

### 2.2.7 Action Plan for KASIBA Promotion

The central government must launch promotional activities for KASIBA implementation by the local government. It seems certain that KASIBA cannot be implemented without *promotional activities of the central government* at the initial stage of the KASIBA program, especially for the first pilot project on which the laws and government regulations are applied for the first time. The action plan is proposed, including the necessary activities as shown below.

Table 2.2.8 Action Plan for KASIBA Promotion

<i>Activities for legal arrangement</i>	
Ministerial decree	Relevant ministries stipulated in the government regulation must issue ministerial decree on the specific items for implementation.
<i>Activities for pilot project implementation</i>	
Promotional activities	Creating favorable circumstances for pilot project
Government task force	Task force for promotional activities of pilot project (Central/local government)
Project implementation	L/C implementation plan for pilot project must be formulated based on the results of the above-listed activities.
<i>Activities for KASIBA project development/expansion</i>	
Proposal of KASIBA sites and development projects	Study on urban development through KASIBA in Jakarta Metropolitan Area
Capacity building of local government	Dissemination, education, and training to local government on KASIBA (Seminar, work shop, school)
	Establishment of division of urban development in local administration.
	Assignment of staff and engineers to the division
Capacity building of central organization	Establishment of financial budgetary system
	Strengthening/expansion of division of KASIBA in the Ministry responsible for housing and human settlement (Administration, guidance, promotion, project monitoring)
Activities for research and development	Establishment of division of urban dev. project in department of Public works
Strengthening research/dev. function on L/C and urban development	The institute for housing and urban settlement (P.W) University

The promotion strategy shall be the simultaneous undertakings of both "*activities for pilot project implementation and for KASIBA project development/expansion*". The former works as a system testing, through which the lessons are obtained to be used for the technical and legal improvement of KASIBA system, and showcase, through which advantages of KASIBA project can become visible. The public awareness may thus be gained so as to enhance the latter. The central government is expected to make proposals of KASIBA projects to local governments. For this end, it is recommended that a "*study on urban development through KASIBA in Jakarta Metropolitan Area*" be executed so as to find sites suitable for KASIBA development throughout the Jakarta Metropolitan area.

### 2.2.8 Conclusion and Recommendation on KASIBA System Development

#### (1) Diversified Application of Urban Development Systems under KASIBA

KASIBA was broadly defined as "KASIBA is an urban control and management system with designation of development area where urban and housing development projects are promoted and implemented in a planned manner". Based on the broad definition, variations of urban development systems in Indonesia were examined and classified into three (3) types of systems, which should be diversely applied to KASIBA. The three proposed systems are not alternatives,

but it was recommended that all be selectively used in response to different situations and purposes of urban and housing development projects in different localities in Indonesia. It was confirmed that any of the proposed KASIBA systems are not contradictory with Law No. 4/1992 on Housing and Human settlement.

## **(2) Innovation of Urban and Land Development Measures of Indonesia through the KASIBA System**

The study was executed for establishing the KASIBA system. However, it must be stressed that it was aimed at innovation and improvement of the Indonesian city planning and development system itself, through the examination of the particular system of KASIBA. It was recommended to keep on researching and examining the innovative measures as proposed in the KASIBA improvement plan for the progressive improvement of the Indonesian city planning and implementing system.

## **(3) Transfer Technology to Local Government through KASIBA**

*(Guidelines for KASIBA project and Manuals for Practical procedures)*

The implementation system and procedures of the KASIBA system were prepared in the form of *Guidelines for KASIBA project and Manuals for Practical procedures*. In this drastic change process of the government administration system toward the autonomy of local governments, which has not yet shown a clear total picture though, it is becoming subject to the local governments' responsibilities and rights to decide which urban development systems are applied and implemented.

KASIBA is not a particular system, but a more general urban and housing development system, including Systems 1 to 3. KASIBA guidelines and manuals were designed to increase the knowledge of the local government on city planning and development through KASIBA projects. In turn, it is considered the best way for the local government to effectively and efficiently utilize and implement KASIBA projects for meeting local needs and demand.

## **(4) Systematization of City Planning & Development in Government Reformation utilizing KASIBA**

Several measures and programs for improving urban and land management systems of the local government have been proposed and set up in association with the government reformations centering on decentralization policy of Indonesian government. It may be regrettable to say that they have not yet been well adjusted and coordinated. Major topics are on the development permit system: Location permit/Spatial utilization permit/Land use permit, and the urban area development system: KASIBA is supported by the State Ministry of Housing and Urban Settlement or the urban area development management system is supported by the Ministry of Home Affairs.

Two alternatives were presented to integrate them into the city planning and development system of Indonesia: *City planning-oriented KASIBA or Project-oriented KASIBA*. The basic policy of KASIBA improvement is to make it more flexible and more certain in urban and housing development. Urban control power and project implementation power entitled to KASIBA shall be separately applied to the *KASIBA urban promotion area* and the *KASIBA urban project implementation area respectively*.

The other alternative is the integration of KASIBA into the global city planning and development system and framework focusing on new urban development management areas sponsored by the Ministry of Home Affairs. KASIBA works as project-oriented system in that global framework. The KASIBA implementation is applied in KASIBA urban project implementation areas.

### **(5) Promotional Action Plan**

The central government must launch promotional activities for KASIBA implementation to be done by the local government at the initial stage of the KASIBA program, especially for the first pilot project on which the laws and government regulations are applied for the first time. The action plan was proposed, recommending the simultaneous undertakings both of "*activities for pilot project implementation and for KASIBA project development/expansion*". The latter included dissemination/training activities on KASIBA and urban development to the local government and "*study on urban development through KASIBA in Jakarta Metropolitan Area*" to find sites suitable for KASIBA development throughout the Jakarta Metropolitan area.

## **2.3 System Development of Land Consolidation**

### **2.3.1 Definition and Basic Features of Indonesian Land Consolidation**

#### **(1) Land Policy and Principles of L/C**

Land Consolidation in Indonesia is based on the basic land policy under Act No. 5 of 1960 known as the Basic Agrarian Law. In principle, the Basic Agrarian Law regulates four main aspects, namely a.) *Land-tenure arrangement*, b.) *Land-use arrangement*, c.) *Land titling*, and d.) *Land registration*. The National Land Agency in 1991 established provisions on the implementation of Land Consolidation in the form of Regulation of the Head of the National Land Agency No. 4 of 1991 concerning Land Consolidation along with its Implementation Guidelines as well as Technical Manuals. The basic policy of land consolidation is stated in the regulation. It must be noted that "*no statement on infrastructure is made in the policy*" (JICA study team's opinion).

#### **(2) Procedures of Land Consolidation**

The procedure of L/C implementation commences with the selection of the location determined by the Head of Level II of the local government followed by construction work after the issuance of land certificate, which differentiates L/C from Japanese Land Readjustment. In L/R, first infrastructure is constructed and secondly land is replotted (then registered).

#### **(3) Organizational System**

The overall organization of L/C as implemented by the BPN is outlined highlighting the following features:

1. Land Consolidation in Indonesia is basically viewed as a *land policy*. Therefore, the main implementing agency of Land Consolidation is the State Ministry for Agrarian Affairs/National Land Agency.
2. Inter-related institutions or agencies such as the *Controlling Team* at the provincial level and the *Coordinating Team* at the municipality level are established for close coordination.
3. The participant landowners act more or less *as individuals*. As a result, the

discussion or deliberation processes between the implementing agency and the participants or amongst participants very often face constraints. 4. Since 1995, the National Land Agency has been promoting *groups of landowners (or Community Groups)*, through which landowners are encouraged to form cooperation so as to facilitate the implementation of land consolidation. 5. The problem of lack of budget especially for the construction of infrastructure and house building can be handled by this organization in cooperation with banking or financial institutions.

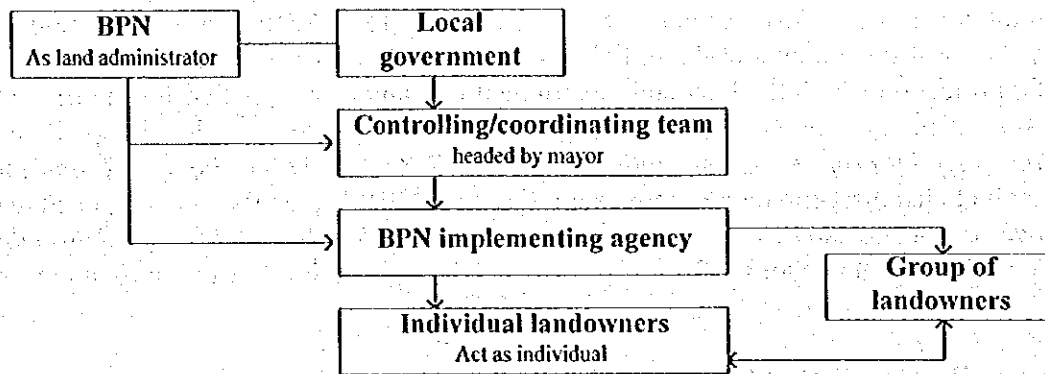


Figure 2.3.1 Overall Organization of L/C implemented by the BPN

#### (4) Technical Aspect

##### 1) Selection and determination of project sites

The location of project sites selected for land arrangement through land consolidation should be agreed upon by *at least 85% of the landowners or landholders whose land covers at least 85% of the total land area of the site.*

##### 2) Decision-making

There are three parties that are to determine the implementation of L/C: Landowners, Local government, i.e. the Regent or Mayor of the area concerned, and Office of the State Ministry for Agrarian Affairs/National Land Agency. More specifically,

1. The Regent or Mayor in the locality concerned determines the proposed location of the site for land consolidation project with the agreement of 85% in terms of number of landholders and land areas.
2. The arrangement of land tenure and land-use on the land consolidation project site can be carried out by the Local Land Office and Provincial Office of the National Land Agency after the State Ministry for Agrarian Affairs/National Land Agency has confirmed the location as the site of land consolidation project.
3. The following items for implementing L/C are subject to the deliberation with the landowners for agreement: 1. General plan on the implementation of land consolidation. 2. Draft of Block-plan design. 3. Percentage of Land Contribution. 4. Proposed new plots as a result of replotting design.

##### 3) Replotting and reserved land

In general, the land condition of the project is relatively the same so the contribution rate is imposed at the same percentage to every single land-plot. Land contribution for

implementation has not been calculated based on the price of land before and after the land consolidation project as well as the cost for implementing the project. The determination of new plots is also applied by a very simple method, meaning that new plots are established based on such land factors as acreage, site and shape.

## (5) Budgetary System

### 1) Principle of financing implementation of Land Consolidation

In principle, the financial burden of the implementation of Land Consolidation is *borne by the participants or landowners* in the form of either land contribution for reserved land or cash money. The amount of reserved land is subject to the deliberation/agreement among all participants.

### 2) Financial Management

For implementing the Land Consolidation, implementation funds, which can be directly managed, are provided through the government budget and self-finance. Funds for the latter are collected from every landowner, either through sale of reserved land or cash money from the participants.

#### National budget for provision of land certificates

The fund from the National Budget for Land Consolidation Projects is managed by the National Land Agency mainly for the arrangement of land up to provision of land certificates and land provision for road or road networks.

#### Self-finance for construction

Self-finance is used for construction cost and development of public facilities as well as urban infrastructure, along with funds provided by local government or department budget allocation.

### 3) Sources of fund

Although, in principle, Land Consolidation costs are borne by the participants/landowners, the implementation cost may also come from such sources as the national budget, the provincial budget, and/or the local budget in various combinations in accordance with the following categories; L/C Project with National Budget and Self-finance, L/C Project with National Budget and Local Budget, L/C Project with Local and/or Provincial Budgets, and L/C project with self-finance.

## 2.3.2 Essence of Land Readjustment in Japan

Basic differences between L/R in Japan and L/C in Indonesia can be found in, among others, the type of implementing agencies: in the case of the former - government agency in charge of city planning and landowners' association, the latter - government agency in charge of land administration (National land Agency, BPN). Land readjustment implementing systems greatly differ depending on the implementing agencies with different authorities and legal powers for executing L/R. The essence of L/R in Japan is presented focusing on the legal structure. The basic concept of L/R of public interest and social welfare from the basis for granting legal powers such as legal entity of association, compulsory participation, enforcement of replotting and etc.

Table 2.3.1 Essence of L/R in Japan (Legal structure)

*Basic concept and principles of Land Readjustment*

1. Fair and equitable sharing of cost and benefit among landowners
2. Cost recovery through development benefit (reserve land)
3. Preservation and continuation of land right, value and utility

*Authorities for implementing L/R projects and types/classification of L/R*

1. Authorities for implementing L/R
2. Types and classification of L/R
3. Legal powers based on the authorities for implementing L/R
  - 1) Legal enforcement power on landowners
  - 2) Decision-makers
  - 3) Checks and balance
4. Legal powers of government and association

**2.3.3 Basic Policy and Principles of System Improvement for L/C in Indonesia****(1) Summary of the Existing Problems and Constraints**

Considering the BPN's past experiences in implementing L/C, problems and constraints of the existing L/C system are summarized as follows: *a.) Difficulty to reach agreement; b.) Reluctance and refusal of land contribution; c.) Discontinuation of participation due to financial burden; d.) No execution of construction works of infrastructure and facilities; and, e.) Low understanding on the importance of L/C.*

**(2) Chain of Problems in L/C**

It seems that most of the problems and constraints identified by the BPN derive from the structural problem that the basic mechanism of L/R does not work well in Indonesian. The basic mechanism of L/C simply interpreted is that infrastructure development through L/C is to increase utility of land resulting in corresponding increase in land value. The increased value is then used to finance the development of infrastructure.

In Indonesian practice, infrastructure is seldom constructed on this mechanism, but rather constructed separately by the local government. However, infrastructure construction cannot immediately and fully follow replotting due to the local government's financial constraints. No (or delayed) construction of infrastructure in L/C threatens to create a chain of problems in the future as follows: 1.) Landowners cannot enjoy infrastructure service and develop their land without infrastructure services; 2.) Landowners are likely to be dissatisfied with their contribution of land due to the above reasons, and consequently appreciate L/C less in terms of balance between benefit and cost, resulting in reluctance of landowners to participate in L/C.

**(3) Basic Policy of L/C System Improvement in Indonesia**

Based on the above discussion, the basic policy of L/C system improvement is set forth as follows: 1.) Increase and strengthen *public awareness/consciousness* of importance of urban and infrastructure improvement, which is a base for L/C. 2.) Increase *reliability and trust* on L/C for reducing reluctance of landowners and enhancing willingness of their participation.

There is no doubt that many people have appreciated L/C and willingly participated in it in Indonesia in spite of the problems and constraints as explained before. It is recognized that those problems must be halted to make L/C more effective and a more generally applicable system for urban and infrastructure improvement. The problems inherent to the existing system of L/C can be summarized in 3 points: problems regarding *participation, construction and replotting/reserve land*; measures to enhance participation in L/C is of the greatest importance; and, improvement in the construction and replotting/reserve land is intended to pave the way for a more global participation of the communities in Indonesia.

The study on the system improvement of L/C aims at increasing the reliability of, and trusts in L/C. For this end, it is proposed to establish and effectively operate the mechanism of L/R including *infrastructure development and proper/objective/scientific replotting and reserve land allocation*. Both of them are indispensable for increasing the reliability of, and trust in L/C as an effective urban and infrastructure system in Indonesia. They are interdependent in that infrastructure financially relies on reserve land, while reserve land and replotting are based on the infrastructure. In this regard, it is above all most significant to install *the infrastructure development system and implementing organization in the L/C system since they have not been built in the existing L/C system of the BPN*.

#### **(4) Basic Concept and Principles of L/C**

In order to improve L/C by the policy set before, it is recommended that L/C adopts the basic concept and principles of L/R in Japan as discussed in the preceding section of 2.3.2, although the application systems may differ from those of Japan. *Basic concept: Promote public interest and social welfare, Principles: 1) Fair and equitable sharing of cost and benefit among landowners; 2) Cost recovery by development; 3) Preservation and continuation of land right, value and utility.*

### **2.3.4 Variation of the Implementation System and Implementing Agency of L/C**

#### **(1) Types and Classification of L/C**

L/C, like L/R, should be implemented only by legitimate implementing agencies having the legal authority. L/C implementing agencies are supposed to be either associations of landowners or the government. Accordingly 2 types of L/C implementation are set forth: Association type L/C and Government type L/C. In accordance with the 2 types of L/R, eligible agencies for implementing L/C in Indonesia are respectively slated as follows, taking into consideration the character and mandated tasks of the agencies.

L/R Type	Public L/C	Association L/C	Remarks
Implementing agencies			
Association of Landowners	×	○	Contractors to execute L/C works under the authority of Implementing agencies Perum Perumnas Real estate developers General contractor others
Central Government (Min. of Public Works)	○	×	
Local Government	○	×	
Perum Perumnas (Housing and Urban Dev. Corporation)	○ (As an implementing agency)	○ (As a member of Landowners' association)	

↑  
 Public interest of improvement of urban infra. & Environment

↑  
 Landowners' interest of improvement of urban infra. & Environment

Figure 2.3.2 Types and Implementing Agencies of L/C

(2) Variation of Implementation Systems and Implementing Agencies of L/R

1) Variation of L/C in Indonesia

In order to solve the L/C problems for constructing infrastructure, which is vital to L/C, there are two (2) ways following the direction of either association L/C or government L/C as set before. Participation of Perum Perumnas into L/R is proposed based on the 2 systems.

Table 2.3.2 Variation of L/C in Indonesia

a. Association type L/C in cooperation with BPN
b. Government type L/C in cooperation with BPN
c. Perum Perumnas type L/C in cooperation with BPN
1. Participation of Perum Perumnas as one member of landowners' L/R association
2. Participation of Perum Perumnas as implementing agency as well as one of landowner

2) Direction of L/R system improvement in Indonesia

Based on the above-discussion, it is concluded that the existing L/C system should be improved in line with *association type L/R generally applied in Indonesia as well as government type L/R applied in KASIBA*, taking into consideration the following factors:

1. It seems possible, less difficult and favorable to promote landowners' organizations in the existing system and practices of L/C. The organization can be supported by the BPN, which has the L/C implementation capability and experience.
2. There seems to be higher possibilities/rationale of justification of government/public type L/R in KASIBA, which is to be developed by the authority and initiative of the government than at large in the urban areas in Indonesia.
3. One of the two variations selected for KASIBA system is Land acquisition by Perumnas and Land Readjustment by either KASIBA management body or Perumnas, which has the project implementation capability and experience.



### 2.3.5 L/C System Improvement Plan

#### (1) Basic Structure and Sub-systems of L/C System

As concluded above, targeted system for L/C improvement is the Association type L/C, which is to include infrastructure construction through cost recovery by disposition of reserve land.

Physical components of L/C project simply consist of designation of L/C area, infrastructure construction, and land replotting. In order to carry out these physical components, the L/C system needs the following sub-systems:

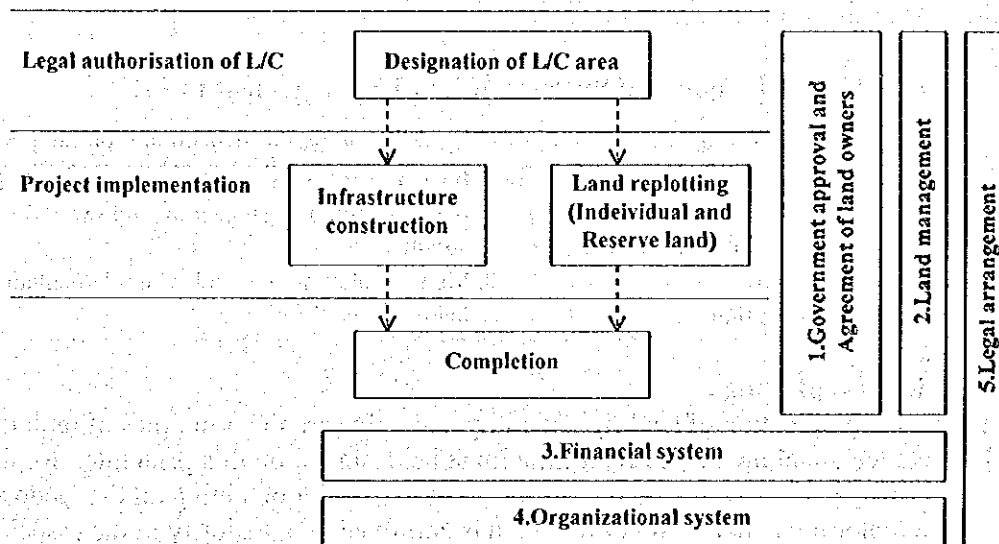


Figure 2.3.3 Basic Structure and Sub-systems of L/C Implementation System

#### (2) Government Approval and Agreement of Landowners

The local government has the task of examining the project from the viewpoint of city planning: public interest, social welfare, social/natural environment, legality and fairness of replotting, and etc. In some cases landowners' approvals are one of the conditions for government approval on the L/C areas and plans. The same system of government approval as proposed in KASIBA should be applied as follows:

Table 2.3.3 Government Approval of L/C

Items for Approval	Check Items for approval	Legal System
L/C Area & Dev. Plan	Public interest and social welfare, conformity with spatial plan, urban dev. program of city	Inclusion in Law on Spatial Plan
L/C Implementation Plan & Implementing organization (Association)	Feasibility, implementability, social/natural environment and influence on property rights	Inclusion in the coming Law on L/C

Unlike land subdivision projects where land issues are terminated upon completion of land purchase, in the case of L/C, land issues continue until completion of the project. In this regard the L/C implementation process is viewed as a social co-ordination process of landowners.

Similar to the government approval, L/C area, L/C development plan, L/C implementation plan and replotting plan, which all affect the rights of landowners, must be agreed upon in sequential order.

### (3) Land Management

Land management is a pivotal part of the L/C system, and therefore its improvement is very important. Land management in L/C is to increase efficiency and utility of land through infrastructure construction and replotting. Land is to be basically managed by landowners through an association, while government is to support the landowners' self-help of land management. Tools and systems of land management in L/C must be provided to the association. They are summarized below.

**Table 2.3.4 Tools and Systems of Land Management in L/C**

Technicality of replotting	Executing mechanism of replotting
1. Objective technical method	1. Basic policy and principles of replotting in L/C implementation plan subject to landowners' approval
1. Principle of correspondence	
2. Replotting based on land value evaluation	
2. Provisional replotting	2. Model replotting plan in L/C implementation plan
3. Legal identification of replotting	

#### 1) Technicality of replotting

Preservation and continuation of land rights, utility and value are the principles of replotting in L/C. Objective technical method of replotting must be designed on this principle. Replotting must be objectively and fairly designed so as to form the base for obtaining all the landowners' consent to the replotting plan (the replotting plan is approved by a majority in the association). In this end, the BPN should establish an objective replotting technical system, which is accountable and persuasive to the landowners for application in the replotting plan, based on the principle of correspondence and land evaluation before and after the project.

The correspondence principle dictates that land should be replotted as close to the location of the original land as possible. This aims at the correspondence between original and replotted land in terms of location, utility and value. However, as special divergence cases should be allowed at the request of landowners that would like to have their replotted land in agriculture and commercial areas apart from the location of their original land. In addition to the replotting principle, replotting must be based on land value evaluation. The economic value of replotted land as compared to that of the original land and other replotted land is one of the important factors for landowners to decide whether or not to accept the replotting design and plan. The technique of replotting based on land value evaluation becomes applicable only when infrastructure improvement, which is determinant of land value, is implemented in L/C projects.

Provisional replotting is a unique and indispensable system of L/C to keep continuation of land utilization meaning no disturbance/interruptions of daily social/economic activities on the owners' land-utility of land during the period of infrastructure construction.

In spite of the difference in physical feature of land between the original land and the replotted land, the law is due to stipulate that the land right vested to the original land would never change through and after L/C project implementation, thus ensuring the continuation of land rights vested. This idea is supported by the replotting design keeping the physical and

economic value unchanged as much as possible before, during and after project implementation through the principle of correspondence and land evaluation as stated above.

## 2) Executing mechanism of replotting

As the replotting plan seriously affects the right and value of peoples' property, it is not until completion of the infrastructure that is changeable depending on the natural and social condition of the project site in the course of implementation, that the replotting plan can be finalized. In this regard the replotting plan cannot be presented prior to completion of infrastructure construction.

For this reason only the basic policy, principles and method of replotting adopted in each L/C project must be included in the L/C implementation plan which is approved by the government as well as the association of landowners through the general meeting. Replotting is to be designed strictly in compliance with the implementation plan. This implies that the landowners have to make a decision on agreement of L/C implementation plan without knowing their replotted land in detail after project implementation. However, the basic policy and principle of replotting design and plan in L/C implementation plan would not be enough to convince landowners to approve L/C projects, especially L/C in developing countries.

Taking into consideration the contradictory situations of replotting (to be presented before project for landowners' approval and to be presented after infrastructure construction for accuracy of replotting), a *model replotting plan* is proposed to be included in L/C implementation plan for landowners' approval on the condition that it will be revised in accordance with actual infrastructure constructed.

## (4) Financial System

A variety of financial sources for L/C should be examined and prepared. The proposed financing systems are summarized as follows:

**Table 2.3.5 Financial Sources for L/C**

1. Government credit scheme for L/C assisted by off-shore fund
2. Infrastructure fund of local government
3. Mobilization of private financing sources (developers of reserve land, construction companies of infrastructure)

Landowners to benefit from land consolidation are due to contribute part of their land to be used for infrastructure and also for the financing of infrastructure construction costs. Since infrastructure construction starts before the completion of the sale of the reserved land, the L/C implementing agency needs to raise funds as shown in the following cash flow. Taking into consideration the importance of L/C for improving urban infrastructure and environment, special fund under government credit scheme should be created just like the credit schemes for cooperatives, which are provided through commercial banks or government. Financial resources are supposedly off-shore international institutes and bilateral aid organizations.

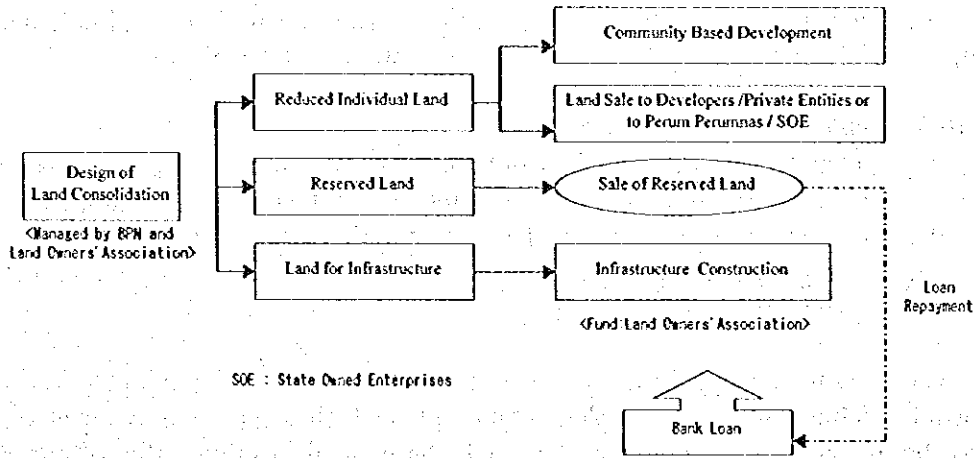


Figure 2.3.4 Cash Flow of L/C Implementation

In the existing system of L/C, local government is in charge of infrastructure construction at its cost while the BPN takes charge of land replotting and registration. Following this rule the local government has the responsibility of fully financing the infrastructure construction. On these premises it is reasonable that the local government establishes an L/C fund under the budget of infrastructure, providing the capital with low cost interest instead of shouldering all the cost of infrastructure construction. The private sector is involved in the implementation of L/C in the form of buyers/developers of reserved land, construction companies of infrastructure of L/C and etc. It is usual practice for the private sector to mobilize its financial credibility in Japanese L/R implementation.

### (5) Organizational System

#### 1) Overall Organization for L/C Project

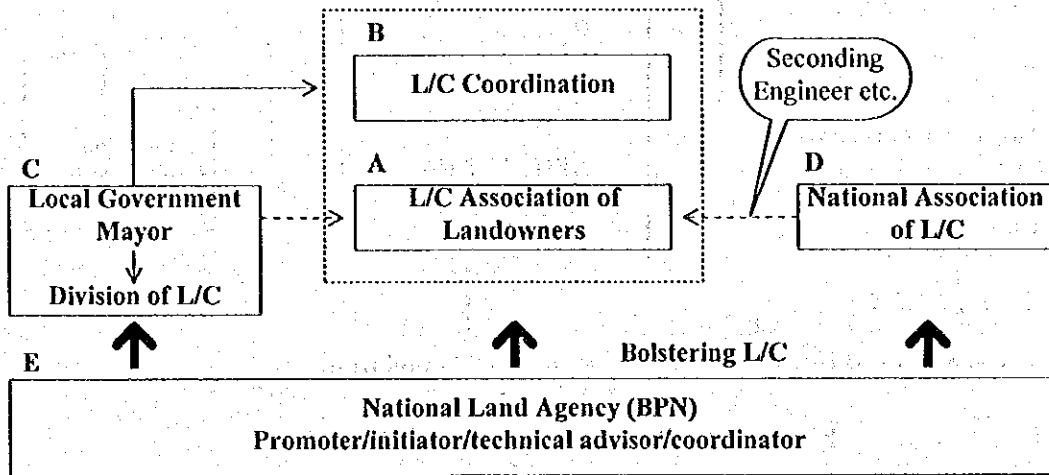
The overall organizational network for implementation of association L/C is proposed. Usually in countries other than Indonesia implementing agencies are solely the local government, which has right and responsibility of urban and infrastructure development and an association of landowners, which has right and responsibility on land properties. However, in Indonesia special attention must be paid to the BPN's right/responsibilities and capability for implementing and expanding L/C projects as follows:

1. BPN's right and responsibility of land tenure registration based on the agrarian law.
2. BPN's right of land management based on the agrarian law.
3. BPN's technical and practical knowledge of L/C through long experience of L/C.
4. BPN's mobilization capacity in land administration and L/C as well (organization, budget and human resources)

In contrast to the advantages of the BPN as stated earlier, local governments responsible for urban development are poorly prepared to deal with issues of land management, land tenure as well as L/C implementation. Not much can be expected of the association as the implementing agency of L/C in terms of its operational/technical and financial capability for L/C projects since it is still at an early stage. Taking into account the current situations as stated above, it is quite apparent that the BPN has to play a large role in expanding L/C in the country.

The BPN should gear its efforts toward the establishment of an overall implementing

organization of association L/C under local government. For this end the BPN should work as a promoter, initiator, technical advisor, and coordinator for association L/C. The overall organization proposed in the preceding section is viewed as a suitable procedure for the BPN to follow for promoting L/C projects throughout the country, including strengthening the organization of local government and association, transferring technology and financial support. The overall organization of L/C is outlined as follows:



Agency	Function
L/C association	Authorized L/C implementing agency
BPN	Promoter, initiator, technical adviser of L/C in addition to land administrator
Local government (Division of L/C)	Local administrative center of L/C
L/C coordination team	Coordination and support for project implementation of L/C
National association of L/C	Disseminating technical/practical information of L/C and supporting L/C project of association

Figure 2.3.5 Overall Organization of Association L/C implementation

## 2) Organization of L/C Association

### Organizational Structure

It is proposed to form the organizational structure of the L/C association of decision making unit and an executing unit. 1. All the landowners are obliged to become members of the association with the decision making mechanism on important issues concerning implementation be through general meeting of landowners. 2. The board of directors will implement L/C projects through the executing unit in conformity with the decision made at the general meeting. 3. In order to lessen the burden on the association, the following measures should be considered: a.) Experts/Engineers to be seconded from National association of L/C, the BPN, etc. b.) Implementing works to be executed by contract with developers of reserve land, construction firms, the BPN, local government, etc.

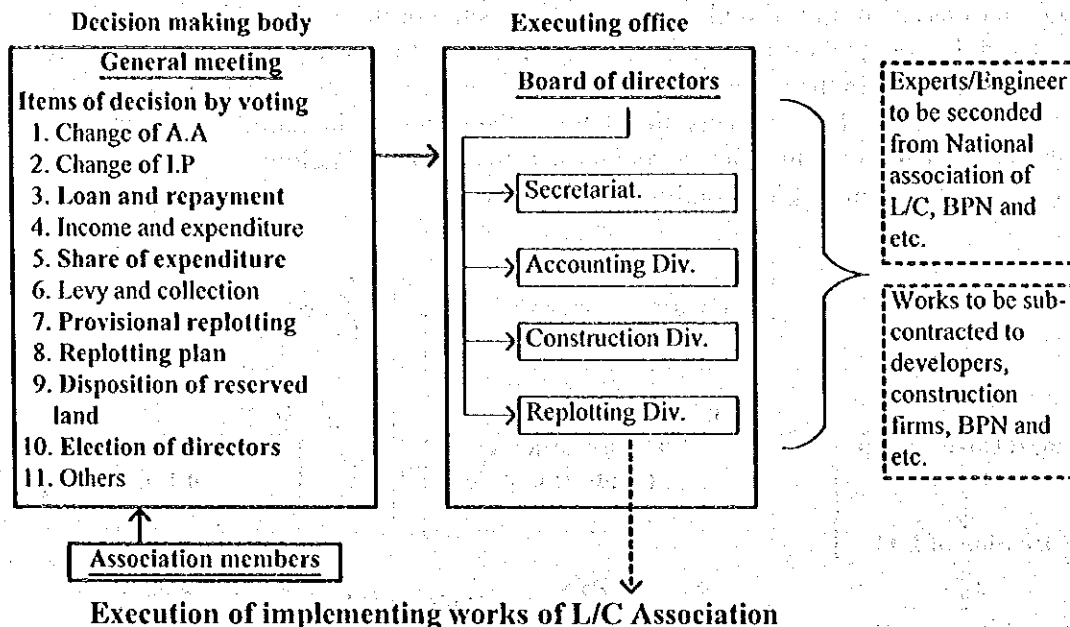


Figure 2.3.6 Organization of L/C Association

**Examination of Implementing Organization**

Alternatives for implementation organization of the association L/C are examined from the viewpoints of the requirements: public interest, landowners' membership and legal entity.

Alternatives of organization examined for L/C association	Basic requirements
1. Landowners' Panitia (Committee) 2. Cooperative 3. Private developers 4. Landowners' Association as a legal entity	1. Public interest (Compulsory and non-profitable) 2. Landowners' membership 3. Legal entity (capable of land/infra. dev.)

While alternatives 1 to 3 may be applicable in limited cases, alternative-4, which meets all of the basic requirements, can be generally and broadly applied. Although alternatives 1 to 3 may be used in the transitional period, the adoption of alternative-4, Landowners' Association as a legal entity should be a target for the improvement of Indonesian L/C.

**(6) Legal Arrangement for Institutionalizing Association L/C**

It must be noted that among the 2 main components of L/C implementation, namely, land replotting and infrastructure construction, the former has been carried out under the existing practices of L/C in Indonesia. The replotting practice is possible under existing laws and regulations although there is room for improvement. Therefore, the BPN aims at the latter, infrastructure construction in L/C projects, which also necessitates the improvement of the former (replotting system) based on infrastructure improvement. In order to secure establishment, continuation, workability, and capability of the association, the measures to make the following items legal are necessary.

<b>Establishment</b>	
L/C association based on majority rule	Landowners can establish L/C association based on majority rule among them in project site
<b>Membership</b>	
All landowners are member of L/C association	Once the association is established, all landowners become its member (cannot drop out and even if landowner is changed)
<b>Management</b>	
Decision is made on majority rule among members of association	The association' decision is made on majority rule among the members (General meeting)
Decision has legal effect	The association' decision has legal effect for enforcement
<b>Legal capacity</b>	
L/C association is a legal entity	The association has right and obligation as a legal entity to implement land and infrastructure development. (Capable of making contracts for borrowing fund, construction, disposing reserve land etc.)
<b>Ownership</b>	
L/C association has ownership of reserve land to dispose	Ownership of reserve land in replotting plan belongs to the association for disposition.

### 2.3.6 L/C System in Government Reformation

#### (1) On-going Government Reformation and Improvement in Urban and Land Management

As shown in the KASIBA study, the government reformation and improvement in urban and land management have been proceeding. Land consolidation cannot be free from these reformation movements, rather more positively should participate so as to support and enhance the government reformation, especially land liberalization and decentralization. L/C will be more needed in accordance with the advancement of the government reformation, considering the following factors: 1.) the more respect of peoples' property rights (liberalization of legal power on land); 2.) empowerment of community; 3.) urban area development approach by local government different from the past sectorized approach of the central government; and finally, 4.) city planing improvement.

#### (2) L/C System in Systematization of City Planning and Development in Indonesia

As shown that L/C can be not only along the stream of the government reformation movement, but also instrumental and responsive to the goals and purposes, which the decentralization policies targeted.

The way and means must be pursued so that L/C can be more positively and effectively utilized for urban and environment improvement in the regions.

As stated in the KASIBA chapter, it should be inter-linked with the improvement of the Spatial planning system, more strategically with the urban development management system as proposed in Figure 2.2.8.

L/C can be a development/implementation apparatus for the urban management system, providing infrastructure. It was also recommended that L/C be a basic implementation system for KASIBA development. In addition to the new urban area development as discussed above, attention must be paid to other serious urban problems which the local government may face:

disorderly urban expansion featured with self-building with poor infrastructure and environment on the fringe of the existing built-up area. L/C is the best development system applied to such urbanization-starting area with high development potentials; otherwise urban slum areas may spread.

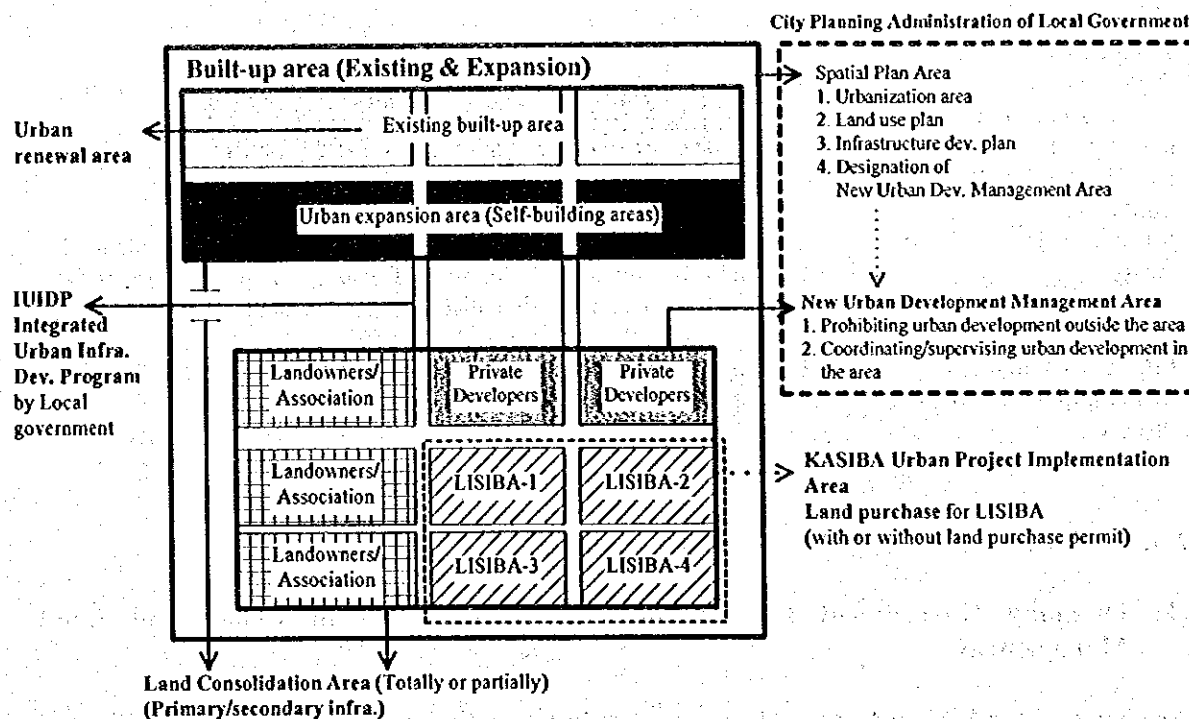


Figure 2.3.7 L/C in Integrated City Planning and Development of Indonesia

### 2.3.7 Guidelines for L/C Projects and Manuals for Practical Procedures

The Indonesian Government launches actual works for developing and institutionalizing the L/C system so that it can achieve the goals expected in urban and environment improvement of the regions. As discussed in the preceding sections, L/C featured with “respect of property rights”, community participation and empowering”, “self-financing”, and others is the best response to the urban and community development envisioned along with the government reformation thrust: decentralization, liberalization and democratization. It is certain that a great improvement and innovation of L/C is vital to live up with those high expectations and hopes on L/C in Indonesia. This dictates that the existing L/C and practices must be drastically improved to step up to the new stage of Indonesian L/C, requiring new a legal system (L/C Law) and a new practical system as well. In this situation the guidelines and manuals are prepared so as to be made use of for Indonesian government in *improving and advancing the legal and practical system of L/C*.

#### (1) Guidelines for L/C Projects

Guidelines for L/C projects are compiled in a separate volume, and its outlines are presented, including 1). Planning guidelines: city planning system and approach; 2.) Organization Guidelines: public oriented and none-profit organization by government type and landowners' association type; 3.) Land management guideline: replotting with three principles, continuation of land right/utility/value, fair sharing of cost and benefit among landowners, and cost recovery



by development benefit; 4.) Administration guideline: government and landowners' approval system; 5.) Financial guideline: self-financing system by reserve land; and, 6.) Environment guideline: social cooperation for environment improvement.

## (2) Practical Procedures and Manuals

Though L/C projects have different alternative flows in their implementation procedures in response to the conditions of project site and time, basic procedures of association type L/C project including essential activities, are set-up. Along with the procedures, the manuals on how to prepare and implement L/C project is proposed and compiled in separate volume.

### 2.3.8 Action Plan for L/C Promotion

When people mention L/C, in practical and technical terms they are mostly referring to *traditional L/C*, which has already been developed and utilized, and *not innovative L/C*, which the BPN is seeking as an urban and infrastructure development system. Therefore promotional activities are required until the innovative L/C takes root in Indonesia. The action plan was proposed, including the necessary activities as follows:

#### Action Plan for Innovative L/C Promotion

<b>Activities for legal arrangement (legislation)</b>	
Draft of L/C law	L/C law must be drafted for legislation based on the proposed association type L/C. (in preparation)
Promotional activities for legislation	Campaign for acquiring public/political acceptance/support for legislation
<b>Activities for pilot project implementation</b>	
Organizing landowners for community involvement	Presentation/education and negotiation for consensus building.
Transitional system	Traditional L/C system must be elaborated for application in the pilot project. The system shall enable infrastructure construction through dev. benefit capturing, based on the maximum utilization of the existing legal frameworks.
Government task force	Task force for promotional activities of pilot project (Central/local government)
L/C implementation	L/C implementation plan for pilot project must be formulated based on the results of the above-listed activities.
<b>Activities for L/C project development/expansion</b>	
Capacity building of local government	Dissemination, education, and training to local government on innovative L/C (Seminar, work shop, school)
	Establishment of division of urban development in local administration.
	Assignment of staff and engineers to the division
Capacity building of central organization	Establishment of financial budgetary system
	Strengthening/expansion of division of L/C in BPN (Administration, guidance, promotion, project monitoring)
Capacity building of L/C consultants	Establishment of division of urban dev. project in department of Public works
	Establishment of National L/C association
Strengthening research/dev. function on L/C and urban development	Strengthen the consulting firms working in L/C
	<b>Activities for research and development</b>
Strengthening research/dev. function on L/C and urban development	The research and development center for land management (BPN)
	The institute for housing and urban settlement (P.W)

Among the activities, priorities should be placed on "*activities for legal arrangement for innovative L/C and pilot project implementation*". L/C Law must be drafted for legalization of the association type L/C. The BPN has already started drafting the law. However some

*transitional L/C system* must be elaborated to bridge the existing system and the proposed innovative system. The BPN has been proposing some devices such as landowners' Panitia (committee) for association and letter of attorney for preservation of land right as the second best alternatives.

The pilot project implementation is also important in terms of *system testing*, through which the lessons are obtained to be used for technical and legal improvement of the L/C system, and *show case*, through which the advantages of L/C projects can become visible. The public awareness of and support for the innovative L/C may thus be gained.

Activities for L/C project developments, including capacity building of local/central government and consultants, and for research and development on L/C and urban development must be enhanced and continued in the long-term.

### 2.3.9 Conclusion and Recommendation on the L/C System Improvement

#### (1) System Improvement for Innovative L/C

It is quite significant to establish a *development mechanism of L/C: Cost recovery by development benefit*. For this purpose it was recommended to establish an *L/C association* as an implementing agency, which can construct infrastructure, and *replotting system based on the land value evaluation* as cost recovery system by beneficiaries. An L/C system improvement plan with Guidelines for L/C projects & Manuals for Practical procedures was presented for implementing L/C based on the development mechanism of L/C, with the recommendations in such sub-sectors as government approval and the agreement of landowners, land management, financial system, organizational system and legal arrangement.

#### (2) Legal Arrangement for System Improvement in Association with Government Reformation

Legal arrangement is imperative for realizing the proposed L/C improvement plan. The legal arrangement should be pursued, with the emphasis on the importance of L/C in the government reformation, highlighting "*land management*" in respect of property rights in L/C and "*Urban Area Administration and Management*" based on Law No. 22/1999 on Regional Administration under the decentralization policy of the government, which necessitates the application of L/C in terms of empowering the community and urban in place of the past sectorized approach by the central government.

#### (3) L/C System in Systematization of City Planning and Development in Indonesia

L/C is instrumental and responsive to the goals and purposes, which the decentralization policies targeted at L/C, can be utilized to increase the implementation capability of city planning of local government. For this end it should be inter-linked with a Spatial planning system, more strategically with the *urban area administration and management system* institutionalized by the Ministry of Home Affairs, and *KASIBA* development sponsored by the State Ministry of Housing and Urban Settlement, which eventually leads to the systematization of city planning and development of the local government. The integration of L/C into systematization of City Planning and Development represented by the *urban area administration and management* in Indonesia was recommended.

#### **(4) Promotional Action Plan**

A promotional action plan was recommended with the emphasis on activities for the legal arrangement for innovative L/C, and pilot project implementations. Regarding the legal arrangement, some traditional system may be necessary to bridge between the traditional and innovative L/C. The pilot project implementation is also important in terms of system testing and showcase of the innovative L/C. To develop and expand L/C across the country, dissemination/education on the innovative L/C must be continuously carried out.

### 3. Urban Development Project Planning Study

#### 3.1 Sites proposed for Case Studies of KASIBA and Land Consolidation

The candidate sites for both case studies, each of an area within 1,000 ha for the Master Plan of KASIBA and Concept Development Plan of L/C, were selected from the whole Parung Panjang and Jatiasih Districts, respectively.

##### [ Parung Panjang ]

###### - Location and Basic Feature

The Parung Panjang District (Kecamatan) is located 35 km southwest of the Jakarta city center and in the northern edge of the Bogor Regency (Kabupaten) proximate to the border of the Tangerang Regency. This district functions as Bogor Regency's area of regional administration level-II. The District with the acreage of 6,289 ha consists of 11 Sub-districts (Desa) and its population was 67,858 in December 1997. The population growth was about 3.4% per annum in the recent years, between 1990 and 1997 and the population density reached 10.8 persons per hectare.

###### - Development Perspective as Suburban Town

Parung Panjang is classified as a "forth center" within the Bogor Regency according to the urban functions and hierarchy indicated in BAPPEDA's city planning section.

##### Regional System

Primary Center	: Jakarta
Secondary Center	: Bogor
Tertiary Center	: Rumpin, Leuwiliang, Jonggol
Fourth Center	: Parung Panjang, Jasinga, Ciawi, Cariu
Fifth Center	: Seat of each district (Kecamatan)

The position of Parung Panjang is higher in terms of hierarchy than the district seat. Thus, it should be further developed as a regional multi-function town. Due to the necessity for urban vitalization, the KASIBA system will ambitiously be fully used as a tool for developing/controlling measures of urbanization, preventing sprawling of large-scale real estate development under an ad-hoc based permission.

The candidate site for the case study is also located in a potentially strategic location along the Jakarta-Serpong-Rangkasbitung railway and at the junction of proposed major regional arterial roads, including the Metropolitan Ring Road, which will serve as an outer-orbital route for the BOTABEK area.

Parung Panjang area is a challenging location for studying the housing and settlement development through the KASIBA system judging from the above-mentioned features.

##### [ Jatiasih ]

###### - Location and Basic Feature

Meanwhile, the Jatiasih District is located just at the outskirts of DKI Jakarta, about 20 km east from its center with an area of 2,450 ha. It is exactly within the fringe of the Jakarta Metropolitan Area (JMA), where a Jakarta's urban conurbation extends and a recent massive population migration, both from the outbound and inbound of Jakarta, can be observed. The

total population counted for 91,500 in December 1997 and its population density was 42.7 persons per hectare; this figure is not so high comparing with the neighboring districts such as 61 to 110 persons/ha in Pondokgede, Bekasi Timur and Bekasi Selatan. The topographical land profile of Jatiasih is of a plain with an altitude of 20 to 50 meters, and with moderate land slopes. In general, the existing land use shows a typical pattern of the Jakarta suburban area; that is, mixed land use with suburban agriculture fields and newly developed/under-development subdivision estates.

#### **- Development Plan/Project**

According to the spatial plan of the Bekasi Municipality (Kotamadya) and the structure plan of Pondokgede/Jatiasih, Jatiasih's future urban development nature is expected to be as follows:

- Jatiasih is defined as a residential/dormitory area of a low/medium density with some open space for the Jakarta Metropolitan people.
- A regional core/center function is expected around Jatiluhur in Jatiasih, though the detailed content is still unclear.
- Jatiasih is in a very strategic location served by the toll expressway network, one being the Outer Ring Road with an interchange and another being the proposed Jatiasih-Karawang Timur Road.

Jatiasih's accessibility by the regional toll road network will be tremendously improved when these projects are completed. The distribution of location permits for housing development in Jatiasih covered almost a third to half of the total area in 1997, and several projects are still going on.

Accordingly, Jatiasih is one of the most suitable sites for studying housing land provision through improvements of the ordinary L/C system in the JMA.

### **3.2 Case Study of KASIBA in Parung Panjang**

#### **(1) Site Selection for Master Plan Study**

The major criteria to consider for the site selection are summarized below.

##### **[ Area Suitable for the Development Concept ]**

The development concept of Parung Panjang is to build the "Rail Oriented New Town" in order to fully utilize the potential of the existing rail network.

##### **[ Development of Regional Service Center ]**

The regional service center will be expanded to accommodate future development. This expansion will cover a wider function and area in the region.

##### **[ Catchment Area from Traffic Node ]**

The selected area has potential for integrated urban and settlement developments located around the proposed new railway station.

##### **[ Exclusion of Conservation Area ]**

Based on the Bogor Regency Spatial Plan, the Parung Panjang district has 3 categories of conservation areas (Agriculture Use, Rural Settlement and Other Use Areas) that must be excluded.

## **(2) Master Plan (1,000 ha)**

### **[ Development Scenario in Response to Demand ]**

The housing demand has recently dropped due to the current economic crisis and political turmoil. Thus, it is increasingly difficult to predict the level of future housing demand and when sufficient demand for the Master Plan area (1,000 ha) will be generated. Accordingly, the Master Plan only describes an area of 300 ha, which is designated to meet the forecasted demand and follow the policy of a “more concentrated and slimming down of the urbanization” approach. The remaining 700 ha are designated as a future urbanization area for the long term, in accordance with the economic circumstances and social needs.

### **[ Conformity with Local Characteristics and Social Needs ]**

The Indonesian government has adopted the ratio of 1:3:6 (in terms of numbers of units supplied for upper, middle and lower category housing respectively) for the supply of housing in large scale developments (about 200 ha or more), and every new development is required to adhere to this principle. However, difficulties have arisen with respect to the upper category housing development in Parung Panjang, particularly in the early stages of the development, due to the potentiality of the land. Given the target groups, middle and lower category housing can be supplied based on the demand analysis.

### **[ Conformity with Transportation System ]**

The key issues involved in the realization of the KASIBA development in Parung Panjang are as follows:

- a. The improvement of the rail network up to Parung Panjang
- b. The opening of a new railway station in the center of the Master Plan area
- c. The construction of a new arterial road (to strengthen the north--south axis) connected with the Jakarta--Merak highway
- d. The construction of a Metropolitan Ring Road to unify the Jabotabek region

### **[ Conformity with Designated Urban Functions ]**

The JABOTABEK Development Plan, prepared by the Department of Public Works, sets forth a designated hierarchy of cities and the function of each city concerned are based upon the regional forecast structure. Parung Panjang is designated as a 4<sup>th</sup> level city in this hierarchy.

### **[ Development Frame and Housing Demand ]**

In accordance with the results of the development demand study, housing demand in the Bogor Regency will require 47,000 units over 5 years (uncertainty after 2001). The planned area of the proposed KASIBA in Parung Panjang amounts to approximately 300 ha, with this being allocated for housing, roads and public facilities.

## **(3) Site Selection for the KASIBA Development Plan**

The candidate site for the feasibility study area (total area within 300 ha) should be selected from the designated Master Plan area. The major points to consider for the site selection are described below, if most of them are positively answered, then the area will be suitable for the KASIBA development plan's Feasibility Study.

### **[ Area Suitable for Establishing the Railway Commuting Town ]**

The catchment area for the proposed railway station should be initially defined in order to

ensure that it will attract sufficient amounts of passengers. It can be fully utilizing the existing potential of the rail network particularly for low-income groups.

#### **[ Area which Must be Included Perumnas's land ]**

Following to the development policy and strategy, most of the area must be included in the land occupied by Perumnas. Therefore, Perumnas is the nominated main organization of the KMB and also most potential candidate for the LISIBA contractor.

#### **[ Exclusion of an Obstacle Area for Land Purchasing ]**

Based on the conducted site survey, the southern part of the area, where two factories and many villages are scattered, should be excluded due to land acquisition difficulties.

#### **(4) KASIBA Development Plan (300 ha)**

##### **[ Present Condition of the Area ]**

###### Population

The estimated number of the population in the area is 2,590, and the number of household is 650.

###### Land Holding

In the development area, most of the landholdings are based on "freehold title without certification (Hak Girik)", and part of the area is occupied by real estate developers with "the right to build on land (Hak Guna Bangunan)" on an area of 29.4 ha.

###### Land Value

The most expensive is residential area (the highest being at Rp.35,000/m<sup>2</sup>), and land for rice fields are lower (the lowest being at Rp.6,000/sqm). The majority of the land prices range between Rp.8,000 to Rp.12,000 per square meter.

###### Development Trend

There are 5 location permits that have, as of now, been issued to developers including Perumnas. Perumnas has acquired a total land area of approximately 106 ha for low cost housing, which covers 50 percent of the planned project area. However, the shape and location of the acquired land seems to be respectively irregular and scattered.

##### **[ Housing/Land Allocation and Development Scheme ]**

On the assumption that 33 percent are for middle-class houses and the remaining 67 percent for low-class houses, the number of units is 3,500 households (14,700 persons) and 7,300 households (30,600 persons), respectively. In terms of land use ratio, 60 percent (93 ha) are for middle-class houses, much larger than 40 percent (64 ha) for low-class houses. Two types are available for middle-class houses, and simple housing (RS) and very simple housing (RSS) for low-class houses.

##### **[ KASIBA Implementation Plan ]**

###### **- Conditions for the Formulation of the Implementation Plan**

So far we have been studying various types of project systems that should play a leading role in organizing the KASIBA Management Body (KMB). Proposed here is a system and a development entity considered being the most applicable and easiest to materialize among the various alternative scenarios.

- **Implementation System as a Premise**

As far as the project area is concerned, a project system with a comprehensive land purchase has been adopted. Regarding the land purchasing, Perumnas has the priority due to its current land possessions and development rights. In other words, the KMB will acquire land in the project area, including that owned by the area's largest landowner Perumnas, implement infrastructure development and sell land with added value to contractors in LISIBA in order to ensure profitability of the project.

- **Organizations Involved in the Establishment of the KMB**

Given the above project system, Perumnas will play a leading role in setting up the KMB together with some sub-organizations such as the MENPERKIM, the Ministry of Public Works and the local government, which will assist the development of the KASIBA project.

- **Institutional Arrangement**

The decentralization process will render the local government financially and administratively more independent. However, it is essential to insure that the following particular points be well coordinated in future reform efforts:

- Strengthening the financial budgets for basic local government public works
- Establishing clear guidelines for setting investment priorities and the ranking of alternative projects
- Bringing up capable government officers in each position and fields
- Strengthening the local government planning section in terms of administrative capacity and rights

- **Project Formulation**

**Strengthening of the Perumnas' Activities**

As a first step toward meeting the changing demand, Perumnas will be able to not only construct and sell low-class houses, but also middle-class houses. In the near future, it is a necessity for Perumnas to also perform a leadership role in the KMB that serves to promote urban development and carry out land readjustment in cooperation with the National Land Agency.

**Private Sector Participation**

The use of the private sector to carry out housing projects is crucial for ensuring an efficient implementation of those projects and programs. The profit motive makes private firms more sensitive to consumer demand, improving prospects for a sustained flow of benefits. After improving Indonesia's economy, their financial resources, management skills and technical know-how should be fully utilized in order to attain the project and program goals.

- **Implementation Schedule**

**Act in Concert with the Market Maturity**

The Short-term period is 5 years, 2001 to 2005, the Medium-term is 5 years, 2006 to 2010, and the Long-term is 10 years, 2011 to 2020. Considering the economic growth in JABOTABEK, the following implementation actions are desired for each term:

**Short-term** : Preparatory and engineering work for the execution

**Mid-term** : Development of the priority area (300 ha/10,000 houses)

**Long-term** : Development of the Master Plan area (700 ha/23,000 houses)



### - Feasibility Analysis

A financial analysis was conducted on each of the following four types of Parung Panjang housing developments, out of which land consolidation is used in two cases. (Land and housing development by a single entity, which is currently undertaken as the conventional housing development by Perumnas, is presented as Case 0 for reference.)

Case 0	Land/housing development	Infrastructure construction, land acquisition and housing development by a single entity
Case 1	Selling LISIBA	Infrastructure construction and land acquisition by KMB and selling LISIBA
Case 2	Development Charge	Infrastructure construction by KMB and development charge on LISIBA
Case 3	L/R for KASIBA /LISIBA	L/R covering the entire area
Case 4	L/R for KASIBA	L/R for main infrastructure

**Table 3.2.1 Financial Analysis Comparison Table**

	Case 0	Case 1	Case 2	Case 3	Case 4
KASIBA	Land/Housing Dev.	Selling LISIBA	Dev. charge	L/C Kasiba, Lisiba	L/C Kasiba
A. Total area (-,000 m <sup>2</sup> )	2,430.1	2,430.1	2,430.1	2,430.1	2,430.1
of which Infra./Public	729.3	311.8	311.8	729.3	311.8
B. Development Cost	556,461	61,182	32,700	91,131-112,457	33,512-42,140
1. Land dev. cost	110,936	61,182	32,700	79,000	29,246
Land acquisition	31,936	31,936	3,454	0	0
Infra/Others	79,000	29,246	29,246	79,000	29,246
2. Housing dev. cost	452,236	0	0	0	0
3. Interest Payment (Interest Rate)	—	—	—	12,131-33,457 10-30%	4,266-12,894 10-30%
C. Revenue	642,583	65,730	35,318	91,131-112,457	33,512-42,141
1. Sales of houses	599,534	0	0	0	0
2. Commercial area	43,050	0	0	0	0
3. Sales of LISIBA	0	65,730	0	0	0
4. Charge to LISIBA	0	0	35,318	0	0
5. Sale of reserve land	0	0	0	91,131-112,457	33,512-42,141
D. IRR	17%	6%	7%	—	—
E. LCR R(max)*	—	—	—	63-73% (59-76%)	34-46% (46-71%)
F. IRR for LISIBA housing development	—	Low Class 8%	Mid. Class 13%	Low Class 4%	Mid. Class 12%

\* Ratio of planned reserve land over maximally allowable reserve land

### - Expected Cash Flow

The KASIBA development in Parung Panjang, the total project cost excluding interest costs is Rp.61 billion. Although revenues are only expected to be generated from the second year, the yearly net cash flow will be positive for the first time in the fourth year. As a result, capital needs will peak in the fourth year: approximately Rp.35 billion will be needed as capital costs.

Perumnas's participation in the KMB's capital by providing its already acquired land (106 ha)

would lead to a smooth implementation of KASIBA in Parung Panjang. The value of the land currently owned by Perumnas in Parung Panjang is estimated at Rp.12 billion, which is equivalent to a third of the KMB's required capital. It is expected that the local government also participate in the KMB, providing the rest of the capital, possibly by using a foreign loan.

## **(5) Conclusion and Recommendation**

### **Development plan**

It was just at the beginning of social unrest and economic crisis in 1998 when the master plan covering 1,000 ha was formulated. To respond to this situation, some measures were taken in planning works e.g. the development area was reduced to 300 ha, leaving the other 700 ha for a future expansion area, and within the 300 ha area only middle-low class housing under the 1:3:6 housing policy of the government was allocated, excluding high-class housing for future development in response to the declining housing demand especially in the upper-class.

### **Financial analysis**

As a result of these measures, the financial analysis showed *the IRR would be at 17% for the total housing project, and when it is divided into KASIBA (land and infrastructure) and LISIB (housing), the former around 6% and the latter 8% (Low class)-13% (Middle class)*. It is apparent that if the former (KASIBA) is set at lower level, the latter (LISIBA) increases, and if the upper-class housing is included when the economy is normalized, the IRR tends to further go up. The financial analysis showed: 1.) KASIBA is feasible when the real interest rate is 10% (the government has been taking measures for lowering interest rates for the Indonesian economic recovery); 2.) With low-cost fund provided by the government (KMB), the infrastructure cost can be recovered through KASIBA; 3.) Cross-subsidy from middle-class (13%) to low-class (8%) becomes possible; 4.) The selling price of LISIBA should be determined, taking into consideration the reasonable profit to LISIBA developers in addition to the KASIBA cost recovery.

### **Pilot project**

It may be concluded that KASIBA can be applicable in the outskirts of Jakarta. However taking into consideration the unpredictable economic situation and the housing demand, it is recommended to start preparation of the pilot project in one small-scale community where Perum Perumnas has already acquired land, in the planned KASIBA development area (300 ha). Expansion shall be examined in response to the socio-economic condition and housing demand in the future, because phased-development is one of the basic advantages of KASIBA. In the pilot project, the KASIBA Law and government regulation will be applied for the first time in Indonesia.

### **Metropolitan urban area and agency**

*A metropolitan urban area and agency covering several regencies and municipalities is due to be established based on the Law No. 22/1999 and the government regulation. It is recommended that the pilot project be handled by this agency, and not by the Bogor regency only, where the project is located, because housing demand to be met in the pilot project comes from DKI Jakarta and other surrounding areas. Therefore, the sharing of funds for the pilot project must be also coordinated through this agency. The real housing demand and the funding capacity of the KMB shall be scrutinized in the framework of the Metropolitan urban area. The housing demand relies on the government financial measures, especially housing loans to the public, which will be established by the new government.*

### **KASIBA in reviewing Jabotabek Master plan (1997)**

The KASIBA case study showed that it is effective in leading urban and housing development along the railway so as to create rail-oriented town aiming at the environment and transport improvement in the Jakarta area. It is desirable that the government enhance this urban policy through the application of KASIBA. Especially KASIBA and the urban policy should be examined in reviewing the Jabotabek Master plan (1997) in the changing economic trends, which will be done by the new government. This is related to the proposal on the study for urban development through KASIBA in the Jakarta Metropolitan area.

## **3.3 Case Study of Land Consolidation in Jatiasih**

### **3.3.1 Outline of the Study Flow**

#### **[ Four Steps of Study Stages in accordance with Area/Planning Level ]**

As Jatiasih was selected as the case study area for land consolidation in the scope of work of the Study, its regional structure context, in the Jakarta Metropolitan Area, was analyzed from the viewpoint of urban development potential in the first stage.

Second, based on the understandings that the L/C project system could be one of the most effective tools for implementing and strengthening the city planning system in Indonesia, a long-term urban development concept plan was drawn up for the selected area (1,000 ha). This concept plan can provide general development directions for the L/C project as well as a total urban development perspective of the area.

In the next stage, the L/C master plan was studied for the selected area of 300 ha to analyze the L/C project feasibility. In addition, an area of approximately 30 ha was determined as the most provable area for the L/C project implementation within the master plan area, and the design and implementation plan were formulated for this area.

Moreover, the general valuation and recommendation, technical guidelines and manuals for practical procedures for the L/C project implementation will be scrutinized in a future stage and proposed as a conclusion at the study's final stage.

### **3.3.2 Concept Development Plan**

#### **(1) Site Selection for the Concept Development Plan**

An area of approximately 1,000 ha, composed of Jatimekar, Jatiasih and Jatiluhur Sub-districts, was selected for the concept development plan based on the following viewpoints:

#### **[ Typical suburban residential town development through the L/C system in the Jakarta Metropolitan Area ]**

A part of a low-density and inefficient land-use in Jatiasih appears suitable for conducting a study on typical examples of L/C project introductions, where a recent huge residential development potential exists in the JMA's suburban area.

#### **[ A certain area for community development ]**

As an area of about 1,000 ha was selected as the concept development plan area, this prototype was selected based on the position of the regional community planning; a range of daily

people's activities, local community/government jurisdiction, etc.

**[ Possible urban developments with an advantage by toll road improvement ]**

The Jatiasih-Karawang Timur toll road, as well as the southeastern section of the Outer Ring Road, is planned to be constructed in Jatiasih. A possibility of the area development through the L/C system, where a series of advantages reside in improving the accessibility, could also be examined.

**[ Establishment of new regional center ]**

According to the tentative spatial plan of the Bekasi Municipality, two regional centers for primary economic services are planned, one is proposed at the urbanized area between Bekasi Selatan and Bekasi Timur, and another one would be in Jatiasih. The latter should be included in the case study area. As Jatiasih has defined its importance in the regional/urban development context, for instance, how to realize a new regional center applying the L/C system will be examined.

**[ Other existing conditions ]**

- Suitable topographical/environmental conditions for urban development,
- Not urbanized demographic conditions,
- Existing land use in low-efficiency,
- Necessity of infrastructure development,
- Community structure, etc.

**(2) Planning Scenario**

**[ Development scale for the long-term ]**

In Jatiasih, it seems certain that the concept development plan area is to fully become a part of the Jakarta conurbation built-up area sooner or later because of its proximity to Jakarta and the past/present urbanization trend. In this regard, a future development plan illustrating a whole-urbanized land use plan, as a long-term development goal, should be established.

**[ Development theme and framework ]**

A title, '*Amenity and Prosperity in Urban Life through L/C System for the 21st Century*'—as a Model Suburban Town in the Jakarta Metropolitan Area—was set up as a development theme for the planned new community, where a substantial Land Consolidation pilot project will be implemented as a major tool of urban development.

The future population of the whole area is estimated to reach 65,000 to 85,000 persons in 2010, taking into consideration the very moderate increase of the slow-down development progress accomplished during the recent economic recession, and compared with the previous framework in the JABOTABEK development strategy plan.

**[ Regional road network ]**

Since transport means in this area, both public and private transportation, completely depend on roads, the systematic road network development is an essential factor of the transportation plan as well as urban development.

The regional arterial road network is planned as follows:

- Completion of a grid pattern network of regional (primary) arterial roads through the improvement of existing roads and construction of missing links, especially creating

- an east-west connection.
- Widening of Jalan Raya Jatiasih/Jatiluhur to cope with the traffic demand to/from the toll expressway as the backbone of the area.
- Development of internal (secondary) arterial roads in the area with an adequate network density for smooth access from each sub-community to arterial roads.
- Provision of enough collector roads to permit access to each housing lot.
- Pedestrian network together with greenery and open space network.

#### [ Alternative development patterns ]

Two comparative scenarios for the future development of the area are examined to illustrate a target of the concept planning.

#### Alternative A: Ordinary Land Consolidation without Comprehensive Plan

This plan is based on an orthodox (or ordinary) context following a natural development trend.

- Gradual residential area development unified into the Jakarta conurbation area.
- Rather small-scale housing development.
- No strategic commercial developments in large-scale.
- Less identity of the community.

This is a development image of the area with some small-scale implementation of L/C projects without a comprehensive urban planning. It is likely to be the case in the future, if no comprehensive city planning and enforcement projects are managed.

#### Alternative B: Integrated Land Readjustment and Community Redevelopment

Another plan is also set up as a strategic development model case through an integrated city planning. Major issues of this alternative are:

- Formulation of quasi-independent communities, even in the Jakarta conurbation area.
- Development of multi-function regional sub-center.
- Efficient land use pattern.
- Establishment of a model suburban community.

Plan B is suitable as a target of an integrated urban development together with L/C projects and the redevelopment of existing communities. This can reveal an image of proper land use orderly arranged together with a systematic road network to cope with the communities' activities.

This overall future development plan can be a fundamental concept for further master plans and L/C designs. (Refer to attached figures).

### 3.3.3 L/C Master Plan

#### (1) Site Selection for the L/C Master Plan

A part of about 300 ha within the Concept Development Plan area was selected for the L/C Master Plan, considering development priorities, the applicability of the L/C project and desirable impacts for further implementations. It is the southwestern part of the concept plan area, where a medium/low density residential area is dominant.

## (2) L/C Master Plan

### [ Existing conditions of the area ]

- Detailed topographical condition: The study area is a plain with a slight slope of an altitude of 28 to 47 meters.
- Land use and Population: The existing land use is dominated by a mixture of dry crop land (60%) and settlements/villages (34%), both along major roads and scattered in the crop land (34%). There are only very small portions of public land (3%) such as roads, religious and educational facilities. Since the Jatiasih area is a typical suburban agricultural community except for two housing estates currently under construction, the total population is 6,200 and the population density was only of 20 persons per hectare in 1998.
- Building condition: There are 1,700 buildings in the area and most of them are for local farmers' residences, small in scale (less than 100m<sup>2</sup>), with one story and made of brick/concrete in poor condition.
- Infrastructure: There are insufficient infrastructures for an urban living environment, such as road networks, waterways, drainage/sewage and supply/treatment facilities.
- Public facilities: There are several educational/cultural, commercial, religious facilities for traditional communities in small scale and in fare condition.
- Land price: Prices along the main road is Rp.100,000 to 225,000/m<sup>2</sup>, meanwhile the inner land is around Rp.50,000 to 80,000/m<sup>2</sup> according to the hearing survey result.
- Property ownership: Most of the area (72%) is composed of uncertified land ownership (Girik). Certified land ownership (Hak Milik) only comprises 8% of the total. Rather bigger landowners are located in the southern part of the area.

### [ Master planning ]

Planning directions and the framework for the master plan were again examined in compliance with the authorized concept development plan. Planning and design standards for basic infrastructures are determined, taking into consideration the development level target. They are roads (by category), bus terminals, water supply systems, wastewater treatment systems, drainage/flood protection systems and public/social facilities.

It has been forecasted that the population will increase by 25,000 persons, with an average population density equal to 100 persons per hectare instead of 20 in 1998. Future land use of the master plan area, after the L/C project, will consist of 92.6 ha (30.2%) of public land such as roads, waterways, parks and public service facilities and 213.8 ha (69.8%) of private land such as residential, business/commercial properties, excluding developed lands.

A layout plan of future land use and infrastructure development was proposed as a result of the master plan. (Refer to attached figures).

### [ Feasibility of the master plan ]

Feasibility analysis on the L/C project as a whole, applying an ordinary association/cooperative organization, was examined based on some assumptions.

- Total cost excluding interests: Rp.80,911million,
- Project period: 7 years,
- Timing of sale of reserve land: from year 3 to 7,
- Price of land: Rp.100,000/m<sup>2</sup> before the project and Rp.266,000/m<sup>2</sup> after the project,
- Real interest rate of loan: 10% and 30%,
- Base case = Complete self-finance L/C project, Alternative case = With subsidy.

Financial cash flow analysis on the base case resulted in necessary interest payment of a total Rp.8,293 million, and the debt kept at Rp.17.4 billion for five years from the second year. Meanwhile the necessary land contribution for reserve land (cost recovery) is 33.5 ha in addition to the public land contribution of 74.5 ha. Accordingly, the aggregated land contribution rate accounts for 37.5% in the base case and 32.1% in the 'with-subsidy' case, though the ratio of planned reserve land over the maximally allowable reserve land is less than 20%. This land contribution rate is a very critical point to whether the L/C project is acceptable or not to the landowners and land-right holders.

Further necessary studies will be carried out in the L/C implementation plan stage:

- Reduction of rather higher land contribution for public facilities,
- Acceptable extent of reserve land,
- Availability of some subsidy from the central/local government,
- Implementation program,
- Availability of financial source at low interest rates, and
- Procedure to get consensus from participants.

### (3) Selection of L/C Implementation Area

A candidate area for the L/C implementation plan can be selected among the southern part of the master plan area, judging from various aspects of project implementations, as follows:

- Rather simple residential area development,
- Existing inefficient land use and rather lower land price,
- Certain size of individual land lots,
- Intention of land development by absentee landowners mostly living in Jakarta, etc.

#### 3.3.4 L/C Design and Implementation Plan

##### (1) L/C Design

The area for the L/C project implementation is defined based on the newly developed topographical map (scale of 1:1,000) and the results of the site survey III, considering forming a unit of living community. Its total area counts for approximate 26.5 ha.

Since there are no authorized design standards specific to L/C projects, tentative infrastructure design standards for residential developments analyzed from both aspects of existing features and future development patterns, are applied in order to create a better urban living environment through the L/C project.

The L/C design of the implementation area is as shown in the attached land use and block plan.

##### (2) Implementation Plan

Major figures of the L/C implementation plan are tabulated in the following tables.

The selected L/C implementation project reveals a comparatively sound feasibility, due to the relatively small acreage of the area, moderate public land use, scale of construction cost and

implementation period. The contribution rate of 27.7% could be accepted in comparison to a reasonable land value increase and ratio of  $R/R_{max}$ .

**Table 3.3.1 Land Use and Major Public Facilities**

Land Use		Before Project		After Project	
		Area(m <sup>2</sup> )	Ratio(%)	Area(m <sup>2</sup> )	Ratio(%)
Public Land Use	Road	5,869	2.2		
	W=22m			6,693	2.5
	W=12m			5,151	1.9
	W=10m			7,449	2.8
	W=8m			3,360	1.3
	W=6m			20,687	7.8
	Foot Path			348	0.1
	W=4m			173	0.1
	W=2m				
	Green Way			2,611	1.0
	Sub-total	5,869	2.2	46,473	17.6
	Public Facilities				
	Mosque	2,225	0.8	2,225	0.8
Park			3,197	1.2	
Water Way			1,679	0.6	
Public Service			413	0.2	
Sub-total	2,225	0.8	7,514	2.8	
Sub-total(1)	8,094	3.1	53,987	20.4	
Private Land Use					
Residential			190,229	71.8	
Commercial			11,234	4.2	
School, Kindergarden, etc.			9,354	3.5	
Sub-total(2)	256,710	96.9	210,817	79.6	
<b>TOTAL</b>	<b>264,804</b>	<b>100.0</b>	<b>264,804</b>	<b>100.0</b>	

**Table 3.3.2 Summary of Project Cost, Base Case**

Item	Amount Rp. Mil.	Composition %
1. Construction Cost	3,525.6	60.28
2. Compensation Cost	1,537.3	26.29
3. Survey Cost	158.9	2.72
4. Overhead (Operation) Cost	626.6	10.71
Subtotal	5,848.4	100.00
5. Repayment of Interest	605.8	
<b>Total</b>	<b>6,454.2</b>	

**Table 3.3.3 Annual Cash Flow, Base Case**

Year	(Rp. Mil.)				
	1st	2nd	3rd	4th	Total
<b>Expenditure</b>					
Construction	0.0	2,115.4	1,410.2	0.0	3,525.6
Compensation	153.7	768.7	614.9	0.0	1,537.3
Survey	63.6	47.7	31.8	15.9	158.9
Administration	125.3	188.0	188.0	125.3	626.6
Subtotal	342.6	3,119.7	2,244.9	141.2	5,848.4
Interest	17.1	192.0	285.8	110.9	605.8
Total	359.7	3,311.6	2,530.7	252.1	6,454.2
<b>Revenue</b>					
Disposition of Reserve Land	0.0	0.0	3,872.5	2,581.7	6,454.2
<b>Balance (Annual)</b>	<b>-359.7</b>	<b>-3,311.6</b>	<b>1,341.8</b>	<b>2,329.5</b>	<b>0.0</b>
<b>Cumulative Balance</b>	<b>-359.7</b>	<b>-3,671.4</b>	<b>-2,329.5</b>	<b>0.0</b>	



**Table 3.3.4 Land Contribution and Ratio**

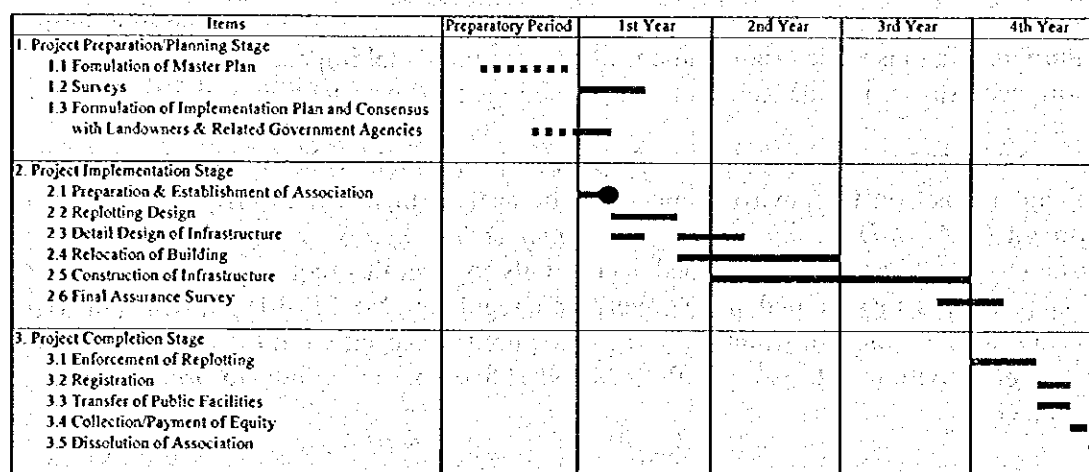
Building Lot Area before L/C (A)	Building Lot after L/R			Contribution			Contribution Rate (D/A)
	Replots (A-D)	Reserve Land	Total (E)	For Public Facilities	For Reserve Land	Total (D)	
m <sup>2</sup> 256,710	m <sup>2</sup> 185,674	m <sup>2</sup> 25,143	m <sup>2</sup> 210,817	m <sup>2</sup> 45,893	m <sup>2</sup> 25,143	m <sup>2</sup> 71,036	% 27.67

**Table 3.3.5 Building Lot Price**

Building Lots before L/C (A)	Unit Price before L/C (a)	Total Amount before L/C (V <sub>1</sub> = A x a)	Building Lot after L/C (E)	Unit Price after L/C (c)	Total Amount after L/C (V <sub>2</sub> = E x c)	Land Value Increase	
						Total Amount (V = V <sub>2</sub> - V <sub>1</sub> )	Increased Rate (c/a)
m <sup>2</sup> 256,710	Rp./m <sup>2</sup> 100,000	Rp. Mill. 25,671.0	m <sup>2</sup> 210,817	Rp./m <sup>2</sup> 256,700	Rp. Mill. 54,108.5	Rp. Mill. 28,437.5	2.57

**Table 3.3.6 Planned Area for Reserve Land**

Total Value of Building Lots before L/C (V <sub>1</sub> = A x a)	Total Value of Building Lots after L/C (V <sub>2</sub> = E x c)	Increase in Total Value of Building Lots (V = V <sub>2</sub> - V <sub>1</sub> )	Land Price per m <sup>2</sup> before L/C (a)	Land Price per m <sup>2</sup> after L/C (c)	Maximum Area for Reserve Land (R <sub>max</sub> = V/c)	Planned Area for Reserve Land (R)	Comparison (R/R <sub>max</sub> )
Rp. Mill. 25,671.0	Rp. Mill. 54,108.5	Rp. Mill. 28,437.5	Rp./m <sup>2</sup> 100,000	Rp./m <sup>2</sup> 256,700	m <sup>2</sup> 110,781	m <sup>2</sup> 25,143	% 22.70

**Figure 3.3.1 Implementation Schedule****3.3.5 Conclusion and Recommendation**

(Conclusions and recommendations related to L/C system improvement are included in section 3-9)

**(1) Effective Self-financing Urban and Infrastructure Development System in the Jakarta Metropolitan Area**

The case study of L/C in Jatiasih showed around 30% of land contribution, while that in Parung Panjang showed as high as 63-73%. As 20-30% is recognized to be the practical level of L/C in past projects in Japan and other countries, it may be generalized that within a certain distance from Jakarta, L/C can be applied and utilized as an effective self-financing urban and infrastructure development system.

Case study	Distance from center of Jakarta	Land contribution ratio
Parung Panjang	35 km	63-73 %
Jatiasih (288 ha)	20 km	37.5 %
(25.7 ha)		27.7 % (25.3%) (Arterial road by government)

## (2) Pilot Project Formation and Implementation

An L/C project covering 25.7 ha was scrutinized, lowering land contribution ratio at 25.3% (public land: 17.9%, reserve land: 9.8%). Based on the results of this Case study, it is recommended that the pilot project be implemented in the study area. The project formation and promotional activities for the pilot project must be started in consultation and coordination with the community and the landowners.

### 3.4 Environmental Study

#### 3.4.1 Environmental Management/Legislation

In the Republic of Indonesia, the basic law concerning the environment is the Government Act No. 23 of 1997 (amendment to the Act No. 4 of 1982), regarding basic provisions for the management of the living environment. The Act adopts 'sustainable development' as a basic policy for environmental management. 'Sustainable development' can be defined as development that provides economic, social and environmental benefits in the long-term and for future generations. The establishment of an environmental impact assessment system has therefore been stressed in the Act as one of the actions for the protection of the environment.

Act No. 23 of 1997 prescribes that every plan/project, which is likely considered to have a significant impact on the environment, must be accompanied by an environmental impact assessment (EIA/AMDAL: *analisa meganai dampak lingkungan*). An environmental impact assessment system has been established accordingly to meet this requirement. The AMDAL's required processes are specified in the government regulation No. 51 of 1993, while, the type of businesses and activities for which AMDAL is required are specified in the Decree of the State Minister of Environment, No. KEP-39/MENLII/8/1996, according to the scale of the plan/project.

At the national level, the Environmental Impact Assessment Board (BAPEDAL), headed by the Minister of State for the Environment (KLH) or Ministry of Public Works (PU), is responsible for environmental management along with the housing development projects. The Central AMDAL Commission, called KOMPUS, which handles the AMDAL process, is organized by BAPEDAL or PU with its chairman appointed by the Minister. While, at the provincial level, this task is taken by the Regional AMDAL Commission, called KOMDA, which is organized by the provincial government with its chairman appointed by the Governor.

#### 3.4.2 Environmental Impact Assessment

The major environmental factors, to be identified by the result of an initial environmental examination (IEE) conducted in the master plan (M/P) study stage and an environmental impact assessment (EIA) carried out in the feasibility study (F/S) stage, where potentially significant and/or possible negative impacts are envisaged due to housing and settlement development activities in the study area of Parung Panjang and Jatiasih, are as follows:

- i. Social unrest due to unwilling/involuntary resettlement (in case of the P. Panjang site)
- ii. Groundwater contamination due to a densely usage of *cubluk* (traditional digging toilet) and an outflow of septic tanks, and surface water pollution due to a free discharge of untreated waste-waters and illegal waste dumping to the ditches and rivers
- iii. Flood/inundation caused by an increased runoff and flood peak occurrence due to a pavement and vegetation removal in large-scale, and soil erosion during the construction stage

#### [ Resettlement ]

A social unrest might occur as a result of the land occupation during the project and the infliction of living and economic losses on the people. Consequently, this may also trigger people's anxiety by fear of not being entitled to receiving proper land, building and prime-agricultural land compensations, which is their source of living/economic activities. The land acquisition (*KASIBA*) in P. Panjang and the land consolidation in Jatiasih are generating quite different responses from the landowners and/or households/inhabitants of the project sites, since the former is to drive them away from the site, while the latter is to keep them on.

The resettle action plan (RAP) shall be properly organized/established/executed in the implementation stage of the project as a mitigation measure to minimize the impact on the people necessary to be resettled, considering the adopted standards/legislation, regional planning policies, peoples' livelihood, proper alternate sites for resettlement, sufficient compensation, etc. Furthermore, post resettlement surveys shall also be conducted periodically in order to understand the situation of resettled people, and if necessary corrective measures shall be taken.

#### [ Groundwater Contamination and Surface Water Pollution ]

Further groundwater contamination, caused by the usage of *cubluk* and/or outflow of septic tanks as for toilets in large numbers, may be occurring. In addition, an exacerbation of the surface water quality due to a free discharge of untreated waste-water, which may contain chemicals and bacteria, and illegal waste dumping to ditches and rivers may also be occurring. People in the P. Panjang and Jatiasih regions are fairly much relying on shallow-well water for drinking (between 10 to 20 m of depth) and commonly use river water for living activities. Therefore, as a basic human need, special attention should be paid on these potential environmental impacts in order to retain the quality of domestic water that is sine qua non to public health and the safety human lives.

As mitigation measures on this issue, technical options, such as, deep wells with a water piping distribution network, sewerage treatment system, periodical dislodging/emptying of septic tanks, proper settlement/location of septic tanks, etc., are proposed.

#### [ Flood/Inundation and Soil Erosion ]

An increased runoff coefficient and hastening of the flood peak occurrence, due to the large-scale pavement and vegetation removal, an improved storm-water collection/removal and a disruption of natural drainage patterns, may have the potency to cause floods at the surroundings of the study area in P. Panjang and Jatiasih and down stream of the region, especially in the rainy season. As a mitigation to prevent this occurrence, flood control measures, such as retention-pond facilities and water-flow retention devises, shall be taken into account for the project plan.

**SUMMARY REPORT**

During the construction period, it will be problematic that large exposed parcels of land will be kept remained without any construction activities for a long time. In the rainy season, a disturbance of the present natural hydrology/drainage system may happen, (i.e. change of river-bed and/or river-flow conditions due to the washing out of the sites' top-soil and turbid water and/or demolished waste flowing into rivers), and may cause the project sites' soil erosion and floods in the down stream area of the region. Therefore, it is necessary to plan for and organize the proper construction plan/process to mitigate this issue such as: to keep the construction area minimum and/or divided into phases, considering the rainfall pattern of the region, compaction or turfed/re-vegetation of exposed land sooner, installation of sediment traps, etc.

#### 4. Overall Conclusions of KASIBA and L/C Studies

This study has produced the proposals for system improvement of KASIBA and L/C respectively. KASIBA is based on Law No. 4/1992 on Housing and Human Settlement, followed by the government regulation, which was finally issued on September 30, 1999. Subsequently the ministerial decree stipulated in the government regulations shall be issued to start the actual implementation of KASIBA projects. In Indonesia land consolidation projects have been executed based on the existing government regulations of the BPN. In response to the proposal for the improvement of the traditional L/C in these study activities, the BPN has started drafting a new law of L/C. In parallel with these legal arrangements for KASIBA and L/C, this studies were carried out with the overall conclusion on the following 3 points, combining the results of the KASIBA study and the L/C study.

##### (1) Applicability of the urban development systems examined through the case studies.

In the case studies of KASIBA and L/C, those two systems were technically and financially examined, resulting in the conclusion with the general applicability of the KASIBA and L/C in the outskirts of Jakarta and the peripheral area of Jakarta built-up area respectively. Based on the study conclusion, it is recommended that KASIBA and L/C as urban control and development measures should be incorporated into the development master plan of the Jabotabek area, or the Jakarta Metropolitan area, which must be reviewed in the recent context of the changing socio-economic situation of Indonesia.

##### (2) Strengthening and improvement of the city planning system

It is widely admitted that the Indonesian city planning or Spatial planning including the development permit system, and practices thereof are in need of improvement to a great extent (its importance is increasing in accordance with the advancement of decentralization policy). KASIBA and L/C shall be institutionalized and managed so as to improve the Indonesian city planning and development system. KASIBA and L/C are the concepts and systems of development benefit capturing for cost recovery, which will bring about innovation and progress in the existing urban and infrastructure development system. Furthermore, they are featured with different urban and land management systems (land acquisition method vs. land replotting method), which should be selectively applied responsively to the different situations of the site and projects. This may thus lead to higher flexibility and implementability of the city planning of Indonesia.

##### (3) Coordination with government reformation activities.

After the political change in 1998, many new laws and government regulations under the government reformation policy have been enacted and reformation schemes are also set forth in the urban and land management sector by the government agencies concerned (transfer of the authority to the local government in urban and housing development, review of the development permit system, establishment of urban area management and administration system, review of the basic agrarian law and so on). It may not be said that they are well coordinated even with KASIBA and L/C. They must be well coordinated with the other reformation schemes and play important roles in the reformation activities, especially decentralization programs. KASIBA and L/C are deeply related to the local society, economy and culture and are regarded as the essential tools for improving the lives and environment of local people, which is the ultimate goals of the social and government administration reformation movement.

Outline of Case Study (1)

### Regional Structure of JABOTABEK

**JABOTABEK is categorized into three;**

1. High density area (Zone up to 20 km from the center of Jakarta)
2. Medium density area (Zone between 10 and 30 km)
3. New urban development areas (Zone between 20 and 50 km)

Jatiasih, the case study for land consolidation, is exactly located in the typical primary fringe area (category 2) adjoining to the administration of DKI Jakarta. It is difficult to find an available land for large-scale housing development in this area because of partially already developed, higher land price, etc.

Parung Panjang, the case study for KASIBA system, is located in the secondary fringe of Jakarta (category 3). The developments in the area, especially for housing estate, tend to require a certain scale of land area for a self-sustaining development as a new town or satellite city.

### Master Plan : Parung Panjang (1,000 ha)

**Development Scenario in Response to Demand;**  
Division of the Master Plan area, 300 ha for F/S and 700 ha for future urbanization area, in consideration of current economic situations.

**Conformity with Locational Characteristics and Social Needs;**  
Given the target groups, middle and lower category housing can be supplied.

**Conformity with Transportation System;**  
Creation of rail-oriented new town.

**Conformity with Designated Urban Functions;**  
The urban function of Parung Panjang is designated as 3<sup>rd</sup> level city.

### KASIBA Development Plan (300 ha)

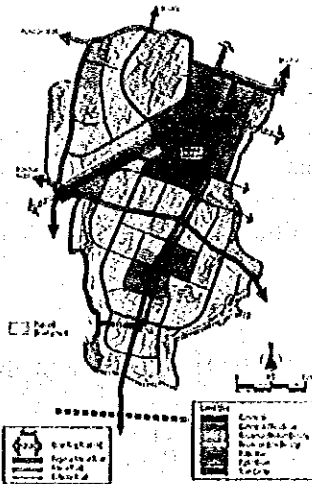
**Land Use Allocation;**  
Excluding the insufficient land, the jurisdiction of land for actual development is 243 ha.

**Housing Allocation;**  
On the assumption, 33 percent are for middle-class (3,500 units), and 67 percent for low-class houses (7,300 units).

**Implementation System;**  
A project system with a comprehensive land purchase has been adopted. Perumnas will play a leading role in setting up the KMB together with MENPERKIM, Public Works Department and local government.

## Outline of Case Study (2)

## Concept Development Plan : Jatiasih (1,000 ha)

**Development Potential;**

- Typical suburban residential town in Jakarta Metropolitan Area
- Possible urban development with advantage by toll roads improvement
- Establishment of new regional center with complex functions
- Utilization of existing land use in low-efficiency
- Suitable topographical conditions

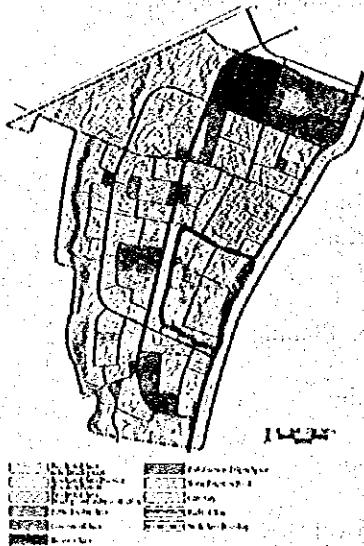
**Development Theme/Framework;**

- Whole-urbanized land use sooner or later in future
- A model town developed through L/C system
- Integrated neighborhood community in harmony with existing villages
- 35,000 in 1997 to 65,000 - 85,000 persons in 2010

**Development Pattern;**

- Development of multi-function regional sub-center next to Interchange
- Regional arterial roads improvement in a grid pattern
- Systematic secondary arterial and collector roads with adequate network
- Moderate population density with enough distribution of open space
- Preservation of greenery along river
- Integrated urbanized pattern through various systems including L/C

## Land Consolidation Master Plan (300 ha)

**Selected Site for Master Plan;**

Southwestern 300ha part of the concept development plan area was selected for the L/C master plan from viewpoints of applicability, priority and impacts of L/C project implementation.

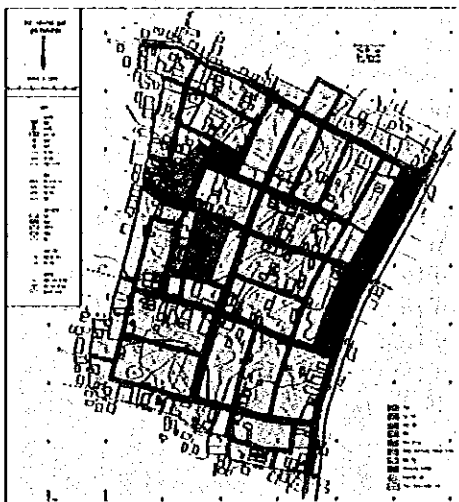
**Land Use Plan;**

- The master plan area is categorized into three:
  - Regional sub-center extension zone in the north edge.
  - Medium-density residential zones (100-150 persons/ha) in the middle.
  - Low-density residential zones (less 100 persons/ha) in the south.
- Each residential sub-community has town center for local use.
- Greenery and open space are systematically located in accordance with service standard.
- Two regional arterial roads run through north to south (w=22m) and east to west (w=16m).
- Internal arterial roads with 10 to 12m-wide divide each sub-community.
- Summary of land use:
  - Public (road, waterway, pond, park, public service): 92.6ha (30.2%)
  - Private (residential, commercial, business area): 213.8ha (69.8%)

**Feasibility of Master Plan;**

- Total project cost excluding interest: Rp.80,911 million.
- Project period: 7 years, and sale of reserve land: year 3 to 7.
- Necessary interest: Rp.8,293 million at 10% of interest rate.
- Aggregated contribution rate: 37.5%.

## Land Consolidation Design (30 ha)

**Selected Site for L/C Design;**

- Most applicable and high priority zone in master plan.

**Basic Direction of L/C Design;**

- To create a better residential environment.
- To secure the existing social/economic activities within the community.
- To provide adequate infrastructure such as roads, drainage system, parks, etc.
- To keep the safety of pedestrians from vehicular traffic.

**Land Use Plan;**

- Public Land: 5.4ha (20.4%)
- Private Land: 21.1ha (79.6%)
- Total: 26.5ha

**Feasibility;**

- Total project cost excluding interest: Rp.5,848.4 million.
- Estimated project period: 4 years, and timing of sale of reserve land: year 3 and 4.
- Necessary interest: Rp.605.8 million at 10% of interest rate.
- Aggregated contribution rate: 27.7%.

## List of Participants

### 1. JICA Advisory Committee

Dr. Takashi Onishi	Chairman/Urban Development	Tokyo University
Mr. Yuichiro Go	Housing Development	Ministry of Construction
Mr. Akihiko Mochizuki	Land Readjustment	Japan Regional Development Corporation
Mr. Yoichiro Kunikata	Land Readjustment	Japan Regional Development Corporation
Mr. Yuji Kanaya	Institutional Development	The Building Center of Japan
Mr. Takatoshi Nishikata	Financial Cooperation	Japan Bank of International Cooperation

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Mr. Nobuwaka Yamakawa	City Planning/ Urban Infrastructure
Mr. Naoyuki Minami	Development Demand Forecast
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Mr. Osamu Ohtsu	Sub-Leader/ Land Consolidation Planning
Mr. Shigecki Takashima	Land Consolidation Design
Mr. Benji Ohmori	Land Appraisal/ Replotting Design
Mr. Yasuhiro Iwasaki	Site Survey
Mr. Manabu Kawaguchi	Topographical Survey and Mapping
Mr. Tsutomu Nishimura	Cost Estimation
Mr. Shinichi Mori	Financial Planning/ Economic Evaluation
Mr. Hisashi Yamauchi	Natural Environment Analysis
Mr. Noboru Osakabe	Financial System for Development

### 4. Steering Committee

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 Ministry of Transportation  
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 Bogor Regency Government  
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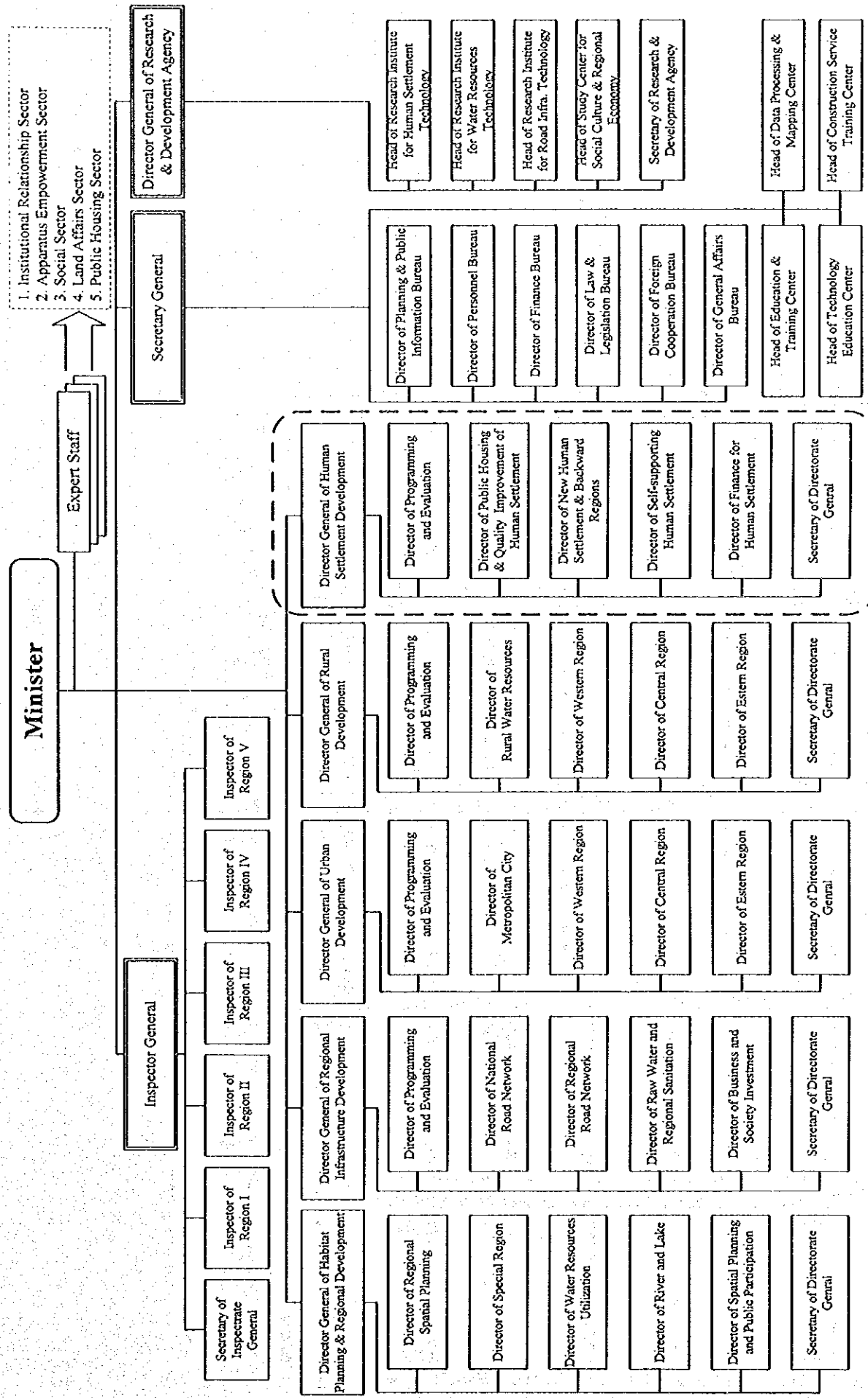
## **6. JICA Experts**

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<b>Mr. Haruhide Kawano</b>	<b>National Urban Development Corporation</b>
<b>Mr. Takumi Abe</b>	<b>Ministry of Home Affairs</b>

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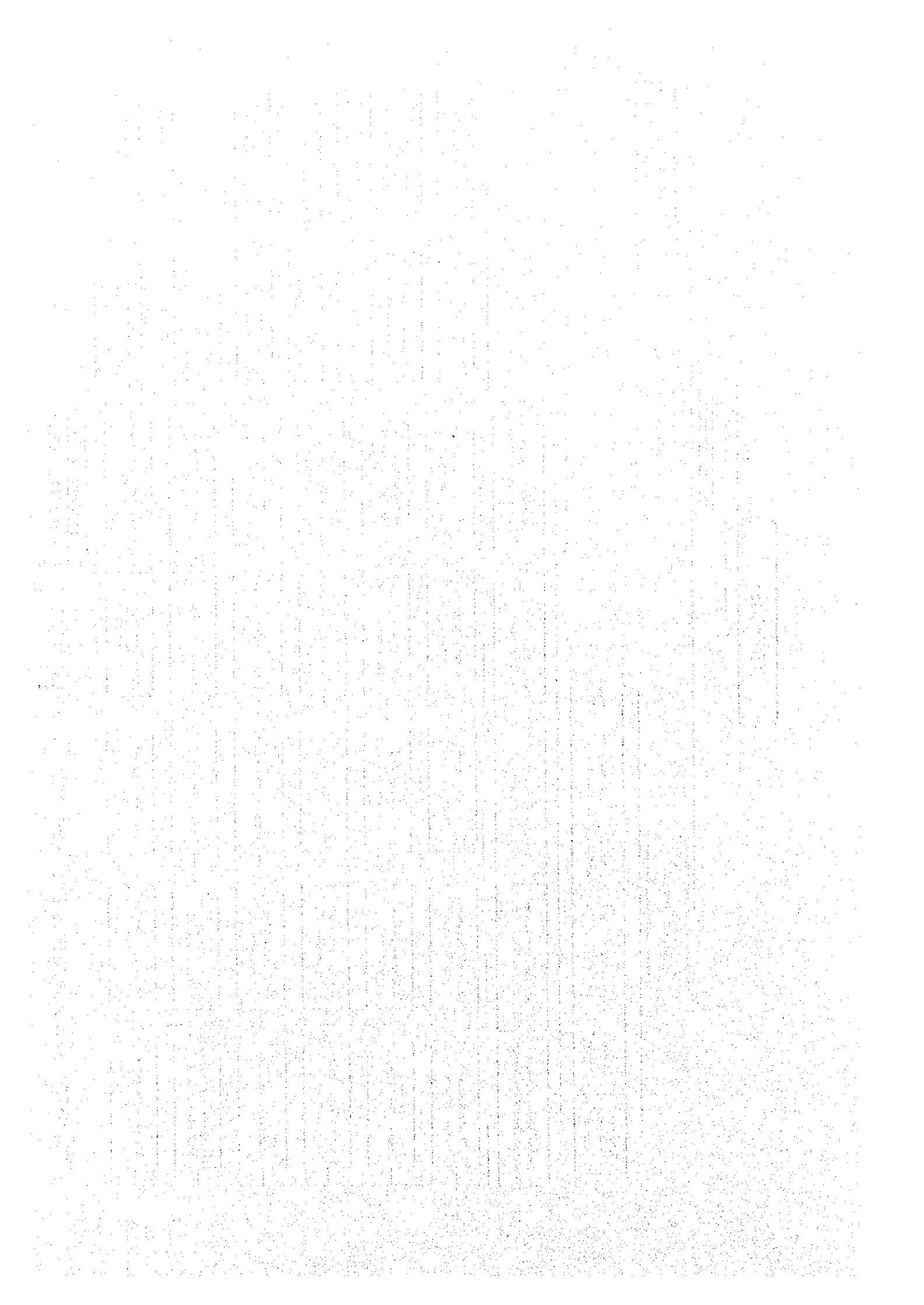
## **[JICA Study Team Local Organization]**

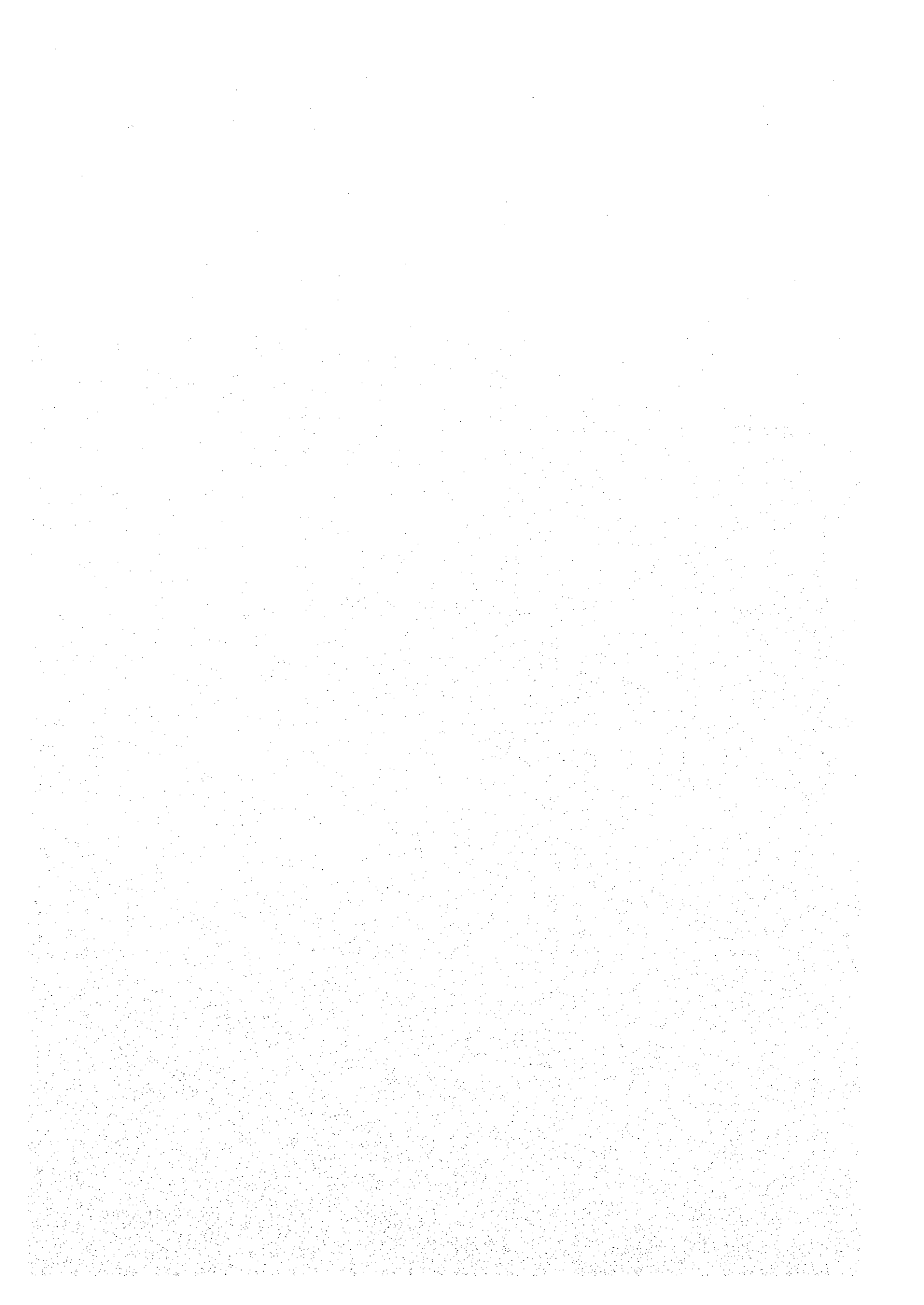
**Drs. Sustiyadi**  
**Ir. Bambang Tata Samiadji**  
**Ir. Harun Hadinegoro**  
**Ir. Netty E. Darga**



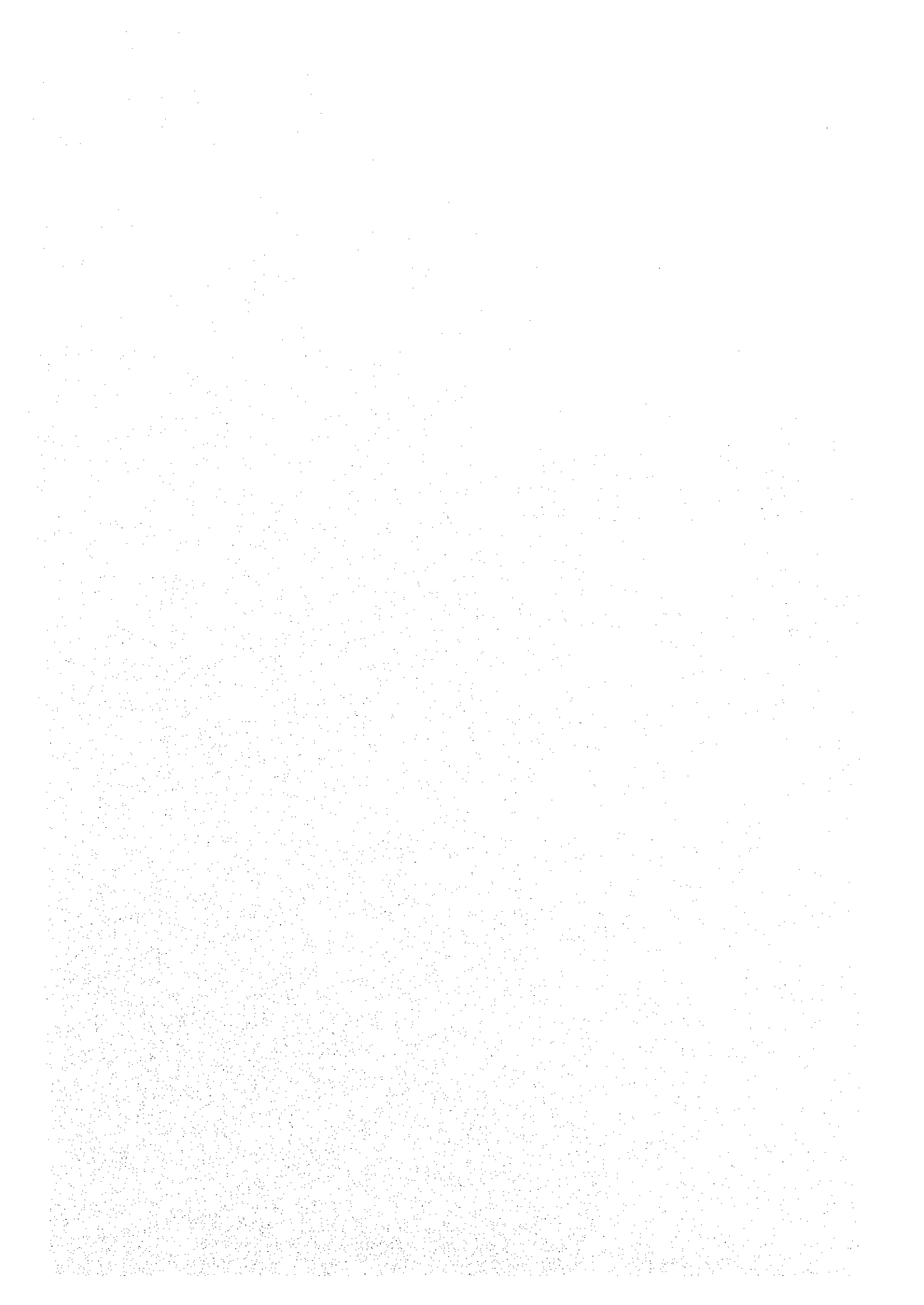
*Former Ministry of Housing and Human Settlements*

# Ministry of Settlements and Regional Development









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