning-related departments in the central and the local governments. The POTs for almost all city councils were prepared. The Ministry of Environment, Housing and Territorial Development (MAVDT) promoted a ministerial ordinance (which also serves as a manual) concerning the "Partial Plan" (which is a plan under the POT and includes land readjustment), for which the former trainees played a central role.

In sum, the former Colombian trainees have a lead over the countries of the Andes region, and are able to guide the other countries' urban planning. Colombian experts have been invited to provide technical support for land readjustment in several other regions and cities, such as Curitiba, Brazil, which commenced in 2012 to establish a framework for land readjustment and urban redevelopment. Colombian experts are also providing capacity development training programs in Colombia for the participants from Curitiba.

## **The Significance of Land Readjustment in Developing Countries**

So far, an overview of the history of land readjustment in some selected countries with Japan's technical cooperation has been given. So, what is the significance of land readjustment for a country that plans to apply the method at home? Yasuo Nishiyama summarized challenges pointed out by urban planning experts from various countries interested in land readjustment in the latter half of the 1970s, as follows (Nishiyama 2002):

- a. How to consolidate a number of small parcels to use land efficiently? (Planned supply of urban land);
- b. How to develop roads prior to urbanization when there are no public funds available for this purpose? (Finance through development profits and land acquisition for public purposes by means other than land purchase); and

c. How to provide houses for the urban poor?

Items (a) and (b) are common questions for land readjustment in Japan and the other countries. Item (c) is an important question especially for Latin America. The following sections will discuss the expectations for land readjustment based on findings from a landowners' survey in Thailand, and will explore the meaning of Japan's land readjustment method for Latin American countries including Colombia.

### Questionnaires to landowners in the pilot project areas in Thailand and the importance of land readjustment

In 2013, five areas where land readjustment projects were underway and title deeds have been issued or are planned to be issued soon in accordance with replotting plans, were selected for the survey. A questionnaire-based satisfaction survey was conducted for 429 landowners of the selected areas (i.e. all landowners, including landowners with co-ownership) (JICA 2013). The objectives of the survey were: (i) to understand the landowners' assessment of land readjustment projects as a new experience in Thailand; and (ii) to understand the extent of the development wanted by the landowners when the beneficiaries are required to pay for the development costs. There were 222 respondents and the response rate was 51.7%. Table 4.2 outlines the five areas where the survey was conducted.

**Table 4.2 Outlines of the Areas where a Survey was conducted in Thailand (2013)**

Name	Area (ha)	Project Approved Date	Contribution Ratio (%)	Numbers of Land Parcels	Numbers of People to Whom the Survey was Sent	Number of People Who Responded	Response Rate (%)
Samut Prakan	30.4	2010.08.23	13.8	29	34	11	32.4
Suphan Buri	31.3	2009.12.22	29.7	83	91	47	51.6
Nan	45.2	2008.05.14	14.3	126	158	73	46.2
Phitsanulok	20.6	2009.04.10	25.5	78	93	54	58.1
Rama 9 Park	8.8	2012.06.20	17.5	56	53	37	69.8
Total				372	429	222	51.7

(Source: Japan International Cooperation Agency 2013).

#### Question 1. Why did landowners participate in the land readjustment projects?

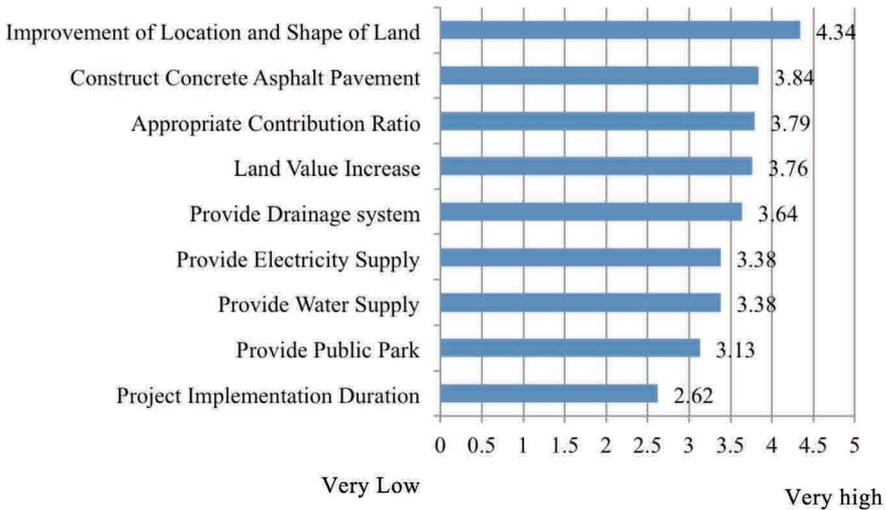
Figure 4.6 presents the important factors in deciding landowner's participation in land readjustment projects. The survey used a five point Likert scale, and the scores of each selected option for a question were summed. The factors considered most important when deciding on the participation were: (1st) improvement of location and shape of

land parcels; (2nd) construction of concrete asphalt pavements; (3rd) appropriate contribution ratio; and (4th) the land value increase.

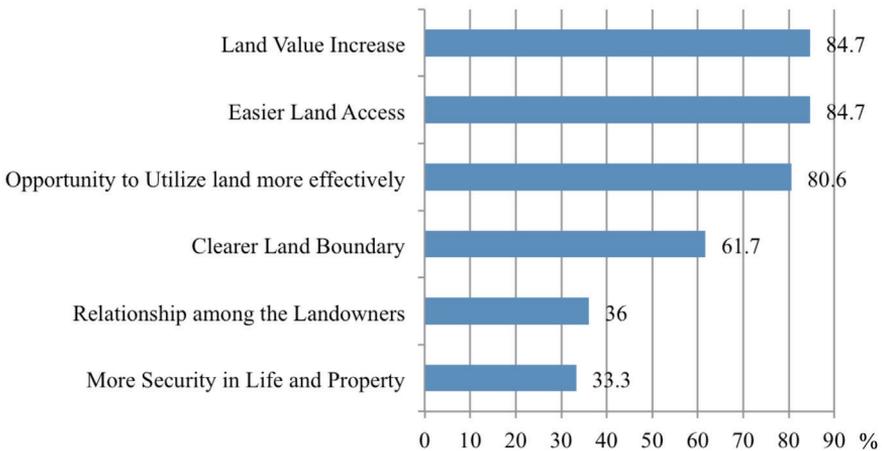
Question 2. What were the benefits acquired through the land readjustment projects?

Figure 4.7 presents that, against the previous question mentioned expectations, more than 80% of the respondents indicated that the top three benefits they acquired by participating in the projects were: (1st) land value increase (84.7%); (2nd) easier land access (84.7%); and (3rd) opportunities to utilize their lands more effectively (80.6%).

▼ Figure 4.6. Important factors for the decision to participate in a land readjustment project



▼ Figure 4.7. Benefits acquired through land readjustment projects



Question 3. What was your satisfaction related to the replotting design?

The responses on the satisfaction to the replotting design were: very good 22.5%, good 41.9% and fair 21.6%, which accounted for 86% in total. The findings indicated that the majority of the landowners were satisfied with the replotting design. These responses may include consideration on the amount of land contribution.

Question 4. What were the desirable levels of development and land contribution ratios?

Land contribution ratio is determined in relation to the benefits acquired by the landowners. During the survey, they were asked if they would like to have a high level of public facility development with a high land contribution ratio (cost), or if landowners would like to have a moderate level of public facility development with a low land contribution ratio (cost). In Thailand, many housing sites do not have access roads, therefore, these questions were asked to assess needs and preferences: if they preferred having local roads built near/in front of their houses first and would wait for public facilities to be built in the future; or if they preferred having all public facilities built, including roads, bearing higher development costs. As shown in Table 4.3, 30.2% of the landowners tended to prefer high levels of development at higher costs (with more than 30% of land contribution).

**Table 4.3. Desirable Levels of Development and Land Contribution Ratio**

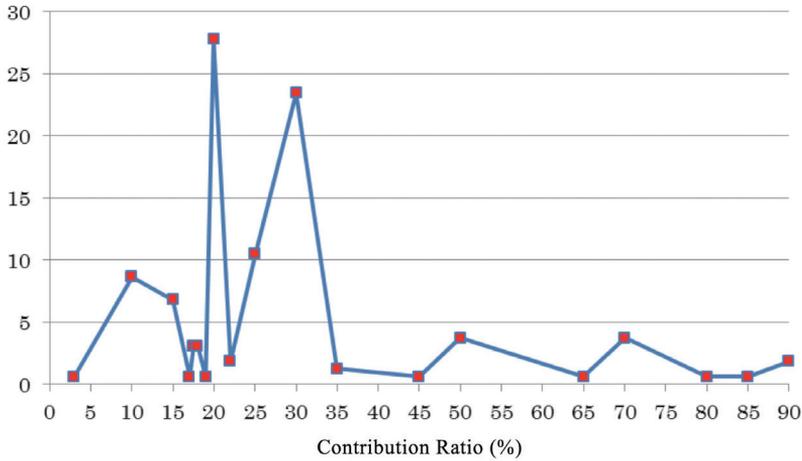
Level of Development	Expected Land Contribution Ratio (%)	Supported by (%)
Will secure land for public facilities including roads, but will not build them	Less than 20	21.2
Will build main roads and sub-arterial roads	20 - 30	28.4
Will build all roads and develop necessary infrastructure	Over 30	30.2
Others, no answer		20.3

(Source: Japan International Cooperation Agency 2013).

Question 5. What is the highest acceptable land contribution ratio?

Simultaneously, a question asked about the highest acceptable land contribution ratio to the landowners. Figure 4.8 presents that highest number of the respondents said that a land contribution ratio of 20% would be the most appropriate (27.8% of the respondents), followed by 30% (23.5% of the respondents), and 63.6% of the respondents selected a contribution ratio of 20 to 30%. The survey indicated that 87% of the respondents said that the limit to the contribution ratio should be less than 30%. However, these findings are not consistent with the responses to Question 4.

▼ Figure 4.8 Acceptable highest contribution ratio



A comprehensive analysis of the results from questions 1 to 5 indicates that in land readjustment projects in Thailand, landowners would like to have public facilities developed with focus on improved access to their houses, and would shoulder the costs up to 30% at maximum. Their willingness to contribute may be supported by their expectations that their land will be easier to use through the development of public facilities, which in turn will lead to increased land prices. This is the significance of land readjustment in Thailand from the landowners' point of view.

### Land readjustment as a means to secure land for the urban poor

In Colombia, the establishment of a land readjustment framework contributed to the country's efforts in urban planning as mentioned earlier. Another significant aspect of the land readjustment in Colombia is that the method can be used to improve poor areas, and to secure land for the poor. In Japan, land readjustment is not usually regarded as a mean to address issues of poverty. Nevertheless, in Latin America where problems of poverty have to be always considered in urban planning, land readjustment has been used as a mean to improve urban poor areas.

The following is an excerpt from a message sent from the leader of the trainees, who participated in the previously-mentioned JICA training courses for Colombia and Andes region, to Yoji Kinoshita, who was dispatched to Colombia as a JICA expert, and was a lecturer of the training course after returning to Japan (Kinoshita 2008a). The message was sent when the 10-year training project was nearing completion:

“The countries of the Andes region have benefited from JICA’s support through this project. Thanks to JICA and its training, a total of 108 persons who participated in the JICA training courses are now capable of conducting urban redevelopment projects and residential area improvement projects. In fact, we have improved the quality of life for many of those who live in poverty and face danger. By learning Japan’s urban planning model and putting it into practice, the countries from the Andes region have gained confidence in their abilities in the area of urban planning. Simultaneously, through our relationship with the Japanese society, we have received a clear message of ‘hope’ and ‘faith’.”

Yoji Kinoshita said:

“In the questionnaire survey for the former trainees, a question asked about the impact of Japan’s land readjustment project on Colombia. The majority of the respondents answered by selecting ‘*confianza*,’ or confidence. This result indicates that Colombian people do not trust local project, project implementation agencies and the public sector in the country, and also indicates that project participants do not trust each other. Landowners, therefore, are reluctant to participate in a project and investors hesitate to invest on it. For instance, from Japanese perspective, Japan’s land valuation method does not really consider ‘humanity,’ and is a method finely created to evaluate land values in fair manner as much as possible. However, in the eyes of the people of Latin America, Japan’s land valuation method signifies the equal and the fair treatment of people, and this is one of the most popular subjects in JICA’s training course. Land readjustment in Colombia was stipulated by Articles 44 to 47 of the *Urban Planning Law N° 388 (1997)*, which state that, ‘cost allocation and land distribution shall be based on the principles of fair share of costs and benefits.’ The former JICA trainees from Colombia learnt in Japan how to put these principles into action.”

A redevelopment project for slums in Medellín is well known as a successful case of that kind in Colombia. The former JICA trainees conducted this project. For one of the slum areas in Medellín, named Juan Bobo, covering 1.75 hectares, and populated by 1,353 people in 300 households, a legal framework for an “adverse possession system” was established, in which landownership was granted to squatters, and the city of Medellín purchased the land from them to conduct the land readjustment project. This is a good example of the application of Japan’s land readjustment method in Colombia (Kinoshita 2008b). Yoji Kinoshita commented that land readjustment is just one of the tools to address issues of poverty, and requires “a whole range of tools and policies to tackle poverty.” The Japanese method that is based on the principle of equal and fair treatment can make it possible (Kinoshita 2008a).

## Future Developments

More than 30 years have passed since land readjustment was internationalized in the 1980s. As we see in Chapter 3, various types of land readjustment are being used in various countries. Land readjustment has made the progress from the era of concept dissemination to the era of system establishment. However, not many countries have incorporated land readjustment firmly into their own urban development system. With this awareness, in 2014, JICA's training course on land readjustment – that started 30 years ago – was changed to take a more specific approach, such as the establishment of an institutional land readjustment framework and problem solving beyond a general introductory program of land readjustment. To this end, JICA decided to accept trainees from countries where land readjustment projects are being conducted, or from countries where a government organization is trying to introduce the land readjustment method at home. The program contents are not specialized in the Japanese type of land readjustment, but are based on mutual learning from countries that are successfully applying their own land readjustment process. The training course also adds a study tour program in which the trainees visit Bangkok to learn about the Thai experience of land readjustment after the two-month course in Japan. Like Colombia is now acting as the leader for Latin American countries, Thailand is expected to be a leader in Asia in land readjustment.

UN-Habitat disseminates land readjustment advice, paying attention to the participatory and inclusive approach of land readjustment. They also consider land readjustment to be a viable tool to enable public and private partnership in land development. The World Bank started to offer an online course on land readjustment in 2016, where the participants learn practical land readjustment. When thinking how to disseminate the land readjustment technique globally in the future, we should consider land readjustment in the context of urban planning as a whole, rather than communicating the technical aspects of the method to the world. The previously-mentioned slum redevelopment project in Medellín is for example “a comprehensive effort, combining an urban planning project with activities to address a variety of issues that range from poverty, unemployment, peace building, community restoration, the rights of women and children, and culture. [...] Japan should enhance its capacity so that it can provide support to such a multi-faceted project” (Kinoshita 2008a). The land readjustment method should be applied considering comprehensively and strategically the issues that face developing countries, including not only infrastructure development, slum upgrading, and the guarantee of property rights, but also urban management, urban governance, inclusiveness, value capture finance (property tax, transfer of development rights, and the use of development profits), sustainable urban development, and

climate change mitigation/adaptation. Furthermore, a more diverse framework for conversion of these rights should be created; as they range from, for example, conversion of rights not only from land to land by administrative measures as practiced in Japan, but also from land to building floor by agreements between private parties as practiced in Colombia and Mongolia. By learning from the world, Japan can explore new approaches to land readjustment.

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