SMERU

Research Report

The SMERU Research Team

An Impact Evaluation of Systematic Land Titling under the Land Administration Project (LAP)

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EXECUTIVE SUMMARY

1. This study entitled "An Impact Evaluation of Systematic Land Titling" (IE-SLT) was undertaken at the request of the World Bank, and conducted between January and May 2002. The general objectives of the study are to assess: (i) the economic and social impacts of systematic land certification/titling under the LAP; (ii) the ways in which the process of implementation of certification has affected outcomes; and (iii) policy conclusions and implications for further policy development.

2. A quantitative survey that involved questionnaires and was supplemented by in-depth interviews with key informants was used in data collection. Fourteen districts and cities in which the LAP had been conducted were selected purposively for data collection. Within these areas, sub-districts (*kecamatan*) were chosen purposively based on the extent of urbanization (urban, rural and semi-urban characteristics), as were the specific *kelurahan* and *desa*[1] selected as research sites. In all, 1,596 respondent households were selected randomly from within the villages. These consisted of 1,004 households that received a land certificate under the LAP, 84 households that lived in the same area and who were eligible but did not participate in the LAP, and 508 households that could not obtain a certificate because the LAP was not carried out in their area. The third group was intended to be a control group.

3. Some 15% of the 84 non-participant respondents said that they did not have the opportunity to participate in the LAP because they could not submit adequate proof of their ownership claims. However, the most common reason given was they lacked money at the time. Other reasons for non-participation were conflicts over land boundaries, non-subdivision among heirs of inherited land, insufficient information, no advantages in having a certificate, absence from home at the time of adjudication and lateness in making an application.

4. The official charge per land parcel for LAP certification was Rp11,500 in urban and semi-urban areas and Rp2,500 in rural areas. Information from respondents, however, indicated that the average cost for the certificate itself was Rp13,204 and that actual expenditure on certification ranged from zero to Rp100,000 because of supplementary costs. The total average cost was Rp36,449 with the inclusion of other charges and was higher in urban and semi-urban areas than in rural areas.

5. The majority (94.7%) of respondents who participated in the LAP said that the time, effort and expenses taken to obtain a certificate were small by comparison with the usefulness of the certificate. More than half felt that the certificate would be very useful, while 39% mentioned the low cost and the easy process as benefits. In saying this, respondents were making comparisons with the trouble, money and time needed to obtain a certificate through the sporadic program. Approximately 70% of respondents believe that they now have greater security of tenure because a land certificate recognizes their ownership rights.

6. The majority of respondents (89.7%) said that there was no discrimination against women landholders during the LAP process. However, survey data reveal a strong tendency for the husband's name to be put on the certificate in cases where land has been purchased jointly by husband and wife after marriage. In 70.9% of cases the husband's name has been used, with only 16.9% in the wife's name and 3% in both

[1] A *kelurahan* is the administrative unit below a sub-district in an area officially classed as urban while a *desa* or village is the corresponding unit in a rural sub-district.

names. The tendency is somewhat greater in urban areas than in rural areas. The reason given by the majority (86%) of respondents for this trend was that the decision about the name to go on the certificate was made by husband and wife together. BPN officials, however, stated that they used the name written on a deed of sale or a receipt in preparing LAP certificates for purchased land. Where land has been inherited from the wife's parents, the certificate was issued in the wife's name. In the case of land originating from the husband's side of the family, the certificate was in his name.

7. Information from key informants indicated that there are Indonesian citizens of Chinese ethnic origin in survey LAP areas and that they had been obliged to meet one additional requirement in the form of proof of citizenship when submitting LAP applications.

8. The proportion of the average number of land parcels certificated through the LAP in all quintiles of per capita household expenditures[2] is greater than 90%. This indicates that systematic land registration touched all socio-economic groups within the community.

9. With expansion in land titling through the LAP, there has been a net impact in the form of an average increase of 12.8% in the mortgaging of land with certificates as collateral. The highest impact was in rural areas (28.4%), followed by semi-urban (13.4%) and urban (2.5%). Analysis by monthly per capita household expenditure reveals a U-shaped pattern in the impact on the use of certificates to obtain credits. The highest impact (15.2%) occurs among respondents in Quintile 1 and the second highest is in Quintile 5 (14.7%), while the lowest is in Quintile 3 (9%).

10. The average net impact of LAP certification on investment in land improvements is estimated to be 5.3%. The highest impact (12.3%) was found in rural areas. Comparative figures for urban and semi-urban areas are both around 3.5%. Most of the improvements consisted of the building or repair of houses, but in a few cases they took the form of a change in land use, with rice-fields being replaced by a house.

11. Systematic land titling through the LAP has had a net impact of a 1.7% increase on the extent of land transactions in the survey locations. The type of land most commonly sold has been home-lots followed by non-irrigated land.

12. In the perception of respondents, the net impact of LAP certificates on the value of land was an average increase of 64.5% on land prices. The highest impact (133.2%) has occurred in urban areas. While in semi urban areas was 32.8% and in rural areas was 64.6%.

13. Survey data indicate that the LAP caused the PBB tax to rise by an average of 33.2%. The highest increase was in urban areas and the lowest in semi-urban locations. There were no increases in village levies and no new fees or charges were introduced.

14. Two aspects of the wider impact of the LAP were mentioned by key informants. The first is the establishment of new offices by notaries in sub-district towns where LAP land titling has taken place, which implies that there is now more demand for notarial services. The second is the decline that has occurred in village and sub-district revenues, since fewer land transactions are now handled at these levels.

[2] Quintile 1 consists of households with the lowest monthly per capita expenditure, while Quintile 5 has the highest

15. One effect of the LAP on nearby villages has been increased awareness of the benefits of certification. There is, however, no indication that the LAP has encouraged an increase in sporadic land registration, the cost of which has always been very high. For that reason many communities are attempting to establish a *swadaya* ("self-help") system of land titling that would be somewhat more expensive than the LAP yet much cheaper than sporadic registration.

16. Some 94% of respondents said that the cost of LAP certification was no burden on household finances. The majority (78.9%) feel that, if the cost of the certificate has to be raised, it should be no more than Rp50,000, or Rp90,000 if supplementary charges are included. This is much lower than amounts quoted by certain control group respondents who, in planning for *swadaya* certification, have proposed Rp150,000 to Rp350,000 per parcel. Many feel that the cost of a certificate should be related to the size of the land parcel, while others suggest stratified charges that would reflect the size and location of the land, proximity to transport and the other factors.

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I. INTRODUCTION

1.1. General background

The Indonesian Land Administration Project (LAP) supported a program of accelerated registration of land rights, technical and other assistance to the National Land Agency (*Badan Pertanahan Nasional* or BPN), and a review of the legal and policy context for land administration. The registration program recorded land parcels and tenure rights in the national register (*Buku Tanah*) kept by the BPN and issued certificates (*Sertifikat Tanah*) to the registered owners.

The program has involved systematic land certification and was designed to offer a service that is cheaper, faster and simpler than the sporadic registration program conducted by the BPN. The objectives of the program were to improve tenure security, reduce land conflicts, promote efficient land markets, facilitate access to credit with title as collateral and provide incentives for long-term investment in land and sustainable land use. The main product of the LAP is a land book entry in a local government land office (as part of the National Land Register) and a land certificate, which is given to the landholder. In most cases this certificate is for freehold (*hak milik*), but in the Capital Territory of Jakarta it is a certificate for leasehold only (*hak guna bangunan*).

The LAP has now been under implementation for six years. After two years of small-scale pilot work, systematic land certification began on a large scale in Project Year 3 (1996/97), focusing on West Java. In the following years implementation has been carried out in Jakarta, the Special Area of Yogyakarta and the Provinces of West Java, Central Java and East Java. In 1999 LAP certification was extended to regions off Java with the introduction of pilot projects in the urban areas of Palembang (South Sumatra) and Medan (North Sumatra).

In September and October 1999 a Social Assessment (SA) of the LAP land certification program was undertaken by the World Bank to provide an important input to the mid-term review of the project, which was conducted in November 1999. The SA used participatory field research methodology in which beneficiaries were asked to provide views on the implementation of the LAP and the impact of the certification itself.[3]

To provide more input to the World Bank and the Government of Indonesia, an Impact Evaluation of Systematic Land Titling under LAP (IE-SLT) was undertaken at the request of the World Bank Office, Jakarta, between January and May 2002. This research report documents the findings of the IE-SLT study.

1.2 Research Aim

The aim of the IE-SLT study is to collect and then to analyze field evidence of the impact of the land registration program on beneficiaries by measuring changes in certain indicators. The general objectives of the IE-SLT are (i) to assess the economic and social impacts of systematic land certification/titling under the LAP, (ii) to examine the ways in which the process of implementation of systematic land certification has affected outcomes, and (iii) to consider policy conclusions and implications for further policy development.

[3] Hardjono, Joan (1999), "A Social Assessment of the Land Certificate Program, Indonesian Land Administration Project", World Bank Office, Jakarta.

The IE-SLT has focused on the following questions:

- In the areas covered by the IE-SLT, what groups have benefited from the land certification program and what groups have not? How did the selection of sites influence targeting of the program?

- What are the observed benefits and costs of land certification for those who participated in the program? Has systematic land certification resulted in increased security of land holdings? Has it resulted in the development of land markets? Has it provided an incentive for investments in land? Has it increased access to credit? Has it increased costs for the landholder, such as those arising from fees and taxes?

- Has the program had an impact on the perceived value of land? What differences are there in perceived benefits, comparing poor and better-off landholders, women and men?

- What are the wider social and economic impacts of the LAP according to the stakeholders included in the survey?

- What is the differential impact of the LAP in terms of gender, that is, how did women benefit or were they impacted negatively? To what extent are women's names formally included on LAP certificates? What has happened to land that has been inherited individually by women from their families? Has it remained in the woman's name or has it been transferred to the husband's name?

1.3 Methodology

A quantitative survey supplemented by in-depth interviews was used in the study. Questionnaires were used in data collection for the quantitative survey, while an interview guideline was prepared for in-depth interviews.

The preparatory stage of the study, which began in early January 2002, took a month. Preparations included the examination of secondary sources, general discussions and the development of questionnaires and guidelines, selection of the administrative districts (*kabupaten*) and cities (*kota*) where research would be conducted, recruitment and training of regional enumerators and the field testing of methodology in an urban area in Jakarta and in a rural part of Tangerang District. A workshop with relevant agencies, including BPN and BAPPENAS as well as NGOs, was held prior to commencement of the survey to obtain further inputs to preparatory work.

Using data from BPN in Jakarta, the IE-SLT research team selected 14 districts and cities/towns purposively, proportional to the number of LAP certificates already issued and the year of certification (see Annex 1.1). Research sub-districts (*kecamatan*) were then selected purposively. In the identification of sub-districts a distinction was made between areas that are urban, those that are rural and those that can be described as semi-urban or peri-urban, that is, places that are close to the administrative boundaries of cities yet still retain many of the characteristics of rural areas. Within the chosen sub-districts, specific *kelurahan* and *desa*[4] were selected purposively as research sites using the same criterion of rural, semi-urban and urban conditions. Villages included in the 1999 Social Assessment were intentionally not selected. Annex 1.2 gives details of the location of the 14 research sites, while a description of each site is given in Annex 1.3.

[4] A *kelurahan* is the administrative unit below a sub-district (*kecamatan*) in an area officially classed as urban, while a *desa* or village is the corresponding unit within a rural sub-district.

Some 1,596 household respondents, of whom 508 formed a control group, were chosen randomly. In each of the 14 survey locations, approximately 112 households were interviewed. The treatment respondents are those who own land and received a certificate for that land under the LAP. The control group consists of landholders who may have been eligible to obtain a certificate but could not do so because the LAP was not carried out in their area. The control group was drawn from a neighboring area which, based on the assessment of the interviewers, has demographic, economic and land use characteristics similar to those of the treatment group. The purpose of the control group was to enable changes resulting from the LAP to be pinpointed.

Several key informants were also interviewed in each area. These informants included the head of the district-level BPN and his staff as well as the staff of district heads (*bupati*), mayors (*walikota*) and sub-district heads (*camat*). At a lower level interviews were held with village and *kelurahan* heads, and the heads of hamlets, administrative wards (RW) and neighborhoods (RT), both past and present. Also included as informants were prominent community figures, and the staff of non-governmental organizations (NGOs), banks and credit institutions.

SMERU assembled eight field teams, each consisting of four members and a supervisor who was directly involved in data collection. Each team was made up of an equal number of men and women to ensure that the team members could talk with both men and women. Some 32 regional enumerators were involved during the three weeks of fieldwork.

II. CHARACTERISTICS OF THE SURVEY SAMPLE

2.1 Characteristics of respondents

2.1.1 Categories of respondents

The present survey covered 1,596 respondent households (referred to in the present report as "respondents"), which were divided into three categories:

1. LAP participants;
2. Non-participants, that is, households that had the opportunity but did not participate in the LAP; and
3. The control group, that is, households that had no opportunity to participate in the LAP.

The first category (1004 respondents) refers to households which reside in a research village or *kelurahan* and in which at least one member obtained a LAP certificate for a land parcel in the village or *kelurahan* concerned, irrespective of whether the parcel is still owned or has been sold. Throughout the report they referred to as "participants".

The second category consists of 84 households that did not take the opportunity to apply for a LAP certificate or else failed to obtain a LAP certificate for some reason, even though LAP certification was carried out in the area where they live. These households own no land in the sample village with a certificate obtained through sporadic registration or other land registration program like Prona. They were interviewed in order to obtain insights into why some people who were presumably eligible for a land certificate did not participate in the LAP. Throughout the present report they are referred to as "non-participants".

The third category, referred to as the "control group", consists of 508 households that live in a research site and own land without a certificate of any kind but had no opportunity to participate in the LAP because their village or *kelurahan* (or the section in which they live) was not included in the area designated for LAP implementation. The purpose in including non-beneficiaries was to enable a comparison to be made with LAP beneficiaries to net out the impact of LAP certificates on various social and economic indicators.

2.1.2 Selection of respondent households

After site selection had been completed, hamlets or RWs (equal in status to a hamlet) and then RTs in which households would be chosen were selected purposively. In each research site (village or *kelurahan*) at least three and no more than five widely scattered hamlets or RWs were chosen. Within each hamlet or RW, two or three non-adjacent RTs were then selected (see Annex 2.1).

A total of 75 LAP households had to be selected in each site. The *Daftar Luas Ajudikasi*, that is, the list of land parcels that had been measured and recorded by the private surveying contractors, was used for this purpose. Household names were chosen from the list at random, with five additional names, in case replacements were needed for people who were not at home at the time of the visit. This list should have been available in each village but in several places it was not. In these situations a system of intervals between houses was used (systematic random sampling). If, for example, six respondent households had to be chosen from 30 households, every fifth house was selected. At the same time a few households were included in which no person had participated in the LAP, even though the opportunity had been offered. These persons were identified with the help of the head of the local RT.

In the case of control group respondent households, there was no list of names from which a selection could be made since, by definition, a control village or *kelurahan* was one in which LAP adjudication had not been undertaken. Because lists of residents could not be provided by local authorities, households were also selected using systematic random sampling from houses in different parts of the study site. Persons living on state land (*tanah negara*) were not included in the selection of these households.

2.1.3 Definition of respondents

In the present study respondents are defined as the households from which information concerning implementation of the LAP was sought. While the household member who provided information for completion of the questionnaire was not always the person who owned the land in question, that member lived in the same house and in almost all instances (97.7%) was closely related. In the majority of cases (93.1%) the household member was the household head himself/herself or the spouse. Table 2.1 gives details.

Table 2.1 Persons Interviewed in the Survey

Relationship	LAP participants		Non-participants		Control group	
	No.	%	No.	%	No.	%
Household head	752	74.9	58	69.0	352	69.3
Spouse of household head	183	18.2	21	25.0	108	21.2
Son/daughter	46	4.6	1	1.2	33	6.5
Son-in-law/daughter-in-law	6	0.6	2	2.4	4	0.8
Grandson/daughter	1	0.1	0	0	1	0.2
Parent/parent-in-law	7	0.7	2	2.4	7	1.4
Other family member	4	0.4	0	0	2	0.4
Other person	5	0.5	0	0	1	0.2
Total respondents	1004	100.0	84	100.0	508	100.0

In most cases the household head was a man. There were, however, a number of female-headed households where the husband was either deceased or else no longer living in the house because of divorce or separation (Table 2.2). There were no cases in which a female household head had a husband.

Table 2.2 Survey Respondents by Gender

Participants	No.	Household head (%)		
		Male	Female	Total
LAP participants	1004	92.2	7.8	100.0
Non-participants	84	86.9	13.1	100.0
Control group	508	93.1	6.9	100.0
Total	1,596	92.2	7.8	100.0

2.1.4 Location of respondent households

Table 2.3 shows the distribution of the 1,596 survey respondent households by district and province. West Java has the highest number of research sites (five) and respondent households (36.4%) because, as already noted, the number of research sites selected per province was in proportion to the number of LAP certificates issued during the period under examination.

Table 2.3 Survey Respondents by District and Province

District/Province	LAP participants		Non-participants		Control group	
	No.	%	No.	%	No.	%
South Jakarta	76	7.6	0	0	35	6.9
Jakarta	76	7.6	0	0	35	6.9
Karawang	75	7.5	2	2.4	37	7.3
Bekasi	71	7.1	7	8.4	37	7.3
Tangerang	68	6.8	7	8.4	36	7.1
Bandung	75	7.5	0	0	35	6.9
Depok	76	7.6	0	0	35	6.9
West Java	365	36.3	16	19.3	180	35.5
Karanganyar	76	7.6	3	3.61	35	6.9
Pekalongan	60	6.0	14	16.87	36	7.1
Semarang	74	7.4	0	0	35	6.9
Central Java	210	20.9	16	19.28	106	20.9
Sleman	74	7.4	2	2.4	37	7.3
Yogyakarta	74	7.4	2	2.4	37	7.3
Malang	67	6.7	11	13.25	40	7.9
Gresik	75	7.5	2	2.41	37	7.3
East Java	142	14.1	13	15.7	77	15.2
Palembang	81	8.1	18	21.7	36	7.1
South Sumatra	81	8.1	18	21.7	36	7.1
Medan	56	5.6	17	20.5	36	7.1
North Sumatra	56	5.6	17	20.5	36	7.1
Total	1004	100	84	100	508	100

Table 2.4 shows the distribution of respondent households by the type of region in which they live. A distinction has been made in the present study between urban, semi-urban and rural regions, even though the government and the Central Bureau of Statistics differentiate only between urban and rural areas. As explained in section 1.3, semi-urban areas are those that are close to the administrative boundaries of towns and cities yet still retain many of the characteristics of rural areas. Since the selection of semi-urban sites was based on information from district and sub-district authorities, these sites were chosen in a somewhat subjective way. It was important to include semi-urban locations, however, since an examination of BPN data in Jakarta had shown a clear tendency for LAP activities to be concentrated in sub-districts and villages on the periphery of urban areas. This was in keeping with the general criteria outlined by the National Land Agency itself for the selection of LAP implementation areas, which is discussed in Section 3.1 below.

Table 2.4 Distribution of Respondents by Type of Region

Type of region	LAP participants		Non-participants		Control group		Ratio of control group to LAP participants
	No.	%	No.	%	No.	%	%
Urban	362	36.1	35	42.2	177	34.9	48.9
Semi-urban	424	42.2	32	38.5	218	43.0	51.6
Rural	218	21.7	16	19.3	112	22.1	51.8
Total	1004	100.0	84	100.0	508	100.0	50.7

2.1.5 Characteristics of sample households

Table 2.5 presents information about respondent households and household heads in each category of respondents and indicates the extent to which the three groups are comparable.

Table 2.5 Characteristics of Sample Households

	LAP participants	Non-participants	Control group
Average size of household (persons)	4.9	5.0	4.9
Average per capita monthly household expenditure (Rp)	159,995 (116,194)	130,907 (96,104)	134,251 (89,929)
Average age of household head (years)	49.3	49.3	48.9
Information about household head			
	%	%	%
Proportion of household heads			
- who are women	7.8	13.1	6.9
- with elementary education or less	54.6	67.9	61.8
- with junior high school education	14.4	9.5	15.9
- with senior high school education	23.7	16.7	17.7
- with tertiary education	7.3	6.0	4.5
- employed in			
agriculture	20.2	22.6	23.0
industry	8.7	3.6	7.5
trade	19.0	28.6	19.5
services	39.3	35.7	38.6
other sectors	12.8	9.5	11.4
Number of sample households	1004	84	508

Note: Figures in brackets show standard deviations.

Households in the non-participant category, who had the opportunity to participant in the LAP but did not, would appear to be the worst off in many respects. This group has the lowest average expenditures and the largest household size. At the same time it has more female-headed households than the other two groups and the lowest overall levels of education. While figures for employment in agriculture and services do not differ much across

the three groups, the non-participant group has a noticeably larger proportion of household heads employed in trade.

Table 2.6 shows the nature of housing, amenities and household possessions among all categories of respondents.

Table 2.6 Housing and Household Assets

	LAP participants	Non-participants	Control group
Average floor area (sq.meters)	104.0 (84.3)	107.2 (107.9)	93.5 (66.2)
Proportion of houses with	%	%	%
- tiled or concrete roof	85.6	72.6	82.7
- brick walls	86.6	72.6	83.1
- marble or tiled floor	62.3	36.9	56.3
- electricity	99.3	100.0	99.4
- gas or kerosene cooking stove	80.0	73.8	78.7
- bottled/purified drinking water	32.8	41.7	20.5
- piped water/protected well water for bathing	75.4	61.9	62.8
Proportion of households owning			
- a radio and/or tape recorder	78.5	67.9	79.5
- a video, CD, VCD and/or LCD	34.1	26.2	31.9
- a telephone (incl. hand phone)	27.2	13.1	23.0
- a refrigerator	35.9	26.2	30.5
- a motor-cycle	42.8	26.2	36.4
- an automobile	7.9	4.8	6.1
Land ownership:			
- average number of owned parcels	1.7	1.4	1.5
- average total area of owned land (sq. meters)	1,381 (4,119)	1,255 (2,928)	1,525 (4,242)
Number of sample households	1,004	84	508

Note: Figures in brackets show standard deviations.

Although non-participant households have the largest average floor area, this group is clearly the poorest in quality of housing if the material used in roofing, walls and flooring is used as an indicator. While electricity is available to virtual all respondent households, just over 25 percent of non-participant households do not use gas or kerosene as energy source for cooking. This suggests that they use wood, which is generally cheaper. The fact that only 62 per cent of these households have access to relatively good water for bathing perhaps explains why this group has the highest percentage for use of bottled or purified drinking water. As far as household possessions are concerned, households in this group are also below the other groups in every indicator. At the same time respondents in this category have the smallest average number of land parcels and the lowest average total area of land.

There is no reason for the apparent "relative poverty" of these households since they were not chosen purposively. They live among households in areas where the LAP was implemented. This means that there are no locational distinctions, unlike the control group households, which live in areas that are spatially separated from those of LAP beneficiaries. It is therefore possible that these indicators, which suggest economic disadvantage, reveal something about households that did not participate in the LAP.

2.2 Characteristics of land parcels

2.2.1 Area and land use

LAP titling was done on the basis of individual land parcels. This is reflected in Table 2.7, which shows the average number and size of all land parcels, including uncertificated parcels, held by survey respondents. The figures in this table include land owned elsewhere, irrespective of whether or not it was in a LAP implementation area. Since many respondent households in all three categories own more than one parcel, the number of parcels exceeds the number of respondent households. In implementation of land titling, non-contiguous pieces of land held by the same owner were treated as separate parcels and separate certificates were issued. The differences between provinces reflect the nature of the particular sites (urban, semi-urban and rural) where the survey was conducted.

Table 2.7 Average Number and Size of Land Parcels Per Respondent by Province

Province	LAP participants (n=1004)		Non-participants (n=84)		Control group (n=508)	
	average no. of parcels	average size of parcels (sq.m.)	average no. of parcels	average size of parcels (sq.m.)	average no. of parcels	average size of parcels (sq.m.)
Jakarta	1.4	365.0	-	-	1.4	513.1
West Java	1.7	1,332.1	1.6	1,810.1	1.8	2,184.8
Central Java	1.9	1,886.6	1.5	1,661.7	1.4	973.8
Yogyakarta	2.9	2,217.2	5.0	7,202.5	2.0	1,695.9
East Java	1.6	1,967.0	1.6	1,971.6	1.6	2,512.7
South Sumatra	1.2	275.1	1.0	123.4	1.0	141.3
North Sumatra	1.3	218.5	1.1	236.0	1.0	211.8
Total	1.7	1,382.5	1.4	1,255.4	1.5	1,520.0

Thus the small average number and size of parcels recorded for all groups in South and North Sumatra are explained by the fact that the LAP had been conducted in relatively densely populated urban areas (*kelurahan*) within provincial capitals. The absence of non-participant figures for Jakarta in Table 2.7 shows that in the two LAP survey sites in this province, all who were interviewed had obtained LAP certificates.

Table 2.8 shows the average number and size of parcels by type of region and land use. As might be expected, almost all urban land parcels are used as home-lots, that is, land on which a house of some kind has been built (*pekarangan*). Very few parcels involve agriculture or "other uses". Where there are "other uses", they consist mainly of aquaculture in the form of brackish fish-ponds (*tambak*) in coastal areas or freshwater fish-ponds further inland. Respondents in semi-urban areas have slightly more land parcels used as home-lots than those in urban and rural areas (1.40 by contrast with 1.20 and 1.23 respectively), while the

average area (975.2 sq. meters) is much larger than the average of 229.1 sq. meters in urban and 751.6 sq. meters in rural areas. Some of this "home-lot" land is very probably used for small businesses such as vehicle repair workshops.

Table 2.8 Average Number and Size of Land Parcels per Respondent by Type of Region and Land Use

Type of region and Land use	LAP participants (n=1004)		Non-participants (n=84)		Control group (n=508)	
	average no. of parcels	average size of parcels (sq.m.)	average no. of parcels	average size of parcels (sq.m.)	Average no. of parcels	average size of parcels (sq.m.)
Urban						
- home-lots	1.20	229.1	1.06	178.1	1.05	197.1
- rice-land	0.01	8.6	-	-	0.01	1.1
- non-irrigated fields	0.03	12.2	-	-	0.02	9.6
- other uses	0.05	12.7	-	-	0.03	5.2
Semi-urban						
- home-lots	1.40	975.2	1.31	1,013.3	1.20	688.3
- rice-land	0.38	626.1	0.28	532.9	0.35	612.9
- non-irrigated fields	0.13	100.3	0.03	15.6	0.13	221.4
- other uses	0.06	119.0	-	-	0.07	423.9
Rural						
- home-lots	1.23	751.6	1.12	805.3	1.13	708.7
- rice-land	0.39	867.5	0.24	760.0	0.38	1,528.9
- non-irrigated fields	0.34	758.6	0.47	1,331.4	0.24	533.0
- other uses	0.02	6.3	-	-	0.01	1.7
Total	1.73	1,382.5	1.4	1,255.4	1.5	1,520.0

Many respondents in the semi-urban group own rice-fields and other agricultural land, but rural respondents have the largest parcels of farm land, although the average number of parcels (1.98 per respondent) is not much greater than the average of 1.97 for semi-urban areas. Even so, the total average area of agricultural land owned by rural respondents is somewhat greater than the equivalent in semi-urban areas. These figures reflect the fact that there is still agricultural land, both irrigated and non-irrigated, in semi-urban areas, while in rural areas the number and size of land parcels is not very large. Given the fragmentation of holdings that has occurred in most rural areas in recent years, each parcel is likely to be relatively small.

2.2.2 Land parcels with LAP certification

Table 2.9 gives details of land parcels for which LAP certificates have been issued. Many of the 1,004 respondents own more than one parcel but some of these parcels were not situated in a LAP implementation area while others were not adequately documented and thus were not able to receive a LAP certificate. This explains why the figures for certificated parcels are smaller than those for total number of parcels. The average number of total land parcels and area of land parcels is highest in the Special Area of Yogyakarta, as is the equivalent for parcels certificated through the LAP.

Table 2.9 Average Number and Size of Land Parcels Certificated Through LAP by Province (n = 1004)

Province	Total land parcels		Parcels certificated through LAP		Ratio of certificated to total parcels	
	average no. of parcels	size of parcels (sq.m.)	average no. of parcels	size of parcels (sq.m.)	no. of parcels (%)	size of parcels (%)
Jakarta	1.41	365.0	1.33	343.9	94.4	94.2
West Java	1.66	1,332.1	1.49	1,092.6	89.8	82.0
Central Java	1.95	1,886.6	1.71	1,649.8	88.0	87.4
Yogyakarta	2.86	2,217.2	2.54	1,882.6	88.7	84.9
East Java	1.64	1,967.0	1.41	958.0	85.8	48.7
South Sumatra	1.19	275.1	1.06	244.2	89.6	88.8
North Sumatra	1.27	218.5	1.14	193.7	90.1	88.7
Total	1.73	1,382.5	1.63	1,233.6	94.4	89.2

The figures shown in Table 2.10 suggest that, when LAP certification was being carried out, a distinction was made between land parcels by type of land use and that the focus in titling was on home-lots rather than agricultural land. This is in accordance with statements from a number of key informants, who said that preference was given to land used for housing as there was a limit of around 5,000 on the number of certificates available per target location (*kelurahan* or village).

Table 2.10 Average Number and Area of Land Parcels Certificated Through LAP by Region and Land Use (n = 1004)

Type of region and land use	Total land Parcels		Parcels certificated through LAP		Ratio (%)	
	average number of parcels	Average size of parcels (sq.m.)	average number of parcels	average size of parcels (sq.m.)	number of parcels	size of parcels (sq.m.)
Urban						
- home-lot	1.20	229.1	1.14	217.8	95.2	95.1
- rice-fields	0.01	8.6	0.00	0.0	00.0	00.0
- unirrigated fields	0.03	12.2	0.02	8.6	63.6	70.6
- other uses	0.05	12.7	0.02	6.0	41.2	46.8
Subtotal	1.28	262.6	1.18	232.4	91.8	88.5
Semi-urban						
- home-lot	1.40	975.2	1.30	855.2	92.6	87.7
- rice-fields	0.38	626.1	0.25	355.1	66.9	56.7
- unirrigated fields	0.13	100.3	0.09	79.7	75.5	79.5
- other uses	0.06	119.0	0.05	20.0	76.6	16.8
Subtotal	1.96	1,820.6	1.69	1,310.0	86.1	71.9
Rural						
- home-lots	1.23	751.6	1.17	670.9	95.5	89.3
- rice-fields	0.39	867.5	0.33	652.6	82.6	75.2
- unirrigated fields	0.34	758.6	0.31	682.7	91.9	90.0
- other uses	0.02	6.3	0.01	2.1	40.0	33.7
Subtotal	1.99	2,384.0	1.82	2,008.3	91.7	84.2
TOTAL	1.73	1,382.5	1.63	1,233.6	94.5	89.2

III. THE LAP CERTIFICATION PROCESS

3.1 Choice of location for the LAP

According to key informants from Land Offices at different levels and in different provinces, the sub-districts and villages in which the land certification program is implemented are chosen by the Land Office at district (*kabupaten*) and city or town (*kota*) level. The list of locations is then forwarded to the provincial-level Land Office, which passes it on to the National Land Agency (BPN) in Jakarta. A Letter of Decision is issued in Jakarta and sent back to the provincial office, confirming the selection.

In deciding about locations, the district-level Land Office is guided by BPN policy. Guidelines prepared at national level contain a list of priority areas. These are locations where:

- no more than 30 % of land parcels have certificates obtained through sporadic registration or other land registration programs like Prona;
- rapid urbanization is taking place in the sense that the built-up area is expanding;
- there is a lot of buying and selling of land through village officials or notaries;
- parcels without certificates are contiguous rather than widely dispersed;
- low-income households are in the majority;
- basic village maps are available; and
- technical control points in the national projection system already exist.

Local requirements have sometimes been added. There are wide variations in the nature of these local criteria, but one is usually the absence of any major disputes over land within the community or between the community and other government agencies. In particular, areas where there are issues involving *tanah negara* have been avoided.

The Jakarta BPN office normally accepts the locations chosen at district level. Very few cases were mentioned during in-depth interviews of changes in sites being made at any level. In a small number of cases a regional government (Pemda at provincial or district) has requested that specific sub-districts and villages be included in the land titling program for certain reasons. This happened, for example, in a number of places in the period before the General Elections. In other places the village head (*lurah*) lobbied in advance to have the district-level Land Office include his village in the LAP program. The reverse, however, has happened in some places. In a village chosen as a control site for the present survey, local officials had specifically requested that their village not be included in the LAP because of the negative effect that this would have on village revenue obtained from land transactions.

The survey found that the priorities set by BPN for LAP locations have very largely been observed in the research areas. On the whole, semi-urban areas have been favored, the reason being that urbanization is transforming them in such a way that local people need the security of tenure that a land certificate gives. Villages adjacent to tourist areas are also among those chosen for the LAP as they are likely to expand in population and economic activity.

Within these areas there has been a clear bias towards locations in which most households are not well off. Land Office decision-makers feel that people who are in a strong economic position can afford to register their land through the sporadic system. In any case, there is usually a high level of awareness of the importance of a certificate among financially better-off landholders. By contrast, people from low-income households are usually nervous about the cost of sporadic certification and often do not even know how to go about registration. Most of

the LAP villages, including research sites, in Karangpandan Sub-district (Central Java), for example, had been included in a government program for poverty alleviation in "left-behind" villages (the IDT program). Because of the poverty of landholders, the land was never likely to be registered with the Land Office. At the same time educational levels in these villages are very low and understanding of the value of land certification is correspondingly limited.

3.2 Socialization of the LAP

Information from respondents indicated that socialization of the LAP followed a similar pattern in most areas and was conducted at two levels, that of the village administration and that of the RT or neighborhood. At village level the Adjudication Team usually held at least one meeting, to which village officials, heads of hamlets, RWs and RTs, members of the Village Community Institute (LMD) and prominent community figures and religious leaders were invited. Dissemination of information among the intended beneficiaries was done at RT level. In addition to formal community meetings, most RT heads undertook specific socialization by visiting the homes of people who were unable to attend these gatherings. At the same time information about the LAP was passed on by word of mouth, and was repeated at almost every community gathering, such as Friday prayers and religious study meetings. Thus most members of the community knew about the LAP before implementation began.

The survey recorded the sources from which respondents in urban, semi-urban and rural areas obtained information about the LAP. The role played by lower-level, unsalaried village officials, in particular by RT heads, in socialization is evident from Table 3.1. More than 90% of respondents stated that they had received sufficient information about the requirements that had to be met. Only half of the respondents, however, obtained this information at formal meetings (Table 3.2). Information was also passed on informally by word of mouth during conversations with friends and neighbors. Brochures, banners and other types of printed announcement played a relatively insignificant role in the dissemination of information because they were usually displayed in the village administrative office where only people who had a specific reason for visiting the office were likely to see them. When meetings were held, it was almost invariably the household head (male in 93.4% of cases) who was invited. In only a few cases were couples (husband and wife) invited, but slightly more attended than were invited.

While most members of the community knew about the LAP before implementation began, a number of respondents in Bandung, Bekasi, Tangerang and Malang said that they learned about the LAP only when surveyors arrived to measure their land. The reasons were that the persons concerned were away from home at the time of socialization or else lived in a remote part of the village. In Tangerang and Palembang a few people said that they did not bother to attend socialization meetings because they doubted that the certification program would eventuate because information was so unclear. Among urban non-participants who had the opportunity to participate, however, a high proportion (42.9%) heard about the LAP only from relatives, friends or neighbors, which suggests that lack of adequate information could have been a reason for non-participation.

Table 3.1 Source of Information about LAP by Type of Region

Source of Information*	Urban		Rural		Semi-urban	
	LAP participants	Non-participants	LAP participants	Non-participants	LAP participants	Non-participants
	%		%		%	
RT officials	72.7	37.1	55.9	40.6	43.6	41.2
RW officials	29.8	14.3	12.0	6.3	13.3	0.0
Head of hamlet	0.6	0.0	23.3	37.5	47.7	35.3
Head of village	11.3	11.4	21.0	3.1	21.6	5.9
Relatives/friends/neighbors	8.3	42.9	9.7	25.0	14.2	23.5
Other persons	8.8	11.4	11.8	3.1	5.5	5.9
Number of respondents	362	35	424	32	218	17

* Note: Multiple answers were accepted.

Table 3.2 Means of Obtaining Information About LAP by Type of Region

Means of Information*	Urban		Rural		Semi-urban		Total	
	LAP Participants	Non-participants	LAP participants	Non-participants	LAP participants	Non-participants	LAP participants	Non-participants
	%		%		%		%	
Formal meeting	59.7	8.6	58.5	25.0	48.2	35.3	56.7	20.3
Informal: through the community	47.5	82.9	42.7	53.1	42.2	64.7	44.3	67.9
Printed public announcement	9.4	2.9	12.0	9.4	5.5	5.9	9.7	6.0
Other sources	12.4	0.0	17.5	18.8	22.0	5.9	16.6	8.4
Number of respondents	362	35	424	32	218	17	1004	84

* Note: Multiple answers were accepted.

The extent to which socialization was undertaken also depended on the target set by the BPN at central and district levels for the number of certificates to be issued. Several respondents in Pekalongan stated that socialization had been intentionally limited by village authorities because the number of certificates available was less than the number required to meet demand among landholders. This was done to avoid "dissatisfaction" among the community. On the other hand, if the number of certificates exceeded demand, socialization was focused on achieving the set target and more attention was given to disseminating information and helping applicants to provide the required documentation.

In villages in certain districts, especially Karanganyar and Yogyakarta, special committees were formed at hamlet level and consisted of the hamlet head, RW/RT heads and community figures. The task of each committee was to provide information, to collect the documents put forward by applicants and to check whether they were complete. The committee then took the documents to the base camp of the Adjudication Team. In most places where there was a special committee, its members also supervised the installation of boundary markers for individual land parcels, the aim being to prevent any misunderstandings or disputes during surveying. This meant that in actual fact they ratified boundaries in advance. Survey information on this point is not entirely clear, however, since respondents found it hard to differentiate between a "special" committee and the regular RW, RT and hamlet staff.

3.3 Management of the LAP process

As with socialization, it was the RT heads who did most of the work in organizing LAP implementation at community level, especially in urban and semi-urban areas (Table 3.3). As a consequence the community tended to regard the head of their RT as a "go-between" in communications with the Adjudication Team. Handling of applications was usually done on a collective basis in the sense that individuals gave their documents to the RT head, who, after checking to make sure that they were in order and arranging to have supplementary documentation provided at village level, passed them on to the Adjudication Team. Those who did not do so submitted their documents direct to the Adjudication Team at its base camp. Repondents usually had to go back and forth several times to the house of the RT head, however, while getting their documents ready. The role of the village head, meanwhile, consisted of providing written statements about lost and missing documents, verifying photocopies and issuing or renewing identification cards where necessary.

Table 3.3 Coordinator of Collective Submission of LAP Applications (n = 1004)

Coordinator	Type of region		
	Urban	Semi-urban	Rural
	%		
RT head	76.3	72.4	35.2
RW head	19.8	8.3	4.4
Hamlet head*	1.9	10.9	56.0
Village head	-	4.7	-
Other person	1.9	3.6	4.4
Respondents	362	218	424

Note: * Hamlets do not exist in urban *kelurahan*; the RW has the status of a hamlet in these areas.

3.4 Requirements to obtain a LAP certificate

On the whole, the survey found no evidence that the requirements for a LAP application favored or disadvantaged any particular group in the community. The documents that applicants needed consisted of proof of ownership in the form of a traditional land document (*Leter C* or *girik*) or deed of sale together with other documents such as personal identification cards (KTP), household cards (KK) and proof of payment of the PBB tax as stipulated in BPN guidelines. People in rural and semi-urban areas were more easily able to provide proof of ownership than those in urban areas since village officials in these districts could trace ownership through the traditional system of land records and prepare copies of missing documents. In Sidoluhur (Sleman District), for example, approximately 30% of landholders no longer had their original document but it was easily replaced. In urban areas, where land had been more commonly purchased than inherited and proof took the form of deeds of sale (*akte jual beli)* or sales receipts, it was much harder to check on inadequately supported ownership claims.

At village level local authorities, with the agreement of Adjudication Teams, made it as easy as possible for applicants to meet LAP stipulations about documents. For example, if a KTP or KK had expired, it could be easily extended with a stamp from the village head. If a person had lived for some time in the village but did not have a KTP, he could obtain a special one or else a letter could be prepared by the village head identifying the person concerned. In Malang the village head even visited households carrying with him the village stamp in case it was needed. Where necessary, death certificates and wills showing subdivision of land among heirs were prepared as well as statements that the names of heirs had been registered in village records. It was more difficult for people to meet these requirements, especially in rural and semi-urban areas, since very few people make written wills or obtain death certificates for deceased parents. This meant that such documents had to be prepared, or at least statements had to be signed by the village head verifying information of this kind from LAP applicants. In many areas a written statement from the *lurah* that the land was not under dispute was also required. Supplementary documentation of this kind, however, incurred special charges, which raised the cost of land certification for most respondents.

Box 3.1
Subdivision of Inherited Land from Deceased Parents

In Gerdu, Karanganyar District, village local officials prepared death certificates for deceased owners to facilitate the adjudication process in cases of inherited land for which there was no will. An internal meeting (generally in the house of the hamlet head) was then conducted by the Adjudication Team with the RT heads as witnesses to legalize the existing subdivision of the inherited land. The heirs had to be present to hear the legalization decision made by the Team. Those who could not be present had to send a Power of Attorney that would bind them to this decision. At the end of the meeting family members who were present signed or put their thumbprint on a document to indicate agreement with the decision. By adopting this approach the Team sought to anticipate claims from other family members.

In Burangkeng village in Bekasi, to save applicants the cost and trouble of getting photocopies of KTP and KK, the village head decided that it was sufficient just to show the actual KTP and KK or to enclose them with the application, to be returned when the applicant collected his/her certificate. Because of flexibility of this kind and the readiness of village officials to help with supplementary documents, 97% of all respondents, irrespective of urban, semi-urban or

rural location, said that they had experienced no difficulty during LAP implementation in meeting requirements for certification of their land.

3.5 The handling of disputes

Information obtained from respondents during the survey showed that disputes occurred in only 30 cases (that is, just under 2% of the 1,542 LAP land parcels that were described by respondents) and were easily settled. Almost half of the 30 cases occurred in semi-urban areas. Respondents gave reasons for the disputes in only 18 cases; 12 of these involved disagreements over boundaries between adjacent parcels. A few disputes arose over the subdivision of inherited land among heirs, while in other cases the land had already been registered in another person's name or else there were multiple claims to the same land. Disputes were normally settled within the community or the family concerned, often with the assistance of the RT and other village officials, since potential beneficiaries realized that certificates would not be issued if conflicts remained unsettled. Given the methodology of the present survey, it was impossible for researchers to ascertain the extent to which unsolved disputes prevented people from participating (see 3.8 below).

According to key informants, it had been hoped that problems concerning land ownership would be solved through the LAP. This hope was realized but only in cases where boundaries between parcels had been unclear for some time before the LAP was undertaken. The disputes that could not be solved usually concerned inheritances and the Adjudication Teams made no attempt to solve them, as they were afraid that the time taken to do so would hold up progress on program implementation. In these cases they advised the individuals concerned to settle the matter themselves or else to go to the law court. Meanwhile, those persons could not be included as LAP participants.

3.6 The cost of LAP certification

Costs have been divided into three categories: the cost of the certificate, the cost of the whole certification process (including charges for supplementary documentation), and additional costs incurred when the certificate was ready to be collected.

Most respondents had difficulty in recalling details of exactly how much money they had spent to obtain a LAP certificate. As a result, information about the cost of the certificate itself could be obtained for only 521 parcels of land. These respondents believed the official cost of a certificate to have been between Rp10,000 and Rp13,500 per parcel. The average proved to be Rp13,204 or just on 53 % of total outlay on certification (Table 3.4). Information about the total cost was available for 1,513 parcels. Costs ranged from zero to Rp100,000 and were higher in urban and semi-urban areas than in rural areas. The highest cost was in Medan (North Sumatra) and the lowest in Central Java. Respondents mentioned cases where village officials had obtained a certificate at no cost to themselves since the supplementary charges imposed for other applicants covered the cost of their own individual certificates. At the same time there were instances, especially in South Sumatra and West Java, where a few extremely poor people, usually widows, paid nothing at all because of this same "subsidy". Wide variations occurred not just at provincial and district level but in RTs and RWs within the same village or *kelurahan*, because additional charges were usually agreed upon at RT/RW level through direct discussion with the community. This was particularly evident in West Java and Jakarta.

Table 3.4 Average Cost per Parcel for LAP Certificates by Type of Region and Province

Type of Region and Province	Cost of certificate (Rp) (A)		Total cost (Rp) (B)		% (A) to (B)	
	No. of parcels	Average cost (Rp)	No. of parcels	Average cost (Rp)	No. of parcels	Average (%)
Type of Region						
Urban	85	16,706	414	40,978	85	49.2
Semi-urban	256	15,316	706	36,712	256	66.4
Rural	180	8,547	393	25,885	177	34.4
Province						
Jakarta	43	14,605	98	37,100	43	46.8
West Java	209	14,022	531	41,283	209	58.5
Central Java	148	9,895	356	29,923	145	36.9
Yogyakarta	75	11,613	186	17,280	75	66.4
East Java	16	23,594	199	37,654	16	59.8
North Sumatra	3	43,333	59	62,619	3	49.7
South Sumatra	27	17,704	84	29,107	27	59.2
Total parcels*	521	13,204	1,513	35,067	518	52.7

Note: * Three respondents gave the cost of the certificate but not the total cost.

No evidence was found that the figure of Rp2,500 per parcel set by BPN for certificates in rural areas was observed. As Table 3.5 shows, the cost of the certificate itself was 3.4 times the official price. The majority of respondents and even key informants were not aware of this distinction, which should make the cost of a rural certificate considerably lower than the Rp11,500 set for urban areas. Similarly, most were not aware that since 1999/2000 no charge at all has been imposed for LAP certificates except payment of the Fee for Acquisition of Rights to Land and Buildings (BPHTB or *Bea Perolehan Atas Hak Tanah dan Bangunan*).

Table 3.5 Average Differences between Cost of Certificates and Official Charge by Type of Region

Type of region	Official charge (Rp)	Average cost of certificates		Average total cost of certification	
		(Rp)	Ratio to official charge	(Rp)	Ratio to official charge
Urban	11,500	16,706	1.5 times	40,978	3.6 times
Semi-urban	11,500	15,316	1.3 times	36,712	3.2 times
Rural	2,500	8,547	3.4 times	25,885	10.4 times

Note: a) Official charges in semi-urban areas are here considered to be the same as those in urban areas.
b) See Table 3.4.

Charges for the supplementary documentation referred to in section 3.4 were relatively high in all areas. The reason given by key informants for imposition of charges outside the official price was to cover certain needs at the time of LAP implementation. These consisted of administration costs (connected with the provision of additional documentation) and operational costs, which meant food and accommodation for government officials while in the field. In some locations, however, the raising of funds for purposes unrelated to the LAP, like the improvement of local pathways (in Depok) and the construction of a subdistrict

meeting hall (in Gresik), was sometimes combined with the LAP implementation process. Thus the average figure of Rp13,204 per certificate becomes Rp35,067 when supplementary costs are included.

Some 10% of respondents said that they had also paid additional money when certificates were completed but that such payment was usually voluntary. Many beneficiaries, for example, gave a small sum of money to the head of the RT in recognition of his assistance (Table 3.6). A number also said that they had given additional money to BPN officials and Adjudication Team members. It was difficult, however, to obtain a breakdown of payments actually made by respondents to these persons.

Table 3.6 Persons Given Money by Respondents After Completion of Certificates (n=159)

Person/agency	Type of region			Total
	Urban	Semi- urban	Rural	
BPN/Adjudication Team	23 (54.8)	36 (69.2)	17 (26.2)	76 (47.8)
Head of village or *kelurahan*	6 (14.3)	7 (13.5)	25 (38.5)	38 (23.9)
Head of RT/RW	10 (23.8)	5 (9.6)	16 (24.6)	31 (19.5)
Other persons	3 (7.1)	4 (7.7)	7 (10.8)	14 (8.8)
Total respondents	42 (100.0)	52 (100.0)	65 (100.0)	159 (100.0)

Note: Figures in brackets are percentages.

In South Jakarta and Depok an additional charge that could not be avoided was imposed on beneficiaries because certificates were handed over to them in a specially prepared folder. A charge of Rp10,000 to Rp12,500 was made at the time when the certificate was ready to be collected from the village head. These post-certification costs bring the total average cost of LAP titling to Rp36,449 per certificate (Table 3.7).

Table 3.7 Average Total of All Certification Costs Per Land Parcel Paid by LAP Participants

Type of region	No. of land parcels	Average costs during certification (Rp)	Average additional costs after certification (Rp)	Average total of all costs for certification (Rp)
Urban	414	40,978	2,263	43,241
Semi-urban	706	36,713	1,079	37,792
Rural	393	25,885	998	26,883
Total	1,513	35,067	1,382	36,449

In 94.2% of cases LAP beneficiaries paid for certification from their own savings. Only 0.7% had to sell assets to meet the cost. Assets sold were mainly in the form of jewelry but a few respondents sold poultry and goats. Others obtained the necessary money from adult children or close relatives. No significant differences could be detected between provinces in this matter. Most respondents said that they did not object to the official cost of the certificate and even the additional charges because, by comparison with sporadic registration, these costs were

small and the LAP process was not difficult. Even so, there were cases where respondents felt that village officials had misused money and that there should have been more transparency in the purposes for which supplementary charges were made.

3.7 Length of time and errors on certificates

The average length of time taken for the LAP certification process, from submission of documents to distribution of certificates, for the 1,542 land parcels described by respondents was 2.2 months. Generally, the time taken was one month (30% of parcels), two months (28%) and three months (36%); in 6% of cases the time was 4 months or more. The shortest length of time was an average of 1.9 months in rural areas and the longest 2.3 months in semi-urban areas. Respondents in Karawang District received their certificates in only 1.2 months.

Only 8% of the 1,535 land certificates for which the owner gave a response had some kind of error. Most (64.2%) of these errors involved wrong measurements of the land in the opinion of the beneficiaries, who found that the size of the parcel shown on the LAP certificate was not the same as the area indicated on the PBB tax form or on a deed of purchase. In 17.9% of cases the parcel was wrongly located (that is, there was a mistake in the street name or the number of the RW or RT). Some 12.2% had the wrong name as the owner and 5.7 % had other errors such as the wrong stamp on them (that is, a stamp not from the Adjudication Team but from the local Land Office).

Box 3.2
A Corrected LAP Certificate Withheld in the Land Office

Pak Andin teaches religion in a senior high school in a district capital. He has also been endeavoring to expand a small household industry that he has established to produce snack food from corn and red sugar. He would very much like to use his LAP certificate as collateral for a bank loan for his business. So far, however, he has not been able to collect the certificate. At the time when the certificate was issued, there was a mistake in the area of land recorded. He went to the local Land Office to have the error corrected but every time he goes to collect the certificate, he finds that there is some other requirement to be met. A Land Office official has shown him the corrected certificate but apparently expects some reimbursement for his "service". Pak Andin says that as soon as he has sufficient funds, he will pay the official concerned in order to obtain his certificate.

Just on two-thirds of the respondents who found that their certificate contained an error did nothing to have it corrected because they regarded it as insignificant. The others (33.6%) lodged a complaint either with village officials or else with the Adjudication Team or the district Land Office. Where the error was rectified, the average time taken was 26 days while the range was from one day to six months.

3.8 Reasons for not participating in the LAP

In most of the survey sites where the LAP had been implemented, a few households had not participated in the program and hence had not received a certificate. All told, 84 such cases (7.7%) were encountered from among the 1,088 respondents in the LAP areas. Of these, 69 respondents said that they had had an opportunity to participate, while 15 said that they had had no such opportunity.

As Table 3.8 shows, the reasons for non-participation were quite diverse. Lack of money and inadequate documentation were the two reasons most often cited by the 53 respondents in the former category. The "other reasons" included cases in Sleman and Karanganyar where people owned such an extremely small piece of land that they felt that the value did not warrant the cost of certification, even though that cost was low. In some places, notably Tangerang and Palembang, people did not believe that the LAP would eventuate and so did not bother to submit an application for land registration.

Table 3.8 Reasons for Not Participating in the LAP

Reasons	No. of respondents	%
Lack of money	12	22.6
Inadequate documentation	8	15.1
Inherited land not yet subdivided	7	13.2
Away from home at the time	7	13.2
Conflict with relatives or surveyors	6	11.3
No apparent advantages	3	5.7
Insufficient information	2	3.8
Late application	2	3.8
Quite content without a certificate	1	1.9
Other reasons	5	9.4
Total respondents	53	100.0

Other reasons for not participating in the LAP are as follows. One respondent was in the process of selling his land and had not yet "subdivided" the *girik* and the PBB document at the time when the LAP was conducted in his village. Another had a similar problem in that he was in the process of buying land but had not finalized documentation with the previous owner. In Tangerang, where the allocation of LAP certificates was insufficient, a few respondents did not participate because village authorities had told them that the cost of LAP certification would exceed Rp 100,000 per parcel, which was a lot more than the persons concerned could afford. In other places some people chose not to participate in the LAP because of negative experiences with Prona in the past. In Medan, for example, respondents said that the Prona process had proved expensive and lengthy and in many instances certificates had never been issued, despite payment of part of the required money in advance.

Box 3.3
Family Matters: The Experiences of a Non-Participant

Pak Padmono is a farmer in Sleman but at the time when LAP land titling was carried out in his village, he was not at home. He was working temporarily as an unskilled laborer on a construction site in the city of Yogyakarta some distance away, in order to obtain extra money for his family's daily necessities. His wife did not dare submit an application for LAP certification of their land out of respect for her husband's step-mother, who did not want the land in question to become the property of Pak Padmono alone. In the year 2001 Pak Padmono and his wife tried to obtain a bank loan so that he could start a business trading in cattle and goats. But they were unsuccessful because the proof of land ownership that they offered as collateral was a *Leter D* document. Since they did not have a certificate, the bank rejected their application.

According to key informants, many of those who would have been eligible to obtain a LAP certificate but did not participate were absentee owners who could not be contacted by village authorities at the time of LAP implementation. They were usually, but not always, urban people who own land in semi-urban and rural areas. In the research site in the city of Bandung, for example, there were instances of people who live in large towns like Tasikmalaya, more than 100 km away, but own land in this urban area. Such persons are not among survey respondents for the very reason that they reside outside the research sites, even though their land is located in these areas. While the proportion could therefore not be estimated, the data in Box 3.4, provided by village officials in Bunut Wetan, illustrate the possible magnitude and the implications of absentee ownership for the land registration program.

Box 3.4
Landowners Could Not Be Found

The village of Bunut Wetan in Malang District has 3,508 parcels of land within its boundaries. Of these, 2,921 parcels (83%) received certificates, while seven parcels, although put forward for adjudication, were rejected because of disputes that could not be resolved. The remaining 580 parcels, which represent 13% of all land parcels in the village, could not even be included in the adjudication process. The reason in 77% of the 580 cases was that the owner could not be located or even identified.

A somewhat different explanation for non-participation was given by village officials in semi-urban areas like Bekasi. Certain residents with large land holdings felt that they would have difficulty in "splitting" the certificate if they wished to sell only a portion of a land parcel. The LAP certificate would have to be replaced by two new certificates through sporadic registration at the district Land Office, which would be a costly and time-consuming process, particularly since it would fall into the category of a "second registration". In their perception, sale of part of the land and registration of the remaining part by the owner would be easier and cheaper if there was no existing certificate.

As noted above, 15 of the 84 non-participant respondents stated that they had had no opportunity to apply for a LAP certificate, even though the program had been conducted in their *kelurahan*. In Palembang, where *budel* land involving rights granted by the colonial government more than half a century ago was involved, agreement could not be reached between the present occupants and the descendants of the original owners, who were renting out this special-status land to them. There were also problems with proof of claims to *tanah usaha*, which in this particular site refers to land originally obtained from the clearing of forest on an individual basis.

A similar situation occurred in Medan where many people are renting land from the heirs of persons who had received the land from the Grand Sultan a few generations ago. Several respondents said that they have been renting the land on a yearly basis for between 30 and 60 years. They have even built houses on the land but are unwilling to renovate or make additions to their homes for fear of ultimately facing eviction (see Site descriptions numbers 13 and 14 in Annex 1.3).

IV. THE ECONOMIC AND SOCIAL IMPACTS OF THE LAP

4.1 Benefits according to respondents

Almost all respondents stated that the LAP certification program was of benefit to those who obtained land certificates. Some 98.4% of LAP participants who said that it was useful gave various reasons as shown in Table 4.1 below. Respondents who had received LAP certificates but said that the program was not of any benefit were almost always people who had never used their certificate for any specific purpose, such as bank collateral, and were unaware of any advantage to be gained from a land certificate.

Table 4.1 Reasons Why Participants Find a LAP Certificate Useful (n=986)

Reason	
Ownership of land is legally strong	47.2
A certificate gives a feeling of security	24.9
A certificate can be used as collateral	19.9
Certificated land can be sold more easily	2.3
The value of the land will increase	1.8
Other reasons	3.9

Possession of a land certificate has made people feel that their ownership rights are clearly recognized in the legal sense because the state, through the district-level Land Office, has given recognition to their claim to the land. Prior to LAP implementation, proof of ownership for the greater proportion of land in the research sites was still in the form of a *girik (*traditional land document), deed of sale or, in many cases, an ordinary receipt showing purchase of the land. All of these forms of proof were open to challenges from other persons who had a claim to the land in question.

For many respondents this feeling of security also stemmed from the fact that the boundaries between adjacent parcels of land had become clear as a result of the technical measuring carried out by the surveyors and witnessed by the RT or RW head and the landholders concerned. This has made it possible for neighbors to avoid disputes. In the specific case of inherited land, respondents who are heirs feel safe from the possibility of claims from co-heirs because the land ownership document is no longer in the name of parents but in the name of the present owner.

In all research areas respondents found the LAP to be a convenient means by which to subdivide inherited land, if subdivision had not already been done. A parcel of land that had previously been in the name of parents could be directly registered in the name of the various heirs. All that was needed was a photocopy of the identification card of each heir. If the parents were still living, registration was usually done by the parents themselves, while in situations where they were deceased, the heirs arranged matters together and then witnessed the measuring of each subdivision of the parcel by the surveyors.

Several respondents said that the certificate could be used as collateral to obtain a bank loan, even though most had never used it for that purpose. In putting forward this reason, they were influenced by information from the Adjudication Team at the time when socialization of the program was being carried out and by the experience of other people who had made applications for credit in the past. Prior to the LAP, some banks like the BRI had been willing to accept collateral in the form of a *girik* (traditional land document) or a deed of sale,

but the number was very limited. Since LAP certification all banks have been prepared to accept the certificate as collateral, provided that other requirements can be met.

The following sections give details of the social and economic aspects of LAP impacts and cover the advantages of the certificate itself, the possibility of land alienation, access to credit, land values, taxes and levies. In many of the analyses the approach taken is to look at the differences in the changes between variables after and before the LAP in areas where the program was conducted and to compare them with the situation in control areas. This approach in analysis is intended to net out any possible influence from other factors. In the specific case of impact analysis, only one parcel of land has been used for each household. In LAP locations a parcel with a LAP certificate has been used, while in control locations a parcel without any kind of certificate has been used. If the respondent owns more than one parcel of land, the parcel that received special treatment such as use as collateral, informal mortgaging or sale has been chosen. If none of the parcels owned by the respondent has received special treatment, the one most valuable in the perception of the respondent has been selected.

4.1.1 Advantages of a LAP certificate by comparison with expenditure

The majority of respondents (94.7%) said the money, time and effort expended to obtain a certificate through the LAP were small by comparison with the advantages of having a certificate. Just over half of these respondents felt that the certificate itself would be very useful. Advantages included ownership proof, a feeling of security and access to credit. Some 39% mentioned the low cost and the easy process of LAP certification as benefits. These aspects were in contrast to the trouble, money and time taken to obtain a certificate through the sporadic program.

As shown in Chapter 3, the average total cost of a LAP certificate was Rp36,449 per parcel and the average time taken was 2.2 months. Requirements were not difficult to meet and in many locations were even easier than stipulated. Also, applicants had to deal only with one team at village level. To obtain a certificate through sporadic registration would require personal handling of the application, much more money, a more difficult process, time-consuming details and frequent trips back and forth to the district Land Office.

Although the provincial-level Land Office in all regions had prepared its own rates for preparation of sporadic land certificates based on the size and condition of the land, the actual cost usually proved to be much greater while the process took more than one year. The experiences of a number of respondents and informants who had undertaken sporadic registration of their land are quoted here to illustrate the point. (1) In Jakarta, there were people who had spent two years trying to arrange registration but the certificate had not yet been issued. (2) In Bekasi, an informant obtained a certificate for 400 sq. meters of land at a cost of Rp 1.4 million; the time taken was 1.5 years. (3) In Bandung, certificates for land under 500 sq. meters cost between Rp 2 and 3 million and took years to obtain. (4) In Depok, an outlay of Rp 2 to 3 million was needed for a parcel measuring 100 sq. meters. (5) In Sleman, a respondent had tried to obtain a land certificate before the LAP and had already paid Rp340,000 in advance but after a year he cancelled his application because the certificate was not finished; only Rp1,000 of his money was returned to him.

4.1.2 Security of tenure

Approximately 70% of respondents believe that they now have greater security of tenure as a land certificate recognizes their ownership rights. It was difficult, however, to link their confidence to the possibility of eviction for government or other projects that require land, since the survey found in all the survey sites, including control areas, that very little

alienation of land has occurred since implementation of the LAP. This is a reflection of the state of the Indonesian economy, which in recent years has not favored investment in large-scale construction projects. The survey recorded only six certificated parcels and one parcel without a certificate that were involved in alienation. In these cases the land was required for road development and expansion of a state-owned sugar-mill.

Meanwhile, qualitative information in a number of research locations indicated that before the LAP was carried out, land was frequently alienated either for the construction and widening of roads or for housing developments. In one study site, for example, there is an area of 30 ha which had been alienated for a housing estate before the LAP began but to this day remains quite neglected. The difference found during the survey cannot be taken as an indicator that the possession of LAP certificates has made landowners quite safe from the possibility of eviction. Respondents living in one control site located close to an industrial estate, for example, very much hope to be able to obtain LAP certificates, as they feel that this would make their bargaining position far stronger if their area is ever affected by expansion in the industrial estate or if the government decides to establish new development projects.

4.1.3 Access to credit

Table 4.2 shows the percentage of LAP and control respondents who used their land as collateral for credits before and after LAP certification. From these data it can be seen that there was an increase after the LAP in the use of certificates as collateral in LAP locations, whereas in control areas the opposite tendency is evident. The difference between the differences in percentages for use as collateral in LAP and control areas is quite large. It is estimated that LAP certificates have increased the use of land as collateral for credits by as much as 12.8%.

The percentage of LAP respondents who used a land document as collateral before the LAP is highest in semi-urban areas while urban and rural figures are the same. After the LAP was conducted, a change occurred and the percentage in rural areas became the highest, followed by semi-urban and urban areas. Overall, in the three types of region there has been a rise in the number of respondents who have used their land as collateral since the LAP, with the greatest jump in rural areas, that is, from 4.1% to 30.7% or an increase of around seven times. The opposite has occurred in control locations, where both before and after the LAP the percentage has been highest in rural areas, followed by semi-urban and urban areas. In semi-urban and rural areas in control areas there has been a drop of 1.8% but in urban areas there has been a slight increase (0.6%).

It cannot be concluded that the increase in the use of land documents as collateral in LAP locations is attributable to LAP certification because of the presence of a number of other factors such as improvements in the general business climate. To identify the effects of the LAP, a comparison is now made between changes in LAP areas and changes in control areas. From the last column of Table 4.3 it can be seen that there is a significant difference of 12.8% in the use of certificates as collateral. This figure shows the percentage of increase as a consequence of the LAP. The highest increase was in rural areas (28.4%), followed by semi-urban (13.4%) and urban (2.4%).

Table 4.2 Respondents Using a Land Certificate as Collateral to Obtain Credit

Type of region/ Quintile of per capita expenditure	LAP participants				Control group				Difference between LAP and Control
	N	Before LAP (%)	After LAP (%)	Differ-ence (%)	N	Before LAP (%)	After LAP (%)	Differ-ence (%)	
By type of region:									
Urban	362	4.1	7.2	3.0	177	2.8	3.4	0.6	2.4
Semi-urban	422	7.1	18.7	11.6	219	6.4	4.6	-1.8	13.4
Rural	218	4.1	30.7	26.6	112	12.5	10.7	-1.8	28.4
By average per capita household expenditure:									
Q1	192	2.1	14.1	12.0	92	6.5	3.3	-3.3	15.2
Q2	198	3.0	13.6	10.6	100	6.0	3.0	-3.0	13.6
Q3	200	7.0	18.0	11.0	102	3.9	5.9	2.0	9.0
Q4	200	6.0	17.5	11.5	100	8.0	8.0	0.0	11.5
Q5	210	8.6	22.4	13.8	113	8.0	7.1	-0.9	14.7
Total	1,002	5.4	17.2	11.8	508	6.5	5.5	-1.0	12.8

Note:
a) Total LAP respondent households = 1,002 rather than 1,004 because of two missing values on LAP impact.
b) Two LAP respondents (out of 1002) gave no information about monthly household expenditure.
c) One control group respondent gave no information about monthly household expenditure.
d) Quintiles for per capita household expenditure have been calculated at sub-district level.

This situation can be explained to a certain extent by the sources of livelihood of the families. From Table 4.3 it can be seen that in urban and semi-urban regions most respondents are employed in the services sector, that is, as drivers of vehicles, small boats, *ojek* and pedicabs and as unskilled wage laborers. In rural areas, however, the majority is employed in the agricultural sector. Employment in the services sector usually does not require the person concerned to have his own capital. The opposite applies in agriculture, however, where farm inputs have to be purchased. Data for trade, which also requires capital, vary somewhat between regions but show a similar trend. The field of employment is relevant to access to bank credit, because banks generally require a credit applicant to have a viable business.

Table 4.3 Sources of Livelihood of Household Heads by Employment

Source of Livelihood	LAP Participants (%) n=1004			Control group (%) n=508		
	Urban	Semi- urban	Rural	Urban	Semi- urban	Rural
Agriculture	3.0	22.9	43.6	2.3	24.2	53.6
Industry	2.5	13.7	9.2	2.8	11.0	8.0
Trade	18.5	20.5	17.0	25.4	16.9	15.2
Services	54.1	33.0	27.1	50.9	37.9	20.6
Other sources	21.8	9.9	3.0	18.6	10.1	2.7

Note: Other sources include pensions and remittances from children and relatives.

In both LAP and control locations more than 90% of households chose a banking institution as the place to obtain a loan with their land documents as collateral. The BRI is the bank most frequently used, very largely because it is the only bank that has had a branch in every sub-district capital since the 1980s and the community is therefore familiar with it. It is interesting to note that the rate of borrowing with collateral of this kind is highest in rural regions and the increase as a consequence of the LAP has also been the highest in these regions. The opposite has occurred in urban areas. This phenomenon does away with the belief that village communities are reluctant to have any contact with the formal banking world.

From the point of view of per capita household expenditure in LAP and control areas before and after the LAP, the percentage of respondents using land documents as collateral tends to rise as household expenditure increases (see Table 4.2). In LAP locations the difference between before-LAP and after-LAP figures is greatest in the highest expenditure quintile (13.8%) followed by the lowest quintile (12.0%). In the control areas the difference is negative in the two lowest and the highest quintiles, which means that a decrease has occurred in this variable. The influence of the LAP on the increase in use of certificates as collateral, as revealed by the difference in the differences between LAP and control sites, can be seen in the U-shaped curve. The highest figure (15.2%) occurs among respondents in the lowest income group, followed by the highest group (14.7%) with the lowest in the middle expenditure groups. This phenomenon can also be explained in terms of the source of income of family heads based on type of region (Table 4.2). Most of the respondents in the lowest expenditure group are employed in agriculture while the highest expenditure group consists largely of people engaged in trade and the middle group of people who work in services, industry and other activities.

Land for home-lots and housing is the type most commonly used as collateral. This is explained by the fact that many respondents own only the land on which they live and the fact that this type of land usually has a higher value than agricultural land of any kind. It therefore has a greater value when used as collateral.

From the above information it can be concluded that the LAP has had a fairly significant effect (12.8%) on the use of certificates as collateral in credit applications. This conclusion fits in with qualitative information from a number of sources, including prominent community figures, village administrative authorities, Land Offices and BRI branches in all study areas. Most stated that since the LAP program was introduced, borrowing from banking institutions by members of the community has increased both in number of borrowers and the size of loans.

At village and *kelurahan* level evidence of this increase is apparent in the rise in the number of letters of recommendation prepared for prospective borrowers by the *lurah*, while in Land Offices it can be seen from the rise in requests for *hak tanggungan*.[5] The survey found only eight cases in LAP areas and one case in control areas of respondents who had requested formal use of *hak tanggungan* for their loans after the LAP. Of these cases 60% involved the use of a LAP certificate.

[5] *Hak tanggungan*, which was previously known as *hipotek* or mortgage rights, is usually required by the bank for a loan above a certain size as it gives the bank the right to auction the collateral if the debt is not repaid. Without *hak tanggungan* the collateral has no legal significance, which means that any problem has to be dealt with through the law-court. In Karawang District *hak tanggungan* is normally required for loans of Rp 30 million or more.

In all BRI branches that were visited there has been an increase in number of loans and borrowers since the LAP was carried out. Bank staff said that the LAP has had certain advantages for the bank. The legal basis for lending is stronger if certificates are used as collateral, while guarantees, especially for large loans, are safer because they are reported first to the Land Office. At the same time there has been an increase in number of customers and loans and repayments of credit are more reliable because borrowers show greater responsibility in this matter.

BRI branch staff said that the bank can in fact accept collateral in the form of deeds of sale and even *girik*, provided that the person requesting the loan has a viable business. Even so, possession of a land certificate gives people greater confidence in requesting a loan because they feel confident that their application will be accepted by the bank if accompanied by collateral of this kind. Almost all branches, however, differentiate between certificates and other land documents as collateral by setting different limitations for the size of loans. Variations also exist between different branches of the bank. Meanwhile, staff in four of the 13 BRI branches that were visited during research stated that, since the LAP certification program, they have altered their previous policy and now accept only land certificates as collateral, even though they have not openly announced this change. This policy could explain the decrease in the percentage of loans using land documents other than certificates as collateral in control locations, as shown above.

Most of the credit obtained from banks is used for business activities. In LAP areas loans for businesses account for around 84.2% of the total, with 77.5% used for non-agricultural and 6.7% for agricultural purposes. In the control areas, loans for businesses reach 78.6% (53.6% for non-agricultural and 25% for agricultural purposes). The rest are for consumption purposes, the building or improvement of houses, children's education, and medical expenses. From these facts it can be assumed that LAP certification, by widening opportunities for credit, has had a positive effect on local business activities, and this in turn should have led to improved conditions in the local village economies, specifically for LAP participants.

Informal mortgaging (*gadai*) in both LAP and control locations has been very limited. Among the 1002 respondents in LAP locations only two transactions were recorded in the pre-LAP period and seven after LAP. In the control areas there were four before and two after the LAP. These findings are supported by statements from informants who said that informal mortgaging transactions are rare. The reason lies in the availability of funds on the part of prospective mortgagees, the usefulness of the land offered as a mortgage, and the degree of interest on the part of landowners. Since formal bodies like the government pawnshops do not accept land certificates, transactions are always of an informal nature between a landowner and a member of the community such as a neighbor.

The increase from two to seven in informal mortgaging transactions in LAP sites is not traceable to the effect of the LAP, since mortgaging is not linked to a land ownership certificate but is directly connected to the land itself. In mortgaging the owner hands over his land to another person who can then use it in return for a certain sum of money. After the agreed period of time has expired, the landowner repays the loan and receives back his land. If he cannot repay the money, the agreement is extended or else the land is confiscated by the person who "borrowed" it. Since land that is mortgaged in this way has to be productive, it usually takes the form of cultivable fields or a location for trade or some kind of business. Money obtained by respondents in this way was used as capital for non-agricultural undertakings, house repairs, investment and the education of children. There was also a respondent who "mortgaged" his certificate to a hospital because he was unable to pay medical bills.

4.1.4 Increases in taxes and levies

The Land and Buildings (PBB) tax

Some 28.3% of respondents in LAP areas said that there had been a noticeable rise in the PBB after LAP certification, while 22.3% of control respondents said the same thing. The increase of nominal PBB taxes in LAP areas averages 93.5%, while in control areas the percentage increase is smaller (60.3%). Overall, the net impact of LAP certificates on nominal PBB tax increase was 33.2% (Table 4.4. The highest increase was in urban areas (55.8%) and the lowest in semi-urban locations (13.3%).

Table 4.4 Average Increases in Land and Building Tax (PBB) after LAP Certification by Type of Region

Type of Region	LAP participants		Control group		Average difference %
	No. of respondents	Average increase (%)	No. of respondents	Average increase (%)	
Urban	70	118.3	14	62.5	55.8
Semi-urban	112	83.1	56	69.8	13.3
Rural	29	73.8	21	33.6	40.2
Total	211	93.5	91	60.3	33.2

Village levies

Unlike the situation in urban *kelurahan*, in rural areas there is generally a village charge or levy that is collected by the village office once a year at the time when the PBB tax is collected. This variable could not be analyzed, however, because very little information was obtained during the survey. Only 13 out of 1002 LAP respondents and 8 out of 508 control respondents replied to the question about village levies. All who answered live in rural and semi-urban areas.

Discussions with informants showed that a village levy is imposed in only four of the LAP sites and three control sites, all located in Karawang, Bekasi, Karanganyar and Sleman. The amount to be paid is fixed at certain intervals and is based on the size of land parcels. The LAP program had no influence at all on changes in amount. These villages that had no such levy before LAP have continued not to impose one, while in two cases where there had previously been a levy, an increase was made at village level. Increases are due not to the LAP but to a rise in the needs of the village because of inflation. Meanwhile, it would seem that none of the research villages have introduced new levies or charges, since only four respondents out of the total sample said that there had been some kind of new levy.

4.2 Differential social impacts

4.2.1 Gender

In the context of the gender aspect of land certification, analysis is based on treatment towards men and women during the implementation process and on the names written on certificates in relation to the origin of the land.

Treatment towards men and women

When asked whether women landholders had been treated any differently from men during the LAP process, the majority of respondents (89.7%) said that there had been no discrimination. The fact that invitations to attend socialization meetings were sent to the household head (who in 93.4% of survey cases was a man) is quite normal in Indonesia and in the perception of respondents was in no way discriminatory. Where a woman was the head of a household, she was duly invited to meetings. Most women, however, tended to delegate this task to a son or some other male member of the family.

Only 10.5% of women handled the application and supporting documentation for a certificate that was to be issued in their own name. Others asked the husband, a son/son-in-law or father/father-in-law to act on their behalf. Most women collected completed certificates themselves, however, because the Adjudication Team insisted on the person who had been recorded as owner of the land appearing personally.

Names on certificates

Conclusions about the effect of the LAP on land ownership by women cannot be based merely on whether there are more men's than women's names on certificates. It is necessary to relate the origin of the land to any changes that have occurred in names before and after certification.

Table 4.5 shows that the number of parcels originating directly from the husband's side of the family (both inherited and purchased by the husband before marriage) is 730, by comparison with 294 which were inherited or purchased by the wife before marriage. Thus the ratio is 5:2. It is not surprising therefore that the number of women's names on certificates is far less than the number of men's names. Approximately 26.1% of parcels have been recorded in the name of women, both wives (21.7%) and daughters (4.2%), with a very small percentage in the names of granddaughters and unmarried women (including widows). Around 66.4% of parcels with a LAP certificate are in the names of men, with 60.6% in husbands' names, 4.7% in sons' names and 1.1% in the names of other men (sons-in-law, grandsons and unmarried men including widowers). The proportion of certificates in both the husband's and the wife's names is extremely small.

According to BPN officials, the Land Office used the name written on a deed of sale or a sales receipt in preparing the certificates for purchased land. Qualitative information from a number of other persons, including village and RT heads, indicates that the name written on a LAP certificate generally depends on the identity of the owner of the land. If the land is an inheritance or gift from the wife's family, then her name is put on the certificate. The same applies to husbands.

This is supported by quantitative data obtained during the survey, which shows that for 697 land parcels originating from the husband's parents, most (74.5%) of the certificates have been issued in his name, with 2.9% in the wife's name, 7% in a son's name and 5.2% in a daughter's name. Where land has come from the wife's parents, 78.2% are in the wife's name, 5.9% have the husband's name, and 4.6 % have a daughter's name and 1.8% have a son's name.

Table 4.5 Names on LAP Certificates by Origin of the Land

Origin of land	Number of Certi-ficates	Names on LAP certificates (%) **										
		Hus-band	Wife	Husband + Wife	Others							
					UM* M	UM* F	Son	Daugh-ter	Son-in-law	Grand son	Grand daugh ter	No answer
Inherited from husband's parents	697	74.5	2.9	0.0	0.6	0.0	7.0	5.2	0.1	0.4	0.0	9.2
Inherited from wife's parents	289	5.9	78.2	0.0	0.0	0.4	1.8	4.6	0.0	0.0	0.0	9.0
Purchased by husband before marriage	33	69.7	9.1	0.0	6.1	0.0	6.1	6.1	3.0	0.0	0.0	0.0
Purchased by wife before marriage	5	20.0	80.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Purchased by husband after marriage	253	78.7	9.9	1.2	0.0	0.0	4.4	2.8	0.0	0.4	2.7	2.8
Purchased by wife after marriage	22	18.2	72.7	0.0	0.0	0.0	0.0	4.5	0.0	0.0	0.0	4.5
Purchased jointly by husband and Wife after marriage	237	70.9	16.9	3.0	1.7	0.0	1.7	1.7	0.0	0.0	0.8	3.4
Other origin	6	50.0	0.0	0.0	0.0	0.0	16.7	16.7	16.7	0.0	0.0	0.0
Total	1,542	60.6	21.7	0.7	0.6	0.1	4.7	4.2	0.2	0.3	0.1	6.8

Note: * UM M = Unmarried Male (single, divorced or widower).
UM F = Unmarried Female (single, divorced or widow).
** Percentage of totals for the origin of land.

Land purchased by the husband before or after marriage is mainly (77.6%) in his name. The same applies to land bought by the wife before and after marriage; 74% has been recorded in her name. Even so, a small proportion of land parcels bought by husband or wife either before or after marriage has been transferred to the spouse (9.8% and 18.5% respectively).

According to data from key informants in the village administrative office in Wiroditan village in Pekalongan District, 335 land parcels were certificated through the LAP and of these 149 certificates (45%) were issued in the names of women. The reason given by informants is that in this area a relatively high proportion of land has passed to women through inheritance or has been given as a gift to daughters by their parents.

Land purchased jointly by husband and wife

Key informants stated that where land has been bought jointly by a couple after marriage, it was generally registered in the LAP certification program in the husband's name because he is the head of the household. Among respondents there are a few cases where land bought after marriage was registered in the name of the wife (16.9%) or in both names (3%) but in most cases (70.9%) it is in the husband's name. Survey data reveal that where land purchased jointly after marriage has been put in the husband's name, it was because the couple together decided to do so.

The tendency for land purchased jointly after marriage to be recorded in the husband's name is greater in urban areas than in rural areas (Table 4.6). In urban areas 76.9% has been registered in the husband's name and 14.3% in the wife's name. In rural areas land bought jointly is in the wife's name in 20.4% of cases and in the husband's in 66.7% of cases. In semi-urban areas the proportions are 17.4% in the wife's name and 67.4% in the husband's name.

Overall, respondents said that the reason for the name on the certificate depended on inheritance (51.9%) or on a joint decision by husband and wife (38.3%). A small group said that the reason was that the original name had not been altered (4.9%) while others said the decision was based on the advice of parents so that the land could easily be passed on to the next generation and could not be sold to others. Qualitative information revealed exceptions in a number of areas, however. In Jagakarsa, in cases where the husband was deceased, the certificate shows the name of the eldest son. In Saga there were cases of land given by the respondent's parents-in-law being registered in the names of husbands as head of the household. The wives had no objection because they believed that the land in question belonged to the household.

Table 4.6 Names on LAP Certificates by Origin of Land and Type of Region

Origin of land	No. of certificates	Name on LAP certificate (%)			
		Husband	Wife	Husband + wife	Other person
Urban					
Inherited from husband's parents	107	66.4	7.5	0.0	26.2
Inherited from wife's parents	61	6.6	63.9	0.0	29.5
Purchased by husband before marriage	17	58.8	0.0	0.0	41.2
Purchased by wife before marriage	3	33.3	66.7	0.0	0.0
Purchased by husband after marriage	131	81.7	13.0	0.8	4.6
Purchased by wife after marriage	12	0.0	83.3	0.0	16.7
Purchased jointly by husband and wife after marriage	91	76.9	14.3	3.3	5.5
Subtotal	*234*	*75.6*	*17.1*	*1.7*	*5.6*
Other origin	4	75.0	0.0	0.0	25.0
Total	426	62.4	20.9	0.9	15.7
Semi-urban					
Inherited from husband's parents	371	77.1	1.4	0.0	21.6
Inherited from wife's parents	157	5.1	82.8	0.0	12.1
Purchased by husband before marriage	11	81.8	18.2	0.0	0.0
Purchased by wife before marriage	2	0.0	100.0	0.0	0.0
Purchased by husband after marriage	80	72.5	6.3	1.3	20.0
Purchased by wife after marriage	4	0.0	100.0	0.0	0.0
Purchased jointly by husband and wife after marriage	92	67.4	17.4	4.4	10.9
Subtotal	*176*	*68.2*	*14.2*	*2.8*	*14.8*
Other origin	2	0.0	0.0	0.0	100.0
Total	719	58.8	22.8	0.7	17.7
Rural					
Inherited from husband's parents	219	74.0	3.2	0.0	22.8
Inherited from wife's parents	71	7.0	80.3	0.0	12.7
Purchased by husband before marriage	5	80.0	20.0	0.0	0.0
Purchased by wife before marriage	-	-	-	-	-
Purchased by husband after marriage	42	81.0	7.1	2.4	9.5
Purchased by wife after marriage	6	66.7	33.3	0.0	0.0
Purchased jointly by husband and wife after marriage	54	66.7	20.4	0.0	13.0
Subtotal	*102*	*72.6*	*15.7*	*1.0*	*10.8*
Other origin	-	-	-	-	-
Total	397	61.7	20.4	0.3	17.6

Box 4.1
Subdivision of Holdings by Type of Land

In Sleman District the subdivision of land during the LAP process usually gave sons and daughters approximately the same area. There were, however, cases where subdivision was based not on size but on type of land. Thus sons were given rice-fields while daughters were given home-lots. Subdivision was decided on by the parents together with the family; outsiders such as the head of the RT or RW or members of the Adjudication Team played no part in the decision. There were also cases where subdivision depended on the location of the land; parcels some distance away from the hamlet were for sons while those close by were for daughters.

Box 4.2
Different Approaches to Names on Land Certificates

In Palembang qualitative information from local officials indicated that four factors determined which names were to be written on LAP certificates. For many people the main factor was the origin of the land; if, for example, it had been inherited from the wife's parents or if the wife had bought it, she was recorded as owner and the certificate was issued in her name, while if the land came from the husband or his side of the family, it was registered in his name. The second factor was attitudes within the family; some families put the land in the husband's name out of respect for him as head of the family and the breadwinner, without any consideration of where the land had come from. A third factor was concern on the part of parents for their children's future, which led them to register the land in the names of all the children. The fourth factor was a desire to avoid subdivision of inherited land; thus land of this kind was sometimes registered in the names of all the heirs.

4.2.2 Distinctions between rich and poor

In attempting to identify any distinctions between rich and poor in the granting of LAP land certificates, the survey collected data for monthly household expenditure as a proxy for economic status. Data are expressed in quintiles in proportion to the number of certificates issued through the LAP. Quintile 1 consists of households with the lowest expenditure, Quintile 3 those with medium expenditure, and Quintile 5 those with the highest relative expenditure.

Table 4.7 shows that the average proportion of land parcels certificated through the LAP is greater than 90% for all quintiles. This proportion increases somewhat from Quintile 1 to 3 and then decreases. This indicates that systematic land registration touched all socio-economic groups within the community, with the greatest percentage in the middle group. It should be noted, however, that the land parcels recorded in the present survey are only those situated in research sites. It is possible that respondents in Quintiles 4 or 5 (the wealthier respondents) might own land elsewhere.

Table 4.7 Average Number of Land Parcels Certificated through the LAP by Expenditure Quintile

Quintile	All land parcels (n=1002)		LAP certificates (n=1002)		Proportion (%)	
	No. of parcels	Size of parcels (m2)	No. of parcels	Size of parcels (m2)	No. of parcels	Size of parcels (m2)
Quintile 1	1.5	478.1	1.4	478.9	94.5	100.0
Quintile 2	1.6	590.8	1.6	555.6	98.2	94.0
Quintile 3	1.7	517.7	1.7	505.6	99.4	97.7
Quintile 4	1.7	509.6	1.6	437.8	92.9	85.9
Quintile 5	1.7	713.9	1.9	534.2	91.3	74.8

This table also shows that the average number of parcels from the total owned by respondents increases with quintiles (from 1 to 5), but if the size is considered the pattern is different and does not quite reflect "rich" and "poor". It is not always those in the wealthiest group who have the largest parcels of land. For example, respondents in Quintile 2 own parcels averaging 591 sq.` meters, whereas those in Quintile 4 have an average parcel of 509 sq. meters.

The same pattern appears in the average number of certificated parcels owned by respondents, that is, the number increases with wealth from Quintile 1 to 5, except in the case of Quintile 4 which is smaller than Quintile 3. Once again, it is not always the wealthy who have the largest areas of land. The average size among the Quintile 5 group is smaller than the size owned by Quintile 2 respondents and on average sizes owned by Quintile 4 people are smaller than those owned by the Quintile 1 group.[6]

4.2.3 Participation of ethnic groups

Information from key informants indicated that there are Indonesian citizens of Chinese ethnic origin in survey areas in Karawang, Bekasi, Depok, Palembang and Medan and that they had been obliged to meet one further requirement in the form of proof of citizenship (SBKRI) when submitting LAP applications.

As it happened, there were very few respondents of Chinese origin in survey locations. Of the 899 respondents who answered the question about ethnic discrimination, 50.7% said that they did not know if it had occurred, while 47.6% said that there had been no discrimination of any kind. Only 1.7% stated that they felt that there had been discrimination.

[6] This is because the table is not differentiated by types of region (urban, semi-urban, rural).

V. WIDER SOCIO-ECONOMIC EFFECTS OF THE LAP

5.1 Investments in land

Investments in land in this context are considered to be changes made in the condition of a parcel of land in such a way that benefits or services from that land will increase. One benefit gained from the LAP is that landholders now have legal proof of ownership and this in turn creates a sense of security in using the land for any purpose. People feel that they can make improvements to their land or to their houses without fear of disturbances or claims by other people. While it is recognized that other factors, in particular the availability of money, influence the extent to which land and buildings are improved, this analysis focuses specifically on the effect of LAP certificates on the extent of investments.

The analysis will differentiate by type of region (urban, semi-urban and rural), per capita expenditure of the certificate holder's household (based on five quintiles in which Q1 has the lowest expenditure) and the form of land use (home-lot, agricultural land and other uses).

5.1.1 Land improvements

In both LAP and control areas, irrespective of type of region, land improvements have been made. The proportion in the control group, however, is lower than in LAP areas (Table 5.1). If all regions are considered, the difference between the two (5.3%) is the net effect of LAP certification. The highest figure occurs in rural areas (12.3%), while in urban and semi-urban areas comparable figures are 3.5% and 3.4% respectively.

Table 5.1 Improvements to Land after LAP Certification by Type of Region

Type of region	LAP participants			Control Group			Difference (%) between LAP and Control
	No. of parcels	Improve-ments made	Pro-portion (%)	No. of parcels	Improve-ments made	Pro-portion (%)	
Urban	362	76	21.0	177	31	17.5	3.5
Semi -urban	422	97	23.0	219	43	19.6	3.4
Rural	218	60	27.5	112	17	15.2	12.3
Total	1,002 [a)]	233	23.3	508	91	17.9	5.3

Note: [a)] See note a) to Table 4.2.

The extent of improvements increases with monthly expenditure quintiles among both LAP participants and the control group (Table 5.2). The net effect of LAP on land improvements has been inverse U-shaped, with the greatest effect was for households in the middle quintile. For respondents in the lowest expenditure quintile, the effect of a LAP certificate has been negative, although small.

The type of land that has most commonly been improved is land used for houses (that is, home-lots). Among LAP participants the proportion of improved home-lots is 23.9%, while in the case of irrigated rice-land the figure is 17.6% and for other agricultural land it is 5.9%. In control group locations, most of the improvements (20%) that occurred involved agricultural land other than irrigated rice-fields. Land for housing is 18.1% and for rice cultivation 13.6%.

Table 5.2 Improvements to Land after LAP Certification by Per Capita Household Expenditure

Expenditure quintile	LAP participants			Control group			Difference (%) between LAP and Control
	No.of parcels	Improve-ments made	Pro-portion (%)	No.of parcels	Improve-ments made	Pro-portion (%)	
Q1	192	30	15.6	92	17	18.5	-2.9
Q2	198	33	16.7	100	10	10.0	6.7
Q3	200	56	28.0	102	19	18.6	9.4
Q4	200	54	27.0	100	19	19.0	8.0
Q5	210	60	28.6	113	25	22.1	6.4
Total	1.000 [a)]	233	23.3	507 [b)]	90	17.8	5.5

Note: a) See note b) to Table 4.2.
b) See note c) to Table 4.2.

5.1.2 Improvements to housing

Table 5.3 shows that in both LAP and control areas more than 75% of the cases of improvements to housing consisted of the building or repair of houses. In some cases they involved the addition of rooms or improvements in flooring, while in other cases they consisted of the construction or improvement of fencing.

Table 5.3 Improvements in Housing after LAP Certification

Form of improvement	LAP land parcels		Control sites	
	Freq.	%	Freq.	%
Construction/repair of house	170	75.2	67	79.7
Addition of rooms/better flooring	20	8.9	12	14.3
Construction/improvement of fencing	7	3.1	3	3.6
Other improvements	29	12.8	2	2.4
Total	226	100.0	84	100.0

5.1.3 Improvements to agricultural land

Some 34 parcels of irrigated rice-fields were certificated through the LAP; of these 17.6 % underwent a change in land use while in control areas the figure was 13.6% of 22 parcels. The overall impact was thus 4%. Improvements to rice-fields included the repair of irrigation channels in two cases. In the control areas changes were made to three out of 22 parcels; in two cases the change involved construction of a house.

5.2 Changes in land markets

5.2.1 Impact on the perceived value of land

It proved difficult to obtain information about the value of land, especially when respondents were asked specifically about periods before and after LAP implementation. Many respondents had never known, and others could not remember, what their land had been worth a few years ago. Only those who have sold or mortgaged land or plan to do so had any real knowledge of trends in land prices. For this reason the prices mentioned in this section may not be the actual market values that prevailed but simply the perceptions of respondents. The difficulty of obtaining information can be seen from the fact that only 634

respondents (63.3%) in LAP areas and 216 (42.5%) in control locations gave answers to questions about land values (Table 5.4).

In the following analysis of the effect of land certification on land values, a comparison is made of the average increase in land prices in LAP and control areas. Overall, the increase in the former areas has been 203.4% and in the latter 138.9%. The difference between the two, that is, around 65%, is considered as the impact of LAP certificates on average land prices. The greatest rise within LAP areas occurred in urban regions (228.6%), while in control areas it took place in semi-urban areas (149.1%).

Table 5.4 Average Increases in Nominal Land Prices After LAP Certification by Type of Region

Type of region	Land with a LAP certificate		Control group		Difference (%)
	N	Price increase (%)	N	Price increase (%)	
Urban	213	228.6	36	95.4	133.2
Semi-urban	282	181.9	133	149.1	32.8
Rural	139	208.2	47	143.6	64.6
Total	634	203.4	216	138.9	64.5

The greatest net impact of LAP was felt in urban areas (a little over 133%), compare to 64.6% in rural areas and 32.8% in semi-urban areas. This means that urban land with a certificate experienced far higher increase in value relative to urban land without a certificate. This is understandable since on the whole people in towns and cities give more attention to the status of land because they are more aware of legal matters; furthermore, land parcels are so small that boundaries between them must be clear and at the same time there is more likelihood of land issues arising.

Interviews with key informants at community, village and sub-district levels revealed the same situation, namely, that there has been a tendency for land values to rise since the LAP, except in Bekasi. Not all informants, however, are convinced that the increase is due solely to the LAP, since factors like inflation, regional development and greater population pressure also exert an influence. In the Bekasi survey sites land values have gone down, not because of the LAP, but because of the economic crisis that occurred at the same time as LAP implementation. The crisis led to a drop in the number of Jakarta people interested in buying land.

Box 5.1
Variations in Land Values in the Same Area

In Tangerang, village authorities in the research site adopted a policy of having only home-lots and dry fields certificated through the LAP. Qualitative information indicates that this approach has led to a greater than normal price differentiation between rice-fields and other land since the implementation of the LAP. The value of rice-producing land is between Rp10,000 and 20,000 per square meter whereas other land can be worth as much as Rp300,000 per square meter. The reason for the big difference is that this location is expanding as a residential area because of proximity to industrial areas and the existence of housing estates nearby.

5.2.2 Sale and purchase of land

The impact of systematic land titling through the LAP on land markets can be seen from Tables 5.5 to 5.9. Data reveal that the LAP has had a net effect of 1.7% increase on the extent of land transactions in the survey locations (Table 5.5). The frequency of land transactions has been greatest in semi-urban areas in both LAP (5%) and control areas (3.2%), while the frequency of sales has been lowest in urban areas. Even so, in rural areas there has been a large difference between LAP locations and control areas. The differences, which have been as great as four times, indicate that the existence of a certificate is more significant in rural than in other regions. Even so, the differences across regions are not very great.

Table 5.5 Land Sold Since the LAP by Type of Region

Type of region	LAP participants			Control group			Difference (%) between LAP and Control
	No. of parcels	No. of parcels sold	Pro-portion (%)	No. of parcels	No. of parcels sold	Pro-portion (%)	
Urban	362	8	2.2	177	1	0.6	1.6
Semi-urban	422	21	5.0	219	7	3.2	1.8
Rural	218	8	3.7	112	2	1.8	1.9
Total	1,002[a)]	37	3.7	508	10	2.0	1.7

Note: [a)] See note (a) to Table 4.2.

Analysis by per capita expenditure quintiles (Table 5.6) shows that in LAP locations it is mainly respondents in Quintiles 2 and 3 who have sold land, while in control areas most sales have been made by respondents in Quintiles 4 and 5. The greatest overall effect of the LAP on land sales by LAP participants has occurred in Quintiles 2 and 3 (6.1% and 5.0% respectively), while the effects for the lowest and highest quintiles had been found to be negative.

Table 5.6 Land Sold since the LAP by Per Capita Household Expenditure

Expenditure quintile	LAP participants			Control group			Difference (%) between LAP and Control
	No. of parcels	No. of parcels sold	% of parcels sold	No. of parcels	No. of parcels sold	% of parcels sold	
Q1	192	2	1.0	92	2	2.2	-1.1
Q2	198	12	6.1	100	0	0.0	6.1
Q3	200	10	5.0	102	0	0.0	5.0
Q4	200	8	4.0	100	3	3.0	1.0
Q5	210	4	1.9	113	5	4.4	-2.5
Total	1,000*)	36**)	3.6	507**)	10	2.0	1.6

Note: See note (d) to Table 4.2.
*) See Note (b) to Table 4.2. **) See Note (c) to Table 4.2.

The type of land sold (Table 5.7) for home-lots in LAP areas was 3.4, while in control areas was 1.3%. The effect of LAP certification on the frequency of sale of home-lots is the difference between the two, that is, 2.1%. The effect on the sale of non-irrigated land has been around 1.8%, while the impact of the LAP on rice-fields has been negative (-3.2%).

Table 5.7 Land Sold Since the LAP by Type of Land Use

Land use	LAP participants			Control group			Difference (%) between LAP and Control
	No. of parcels	No. of parcels sold	% of parcels sold	No. of parcels	No. of parcels sold	% of parcels sold (%)	
Home-lot	947	32	3.4	465	6	1.3	2.1
Rice-fields	34	2	5.9	22	2	9.1	-3.2
Non-irrigated land	17	2	11.8	10	1	10.0	1.8
Other uses	4	1	25.0	11	1	9.1	15.9
Total	1,002[a)]	37	3.7	508	10	2.0	1.7

Note: See note (a) to Table 4.2.

5.2.3 Interest in buying and selling land

Table 5.8 indicates the extent to which potential buyers have shown an interest in the land of respondents in LAP and control locations. It appears that the land most attractive to buyers in both LAP and control areas is urban land, followed by semi-urban land. Rural land is less attractive in both LAP and control areas.

In LAP areas interest has been expressed in 11.5% of the 992 land parcels for which survey respondents gave information, while in control locations the figure is 9.0%. This indicates that purchasers prefer certificated parcels and that the LAP has had an impact of 2.5% on the interest of those purchasers. From the point of view of type of region, the impact of the LAP on purchasers' interest has been positive in urban and rural areas, yet in semi-urban areas there has been no apparent impact. The place of residence or domicile of those interested in buying land varies from the immediate vicinity of the land and other villages or *kelurahan* to towns and cities (urban regions) but the proportions are approximately equal.

Table 5.8 Interest in Buying Land in Research Areas

Type of region	LAP parcels		Control parcels		Difference between LAP and Control areas (%)
	Number of parcels	% of parcels in which buyers have shown interest	Number of parcels	% of parcels in which buyers have shown interest	
Urban	362	16.3	176	11.9	4.4
Semi-urban	415	9.2	216	9.3	-0.1
Rural	215	7.9	110	3.6	4.3
Total	992	11.5	502	9.0	2.5

A similar trend was found among respondents when they were asked whether they wish to sell their land. As Table 5.9 shows, interest in selling is highest in urban and semi-urban areas and lowest in rural areas. Overall, the interest in selling land in LAP areas was 5.7%, while in control areas was 4.2%. The impact of the LAP is indicated by the difference of 1.4% in the proportion in LAP and control areas. The greatest impact is found in rural areas (3.3%), followed by semi-urban (1.1%) and urban areas (0.5%).

Table 5.9 Interest in selling land in research areas

Type of region	LAP parcels		Control parcels		Difference between LAP and Control areas (%)
	Number of parcels	% of parcels which respondents wish to sell	Number of parcels	% of parcels which respondents wish to sell	
Urban	361	6.9	173	6.4	0.5
Semi-urban	414	5.3	214	4.2	1.1
Rural	215	4.2	110	0.9	3.3
Total	990	5.7	497	4.2	1.4

Although LAP implementation has had some impact on the wish of respondents to sell certificated land, they will do so only after considering a number of aspects, especially the economic aspect. The reasons given by those who said that they would like to sell land include a desire to move to another place, the wish to obtain business capital, plans to buy land elsewhere and the need for money to build a house. Similarly, the reasons for sale given by those who have already sold land are not of a consumptive nature. Rather, they said that they needed a large sum of money for the education of children, business capital or the purchase of land in another place.

5.2.4 Impact on nearby areas

It has been estimated that certification of land in a number of *kelurahan* and villages has also had an effect on land markets in the general vicinity. In the perception of just under 30% of LAP participants, land titling has indeed had an impact on land values in the vicinity of LAP implementation areas (Table 5.10). Just over 40%, however, felt that there has been no such effect, while another 30% said that they had no idea whether or not there has been an impact. The 70% of respondents in the last two categories stated that many other factors apart from the existence of LAP certificates have influenced land values.

Table 5.10 Perception of Respondents on the Impact of the LAP on Surrounding Areas

Opinion of respondents	Surrounding areas	
	Respondents	%
There has been an impact	298	29.7
There has been no impact	407	40.6
No idea	298	29.7
Total	1,003	100.0

Respondents living in areas where the LAP was not implemented very much hope that their villages and *kelurahan* will be included in the next round of LAP certification. While not everyone understands how cheap and easy the LAP process is, all hope that there will be some kind of large-scale registration program that will provide certificates for their land.

5.2.5 Other impacts

Two additional impacts of the LAP were mentioned by key informants at RT/RW, village and sub-district level. The first impact is the establishment of new offices by notaries in those sub-districts where LAP land titling has taken place. Five offices have been opened in Tangerang, one in Bekasi and one in Sleman, which indicates that there is now more demand among the community for notarial services.

The second impact is the decline that has occurred in village and sub-district revenue in places where the LAP has been carried out. The establishment of new offices by notaries has made it easy for landholders to have deeds of sale drawn up. Thus land transactions are being increasingly handled by notaries rather that by village and sub-district heads (*camat*). Actually it is still possible to obtain a land certificate through the *camat*, who is himself a PPAT (*Pejabat Pembuat Akta Tanah* or official with authority to prepare land deeds), but people prefer a notary, as they say that the fee is lower. The cost through a notary is between 1.0% and 1.5% of the sales value (NJOP), while the cost through the *camat* ranges from 5% to 15%, depending on negotiations and the size of the NJOP, which becomes lower as the land becomes more expensive. This means a drop in revenue for village and sub-district administrative authorities. The effect is felt most strongly in those villages that have no other sources of local revenue apart from charges for land transactions.

5.3 Encouragement of sporadic titling

Sporadic titling is land registration done at the request of the landholder, which usually means the owner or the buyer of a land parcel. Titling of this kind is done in the case of first-time registration or because of changes in physical or legal data about a land parcel that has already been registered. It also takes in the replacement of lost or damaged certificates. One effect of the LAP on nearby villages and *kelurahan* has been increased awareness of the benefits of certification.

The cost of sporadic registration, defined in this survey as first-time registration of land at the initiative of the individual landholder, is determined by the district-level Land Office for each area in the district or city. The largest component in pricing is land surveying, the cost of which has always been high. A survey respondent in Gresik, for example, said that the official cost of surveying land parcels less than one hectare in size ranges from Rp103,000 to Rp951,000 while for 10 hectares the figure is Rp7.35 million. In fact, however, the total cost is far greater.

For that reason many communities are attempting to establish a *swadaya* ("self-help") system of land titling that would be somewhat more expensive than the LAP, yet much cheaper than sporadic registration. Their plans are based on achieving economies of scale by having a large number of adjacent parcels surveyed at the same time and applications handled collectively. In many places close to LAP areas, however, the opposite has happened. People are waiting for the next "round" in the LAP and sporadic registration has actually declined. Hence the effect of the LAP on encouragement of sporadic land titling seems to have been mixed.

Some 94% of respondents said that the cost of LAP certification had imposed very little financial burden on their household because the program had been very cheap. The majority (78.9%) of respondents feel that, if the cost of the certificate has to be raised, it should be no more than Rp50,000, or Rp90,000 if other charges are included (Table 5.11).

Table 5.11 Willingness of Respondents to Pay a Higher Cost for Certificates

Attitude of respondent	Cost of certificate		Total cost		Difference (Rp)
	Number of respondents	Suggested cost (Rp)	Number of respondents	Suggested cost (Rp)	
Willing to pay more	594 (78.9)	52,352	675 (75.6)	89,399	37,047
Not willing to pay more	159 (21.1)	24,589	218 (24.4)	41,468	16,879
Total	753		893		

Note: Figures in brackets are percentages.

These amounts are substantially lower than the amounts people are actually willing to pay through a *swadaya* system. For example, in Ciganjur *kelurahan* (South Jakarta) the community is in the process of making a request to the BPN to undertake *swadaya* certification; people are prepared to pay Rp350,000 per parcel, which is the amount paid in other places where *swadaya* certification has already taken place. The same was found in Bandung. Meanwhile, in Baturaden (Central Java) respondents are making plans for *swadaya* certification at a cost of Rp150,000 per parcel.

At the same time many control group respondents feel that the cost of a certificate should be related to the size of the parcel of land. In Ciganjur, for example, some suggest the application of several layers or strata in charges that would reflect the location of the land, proximity to transport and the other factors mentioned above. They propose seven strata with a difference of Rp50,000 to Rp100,000 between each. Classification is not yet final, however, as there have to be further discussions among the community. With the introduction of a progressive scale of charges, the planned system of adjudication would more closely resemble sporadic than systematic registration of the type on which the LAP was based.

While recognizing the fact that there is great community interest in large-scale *swadaya* registration of land, BPN officials[7] have said that *swadaya* adjudication cannot be undertaken because there are as yet no regulations that would provide a legal basis for land certification of this kind. At the present time proposed regulations are being discussed for submission to the Department of Finance.

[7] Discussion in the central office of the BPN on 10 May 2002.

VI. CONCLUSIONS AND IMPLICATIONS FOR POLICY DEVELOPMENT

If the LAP is to be continued in its present form, a number of implications from the findings of this study warrant consideration.

Implications based on survey data:

1. Priority in targeting should continue to be given to landholders in the lower socio-economic strata in all regions. The subsidy provided by the LAP to cover part of certification costs is difficult to justify if the benefits of LAP titling are to be shared by landholders in the higher socio-economic strata. There is, however, an urgent need to make sporadic titling as easy and as fast as LAP titling.

2. Policies concerning the cost of certificates should be reconsidered and should take into account:

   - the fact that many people in urban and some semi-urban areas can afford, and are willing, to pay more than at present for land certification through the LAP, provided that the process remains easy and quick and costs do not begin to approximate those of sporadic land registration.

   - the size of individual land parcels and the use to which the land is put, even though this would necessitate the development of a more sophisticated scale of costs than the current one, which differentiates only between urban and rural locations.

   - possibilities for *swadaya* (self-help) land registration on a local basis, without any attempt to make uniform regulations for all regions.

3. Within the LAP implementation process there is scope for improvement in certain aspects:

   - Socialization activities must provide complete information and transparency about all aspects of land titling and in particular the cost of the certificate itself and other associated charges imposed at village level.

   - Socialization must be conducted in a planned manner and in all relevant places, including those that are relatively remote from the village administrative office.

   - Physical and legal information about land parcels for which certification applications have been made should be disseminated widely at all levels at least one month before certificates are issued, as stipulated in BPN guidelines, and should not be limited to a printed notice placed in the village office.

   - There should be greater precision in the surveying of land to reduce complaints about errors on certificates.

   - After the completion of LAP certification in each area, data about land ownership should be forwarded to appropriate government agencies, including taxation offices as well as district, sub-district and village administrative offices, in the interests of greater efficiency and order in land administration; at the same time the public should be given easy access to this information.

4. The National Land Agency and its regional Land Offices should work more closely with government agencies responsible for land-related matters, for example, the Land and Buildings Tax (PBB) agency. Close cooperation would offer certain advantages in

   - an updating of records on the part of the PBB agency so as to adjust figures to the size of parcels shown on land certificates; this would increase community confidence in both the taxation and the agrarian agencies.

   - the development of a common recording system; this would provide the basis for the BPN to develop a new land certificate pricing system that includes other variables, since the PBB agency already operates on the principles of land use and location.

5. Consideration should be given to providing payment for RT heads in recognition of their very significant role in LAP implementation. These unpaid village officials are not members of the Adjudication Team, yet they handle the greater part of the socialization and administrative work connected with the LAP at community level.

General observations resulting from the survey:

6. The LAP program cannot be applied in a uniform fashion in all regions, particularly those outside Java, due to significant differences in the systems of land rights that prevail in those regions.

7. The LAP in its present form cannot be expected to form an instrument by which specific land problems can be solved. This applies to land considered to be state-owned (*tanah negara*) and also to land where certain non-typical traditional rights still exist, as in Medan where certain rights can be traced back to the former Grand Sultan.

8. If the LAP is to make an even greater contribution in providing security of tenure to landholders, ways should be found to provide certificates for land parcels located in areas classed as state-owned; if ownership rights cannot be given, at least usage rights should be granted to those who have lived there for a certain number of years. Adoption of such a policy would require unqualified support from other government agencies.

ANNEXES

ANNEX 1.1

Site Selection

PROVINCE	Number of certificates issued 1996/97 - 2000		% of certificates issued in each province	No. of districts/cities in which the LAP was implemented*	Sites (districts/cities)	
	Target	Realization			SA study** 1999	IE-SLT study** 2002
West Java	783,000	811,831	43.2	14	4	5
Central Java	457,000	465,321	24.8	15	2	3
East Java	252,000	258,083	13.7	10	1	2
Yogyakarta Special Area	162,000	170,580	9.1	3	1	1
Jakarta Capital Territory	175,000	157,153	8.4	5	1	1
South Sumatra ***	11,000	11,028	0.6	1	-	1
North Sumatra ***	16,000	4,934	0.2	1	-	1
Total %	1,856,000 100.0	1,878,930 101.2	100.00	49	9	14 28.6
Additional research area: West Sumatra****						1 (*ulayat* land)

* Number of districts (*kabupaten*): 37
Number of cities/towns (*kota*): 12

** SA = Social Assessment done in 1999
IE-SLT = Impact Evaluation of Systematic Land Titling done in 2002

*** South Sumatra and North Sumatra are included even though LAP certification began only in 1999/2000 in order to identify issues specific to these regions. Hence the number of sites is not completely proportional to the total number of certificates that have been issued.

**** One area in West Sumatra was included for a report on a pilot project for community mapping of *ulayat* land. See Annex 5.1 for details.

Criteria for area/site selection:

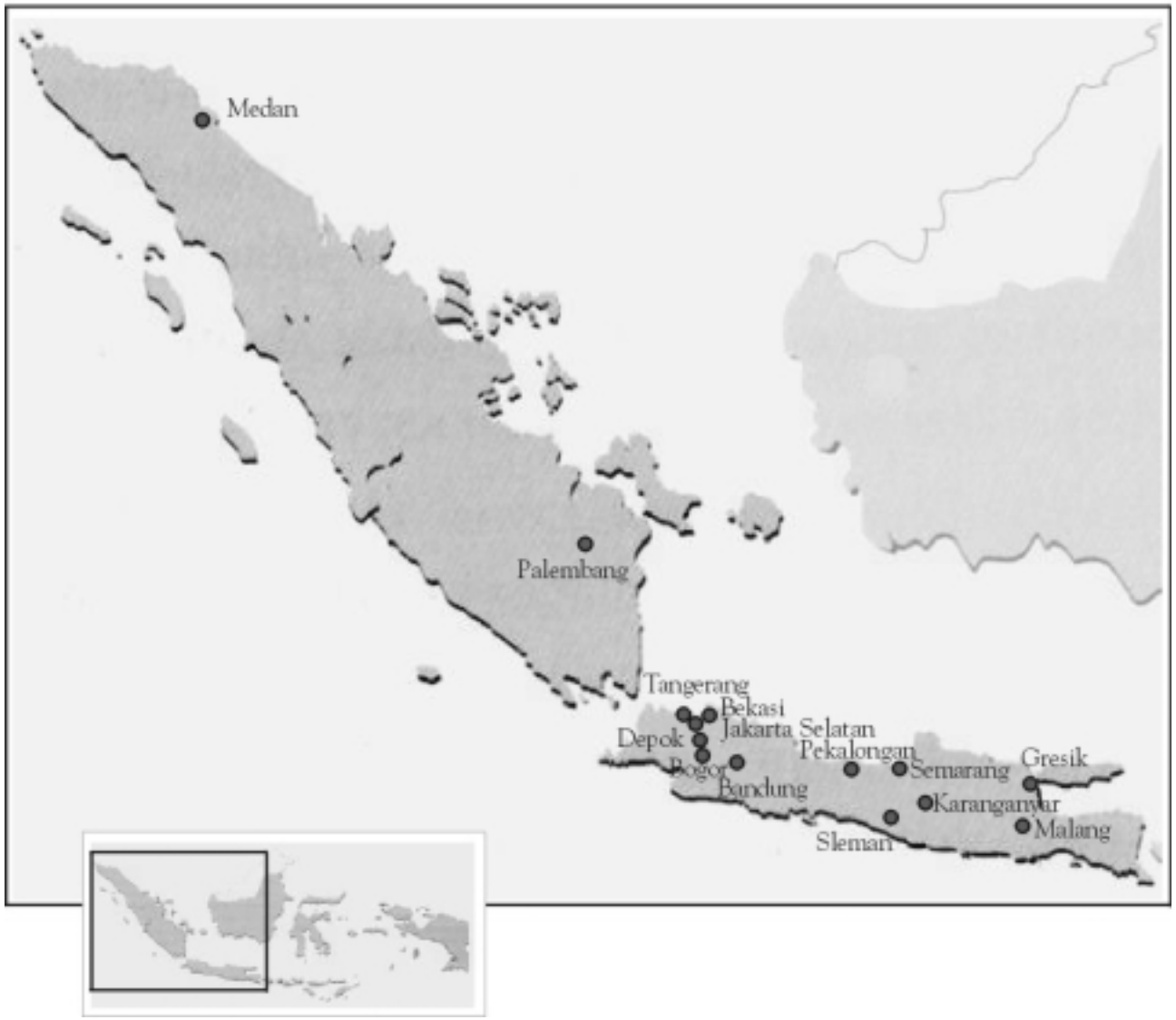
- Proportion of LAP certificates issued from 1996/97 to 2000
- Year of certification
- Location: urban, semi-urban or rural area
- Villages not included in the1999 Social Assessment

ANNEX 1.2

Location of Research Sites

Province	No	District/city	LAP participants/ Control group	Sub-district	Village/*Kelurahan*	Type	Year of certification
West Java	1	Bandung City	Participants	Kiara Condong	Babakan Sari *kelurahan*	Urban	1997/1998
			Control	Bandung Wetan	Taman Sari *kelurahan*		
	2	Karawang District	Participants	Klari	Margasari village	Rural	1996/1998
			Control		Darawolong village		
	3	Depok City	Participants	Sukmajaya	Sukamaju *kelurahan*	Semi-urban	1997/1999
			Control	Cimanggis	Jatijajar *kelurahan*		
	4	Bekasi District	Participants	Setu	Burangkeng village	Semi-urban	1996/1997
			Control	Cibitung	Mekarwangi village		
	5	Tangerang District	Participants	Balaraja	Saga village	Semi-urban	1997/1999
			Control		Tobat village		
Jakarta	6	South Jakarta City	Participants	Jagakarsa	Jagakarsa *kelurahan*	Urban	1997/1999
			Control		Ciganjur *kelurahan*		
Central Java	7	Semarang City	Participants	Ngaliyan	Purwoyoso *kelurahan*	Urban	1997/1998
			Control	Candi Sari	Candi *kelurahan*		
	8	Pekalongan District	Participants	Bojong	Wiroditan village	Semi-urban	1999/2000
			Control		Bojong Minggir village		
	9	Karanganyar District	Participants	Karangpandan	Gerdu village	Rural	1998/1999
			Control	Matesih	Girilayu village		
Yogyakarta	10	Sleman District	Participants	Godean	Sidoluhur village	Semi-urban	1997/1999
			Control	Gamping	Banyuraden village		
East Java	11	Gresik District	Participants	Sidayu	Mriyunan village	Semi-urban	1998/1999
			Control		Purwodadi village		
	12	Malang District	Participants	Pakis	Bunut Wetan village	Rural	1998/1999
			Control		Sumber Kradenan village		
Sth Sumatra	13	Palembang City	Participants	Seberang Ulu I	5 Ulu *kelurahan*	Urban	2000
			Control		5 Ulu *kelurahan*		
Nth Sumatra	14	Medan City	Participants	Medan Area	Kota Matsum1 *kelurahan*	Urban	1999/2000
			Control		Pasar Merah Timur *kelurahan*		

Location of Research Sites



ANNEX 1.3

Site descriptions

1 South Jakarta City (urban)

A. Jagakarsa *kelurahan*, Jagakarsa Sub-district

Jagakarsa Sub-district is located within South Jakarta, which has the administrative status of a city (*kota*). Most of the *kelurahan* in which the LAP was undertaken are located on the periphery of the sub-district. The *kelurahan* of Jagakarsa, which is the administrative center of the sub-district of the same name, is located at a distance of 12 km from the South Jakarta Administration Office. It is the most urban of the *kelurahan* and the one with the highest level of LAP certification.

In the year 2001 the population of the *kelurahan* was 34,793 persons and population density was 7,174 persons per sq. km. Almost half of the 485 ha covered by Jagakarsa was until recently used for fish-ponds (*empang*). Now some of that land has become home-lots on which houses have been built. Despite the presence of fish-ponds, a large proportion of the residents earn a living as public servants or as office and factory employees.

Prior to the LAP, most land documents were traditional papers (*girik*), deeds of sale (*surat akta jual beli*) or nothing more that informal sales receipts. At that time less than 30 % of land parcels in the *kelurahan* had certificates. In the case of inherited land, much was still in the names of parents and had been subdivided among heirs without a will. Where there was a will, it was a document of weak legal status. In 1995 registration of around 10% of uncertificated land parcels was undertaken through the Pronada (Prona Daerah) program. In 1996-97 the *kelurahan* was chosen as a demonstration area for land certification financed by the government of Jakarta (DKI). Finally, the LAP was introduced and a large number of certificates was issued through this program. It has been estimated that almost 100 % of land parcels in Jagakarsa *kelurahan* now have certificates.

B. Ciganjur *kelurahan*, Jagakarsa Sub-district

Ciganjur *kelurahan*, which was selected as the control site for research in Jagakarsa, is located a little to the south of Jagakarsa. On the western side Ciganjur adjoins the city of Depok. It covers 338 ha, of which 30% is used for houses and home-lots, 31% for fish-ponds and 14% for dry fields and other farm land. There are also a number of *pesantren* in the area, which is a basis of the NU organization.

The population in 2001 was 20,784 and density was 6,150 persons to the sq. km for the whole *kelurahan*. Since there is still a relatively large amount of agricultural land in this area, many residents earn their livelihood as farmers or agricultural workers. The latter account for 51% of the population, while another 19% are self-employed in small business and 16% are office and factory workers. The rest are public servants, members of the army, pensioners, carpenters and other tradesmen or else earn a living in the services sector.

Ciganjur *kelurahan* has never been selected for any government land certification program, by contrast with Jagakarsa, which has participated three times in registration programs. It has been overlooked not only in the LAP but in other government programs also, a fact that has continued to disappoint many of its residents. Existing data indicate that certificates have been issued for only 23 of the 4,244 land parcels recorded as being subject to the annual Land and Buildings Tax (PBB).

2 Tangerang District (semi-urban)

A. Saga village, Balaraja Sub-district

The village of Saga is located approximately 20 km from the district capital of Tangerang and only 2 km from the Balaraja entry point to the Jakarta-Merak toll road. It covers 477 ha, of which 83% consists of rice-fields and unirrigated agricultural land. There are, however, several housing complexes.

The village has 13,962 people, with a population density of 2,870 per sq.km. of all land. The population consists of both newcomers and indigenous people. The majority of the newcomers, who for the most part live in the housing complexes, work in factories situated around the town of Balaraja. The greater proportion of the indigenous residents earn a livelihood in agriculture as farmers, sharecroppers and laborers, while some are employed in trade and factory work.

At the end of the 1980s and the beginning of the 1990s, when there was considerable alienation of land in this village by housing developers, many farmers lost their rights to the land that they were cultivating. Today the land market in Saga is still high, a fact that reflects the strategic location of the village. Access to the toll road is easy and the village itself is surrounded by a number of large factories. Currently there are plans to build a very large housing complex in and adjacent to Saga, as well as a bus and minibus terminal and a market.

In 1986 land certification had commenced through the PRONA program but only 25 land parcels – all of them owned by prominent community figures - received certificates. Implementation of the LAP took place in Saga in 1997-98 and in 1998-99, with priority given to the titling of home-lots and built-up areas. Before the LAP was undertaken, less than 5% of land parcels outside the housing complexes had certificates, but today approximately 85% of non-irrigated land has been registered.

B. Tobat village, Balaraja Sub-district

The village of Tobat, selected for control purposes, is also in Balaraja Sub-district and is located to the south of Saga. Although it has a number of factories, there are no housing complexes. More than 50% of the village area of 555 ha consists of rice-fields. This explains why most households, like many in Saga, still depend on the agricultural sector for a living as farmers or agricultural laborers. Others earn a livelihood as employees in private companies. Meanwhile, the factories established in Tobat in recent years seem to have an existence that is quite distinct from community life, since very few of the local people have obtained the chance to work in one of the companies or factories in the village. The reason is the constraints imposed by low levels of education within the Tobat community.

The territory covered by Tobat village is somewhat elongated in shape, with the result that there are a number of RWs (known locally as *jaro*) that are located at some considerable distance from the village office. The residents of these RWs feel that because of their geographical location they receive very little attention from the village head. There have been many disputes involving land in this village, especially in the context of the alienation of land for factory construction. With the exception of land that has been purchased by businessmen, most land parcels in Tobat have no certificates. Local people regard this situation as an invitation to disputes in coming years and for that reason they feel that they very much need a land titling program like LAP.

3 Bekasi District (semi-urban)

A. Burangkeng village, Setu Sub-district

Burangkeng village is located on the main highway that links Bekasi and Bogor Districts, at a distance of 27 km from the city of Bekasi and less than 2 km from the administrative center of Setu Sub-district. Public transport to either of these places is readily available in the form of minibuses at any time.

In the year 2000 Burangkeng had a population of 7,936 persons or 1,812 households. The village covers 287 ha and most of its people are employed in agriculture in the form of either rice cultivation or fruit growing. Others obtain a living from trade or from small household businesses. The greater part of the land in Burangkeng (224 ha) consists of rain-fed rice-fields, but some is planted with fruit trees, of which rambutan is the most common. In general, people do not live in large groups along the main road but instead are widely scattered in small hamlets located some distance inland from the road. The settlement pattern is closely related to the nature of the land, most of which cannot be irrigated.

For some time the land in this village has been under observation by capitalists, who see it as a potential industrial site. Their hopes have so far been blocked, however, by the existence of a district policy that has designated Setu Sub-district as a residential area. Before the economic crisis, people living in Jakarta showed a lot of interest in land in and around Burangkeng because, with steady expansion in the city of Bekasi itself, housing complexes and factories had been constructed in a zone not far from Burangkeng. It is said that around 40 ha in Burangkeng is controlled by people living in Jakarta. Since the crisis, however, right at the time when the LAP was undertaken in this village, interest on the part of Jakarta residents in purchasing land here has declined, to the point where the price of land in the village has dropped by 50%. In the 1983-85 period the PRONA land registration program was carried out in Burangkeng, and then in 1996-97 LAP was implemented. This resulted in the titling of 3,508 land parcels, of which all but 3,350 received certificates of ownership. The remaining 8 parcels received usage rights.

B. Mekarwangi village, Cibitung Sub-district

The village of Mekarwangi is located on the main Setu highway and belongs to Cibitung Sub-district, which adjoins Setu. It is around 9 km from the sub-district center, and 18 km or 45 minutes from the district capital of Bekasi. Like Burangkeng, it can be described as semi-urban in nature. Mekarwangi covers an area of 602 ha, much of which is occupied by an industrial estate known as MM2100. Only 10 ha of rice-fields now remain. Even so, despite the fact that the village is in an industrial zone, its human settlements still have strong rural features. There is some distance between houses, which are still relatively simple in nature, especially those along the main road. This appears to be due to the effect of the location of the industrial zone in the back part of the village and not on the highway. A high fence separates the industrial zone from local settlements and there is direct access to and from the zone from the Cikampek toll road rather than through Mekarwangi village.

In the year 2000 Mekarwangi had a population of 55,745 or 1,370 households. On the whole residents are employed in trade, as service providers (drivers of vehicles and ojek), as factory workers in the industrial zone (especially those who are relatively young) and as farmers. A number of local people have constructed rooms, which they rent out to factory workers who live elsewhere. The main agricultural activity is the cultivation of fruit both in the area that remains in the village itself and also outside the village and even outside the sub-district. Those people who were evicted from their land by the establishment of the industrial zone have generally purchased agricultural land outside the village.

4 Karawang District (rural)

A. Margasari village, Klari Sub-district

The village of Margasari is located 14 km from the small town of Klari, which is the capital of the sub-district. Unlike other villages in Klari Sub-district, Margasari is not situated on the coastal highway that links Karawang with Indramayu. Rather, it is some distance away from the main road and can only be reached by a narrow village road. Public transport goes only as far as a hamlet 2 km from the village, after which it is necessary to walk or travel by *ojek* (a motor-cycle that carries a passenger) for another 2 km. In 2001 the population of Margasari was 7,498 persons (1,933 households). Only 4% of the adult population are land-owning farmers. Some 38% are agricultural laborers, 20% are employed in the services sector (mainly as pedicab drivers), 17% work in offices or factories and 14% are engaged in trade or some other kind of small business. The rest are public servants, members of the armed forces, pensioners and artisans.

Margasari is located in a rice-growing area. Approximately 71% of its total area of 283 ha consists of rice-fields with technical irrigation; the remaining 29% is used for houses and other buildings. Houses are situated along the village road, while rice-fields are located both along this road and behind the built-up area. The greater part of these rice-fields does not belong to village residents. Rather, it is the property of people who live in Karawang, the district capital. Sale of rice-fields took place on a large scale in the early 1990s when there was high demand from urban people. This demand stemmed from plans for the construction of a road leading to the coastal highway. Although the proposed road was to transverse village rice-fields, the village people themselves had heard nothing about it at the time.

Most of the land in Margasari, both home-lots and rice-fields, has already been titled. At present, more than 91% of the 2,639 land parcels in the village have certificates. Of these parcels 75 received certificates through Prona in 1995, while another 2,335 parcels were certificated through the LAP in 1996-97 (home-lots) and 1997-98 (rice-fields).

B. Darawolong village, Klari Sub-district

Darawolong, the control village for this area, is located at the eastern end of Klari Sub-district. It is 6 km from the town of Klari and 17 km from Karawang. To reach the village it is necessary to go through Cikampek Sub-district and then along a village road that can be used only by *ojek*. Darawolong covers 603.7 ha, of which 520 ha is rice-fields (427 ha with irrigation and 93 ha without). The 83.7 ha of non-irrigated land is used for home-lots and other buildings. In 2001 the population was 5,748 (1,772 households). The majority of people earn their livelihood from rice-cultivation. Of the 632 persons engaged in agriculture, 347 are farmers who own the land they cultivate, 55 persons are sharecroppers and 230 are agricultural laborers. The rest earn a living as the owners of or unskilled laborers in small businesses, factory workers, public servants and pensioners and in trade.

Darawolong is one of the three villages in Klari Sub-district that have not yet participated in the LAP. It had been included in the 2000-01 target for Karawang District and socialization of the program had begun. But in that year Karawang itself was not included in the national-level plans for the LAP. Interest in land titling among village officials and the community was so great, however, that BPN tried unsuccessfully to have certification carried out with funding from the Karawang District budget. Some individuals, who said that they were from a certain Foundation (*yayasan*), then offered to arrange for certificates to be issued at around Rp.300,000 per parcel. Several people had their land measured and some even paid. Later it was discovered that the *materai* (duty stamps) that had been sold to RT heads for applications were counterfeit, by which time the individuals concerned had disappeared.

5 Depok City (semi-urban)

A. Sukamaju *kelurahan*, Sukmajaya Sub-district

The *kelurahan* of Sukamaju is located on the Jakarta-Bogor Highway approximately 10 km from the center of Depok City. It has easy access to both cities by road, by electric train and by the Jagorawi toll road. Its strategic location and excellent road connections have long attracted land developers to Sukamaju. There are now ten housing complexes, which cover around 75% of the built-up part of Sukamaju. There are also several large pharmaceutical companies as well as food and beverage processing factories and a tire vulcanization business.

Around 90% of Sukamaju's 388 ha is used for housing. Rice-fields, unirrigated fields and fish-ponds constitute no more than 5%. In 2000 Sukamaju had almost 35,000 residents and a density of 8,950 persons or 2,200 households to the sq. km. Many of the people living here are newcomers, as the presence of the housing complexes indicates. The homes of the original Betawi people have been pushed to the outskirts of Sukamaju or else are situated in densely populated kampongs behind the housing complexes. In addition to local people and newcomers, there are also a number of residents of Chinese ethnic origin.

Most of the people of Sukamaju depend on the industrial and services sectors for their livelihood. Those who live in the housing complexes are generally employed in Jakarta in private businesses or state-owned companies (BUMN) or as public servants. By contrast, most of the people who live in the kampongs work as unskilled laborers, bricklayers, small-scale vendors in food stalls, itinerant sellers and taxi and *ojek* drivers. Those newcomers who reside in the kampongs are usually employed as unskilled laborers and daily wage workers in the large, medium and small businesses and factories located along the highway.

The LAP was carried out in Sukamaju between 1997 and 1999. Almost all land parcels on which houses have been built in the kampongs now have certificates. In 2001 land without certificates amounted to 30 parcels (3 ha), most of them owned by people living elsewhere.

B. Jatijajar *kelurahan*, Cimanggis Sub-district

Jatijajar *kelurahan* is located on the Jakarta-Bogor highway directly opposite Sukamaju but in a different sub-district. Within the *kelurahan* there are two large factories, namely, a spinning mill and a paint company, as well as a medium-sized soft drink factory. Like other areas close to Depok, Cimanggis Sub-district has been a target among developers seeking locations for housing complexes. In 1991-2 land acquisition began for construction of the Jatijajar Housing Estate on an area of 60 ha, that is, around 23% of *kelurahan* land (258.37 ha). The land alienated so far, however, amounts to only 40 ha.

Approximately 78% of Jatijajar *kelurahan* consist of kampongs, the Jatijajar Housing Estate and an army housing complex, while 19% is made up of rice-fields, dry fields, fish-ponds and a small lake. In the year 2000 the population of the *kelurahan* was 19,344, with a density of 77,470 persons or 1,475 households to the sq.km. *Ojek* represent the only means of public transport for those wishing to get to the highway. The kampongs located along this highway have semi-urban characteristics, which become increasingly rural with distance from the road. As in other places the residents of the housing estate are newcomers who generally work in offices in Jakarta. Most of the people of local origin are employed as factory workers, bricklayers and carpenters, agricultural laborers and sharecroppers, food vendors and *ojek* drivers. No more than 70 persons living in Jatijajar *kelurahan* but outside housing complexes have land certificates; the greater majority do not. With the exception of those who have a friend or relative in a *kelurahan* where the LAP was implemented, most of the Jatijajar community know nothing at all about the land titling project.

6 Bandung City (urban)

A. Babakan Sari *kelurahan*, Kiara Condong Sub-district

Babakan Sari covers an area of 88.1 ha, of which almost 80% is used for houses and public facilities like shopping centers, supermarkets, traditional markets, schools, offices and places of worship. The *kelurahan* is bounded on one side by the Bandung-Yogyakarta railway line and on the others by roads that carry busy traffic at all times. The Kiara Condong Sub-district office, the community health center and an army office are all located in Babakan Sari.

Babakan Sari once consisted of irrigated rice-land but, with the expansion that has occurred in the city of Bandung since the late 1970s, residential areas have replaced fields. In December 2001 the population of the *kelurahan* was 29,036 persons or 6,803 households; thus population density is 33,000 persons or more than 7,700 households to the sq.km. There are no open spaces in the area. Even state-owned land along the railway line is used for residential purposes. Houses are very close together and in many cases adjoin one another. Living conditions are so congested that much of the *kelurahan* can be described as slums.

The majority of people living in Babakan Sari are newcomers. In terms of socio-economic position, most belong to the less affluent section of the wider Bandung community. A small proportion are of Chinese ethnic origin. There is a wide variation in sources of livelihood. While some people are employed in the public service or army and in private companies, small businesses and petty trade, others earn a living as skilled laborers (carpenters and the like), as automobile, taxi and *ojek* drivers and as scavengers. Quite a few are pensioners. The LAP was carried out in Babakan Sari over a two-year period (1997-8 and 1998-9). Almost all landowners have now received certificates for their land.

B. Taman Sari *kelurahan*, Bandung Wetan Sub-district

Taman Sari *kelurahan* is situated in the heart of the city of Bandung in the shallow valley of the Cikapundung River. It covers 102 ha and is densely populated with 27,916 residents or 27,370 persons to the sq. km. Approximately 32% of the *kelurahan* consists of houses. Much of the rest is occupied by large universities like the Bandung Institute of Technology (ITB) and Universitas Islam Bandung (Unisba). Slum conditions prevail in most parts, with houses built close together along small paths and lane-ways, most of which are too narrow for anything larger than a motor-cycle to enter. The situation is made worse by the river, which is highly polluted and foul-smelling. One reason for the congestion is the fact that many families have added rooms to their houses for leasing to university students. Around such places there are clusters of food stalls (*warung*), internet cafes and computer rental shops. Most of the people who live in Taman Sari earn a living as public servants, employees in private companies, factory workers and providers of services of various kinds such as food catering. Large numbers are engaged in petty trade of various kinds.

Approximately half of the land in this *kelurahan* is *tanah negara* (state land) and as such is under the authority of the Bandung city government. The rest is *tanah milik adat* (land held under traditional law). State land is located on both banks of the river and along the major roads that form the boundaries of the *kelurahan* on three sides. Originally the *adat* land belonged to a handful of people but over time it has been sold or rented out. The majority of Taman Sari residents do not have land certificates. Most landowners have no more than a Deed of Sale (*akte jual beli*). Prona was conducted here in 1984 and again in 2000-2001, when RW staff were given priority in registration for the 11 certificates that were issued. This brought total Prona certificates to 354 for an area of three hectares of land. The people of Taman Sari very much hope that the LAP will be carried out in this area as the cost is low and the procedure is easy.

7 Sleman District (semi-urban)

A. Sidoluhur village, Godean Sub-district

The village of Sidoluhur is situated a short distance from Godean Market, half a kilometer from the center of sub-district activities and 15 km from the district capital. It covers 488.6 ha, most of which consists of rice-fields (324.5 ha). More than half of the rice-land has semi-technical irrigation.

In 1999 the population was 2,382 households or just over 10,000. Rice-growing forms the main source of livelihood for the majority of these households. In recent years, however, returns from this form of agriculture have been low because of frequent damage to crops by rats and insect pests. Many local people have therefore turned to other occupations such as construction work and carpentry. Several small furniture factories, food processing units and trading activities have been established, in addition to the many businesses that, since the 1950s, have been making roof-tiles for sale as far away as towns outside Java.

The people of Sidoluhur are dynamic and keen to progress economically. Most people in the village have completed at least elementary-level schooling; only 12% have less than six years of education. Some time ago the village obtained Rp. 3.5 million for road surfacing from a government program; community activities of a self-help (*swadaya*) nature succeeding in contributing a similar sum.

Proximity to Godean Market plays a very important role in the economy of this and other nearby villages since it offers many general facilities including financial services in the form of a branch of the BRI, a government pawnshop and other small financial institutions. Close to the market there are retail shops, restaurants, food-stalls, telephone kiosks, photocopy businesses and vehicle workshops.

B. Banyuraden village, Gamping Sub-district

The village of Banyuraden is located about 3 km from the sub-district capital on the local ring road, which makes it a transit area of a peri-urban nature. The dominant form of land use is still agriculture but transfers of land ownership are increasing because of the pressures of urbanization. Employment is also shifting from the agricultural sector to other sectors like industry and services. Even so, rice cultivation is still important, together with the raising of pigs, which is closely associated with local *tahu* (bean curd) production.

Banyuraden had a population of 10,724 people or 2,865 households in the year 2001. The community would very much like the LAP program to be carried out in this village as it was in two other villages in Gamping Sub-district in 1999/2000. It so happens that the National Land College (Sekolah Tinggi Pertanahan Nasional), the Maritime College (Sekolah Tinggi Maritim) and the Health College (Sekolah Tinggi Kesehatan) are all located in this village. In 1998 the village head (*lurah*), acting in the name of the community, asked the National Land College to act as its intermediary in putting forward a request to BPN for land certification in Banyuraden. College authorities agreed to help and in 2000 community members prepared the documentation required for LAP certification of around 700 land parcels. The College undertook surveying and mapping of the parcels but these documents are still stored in the village office. Landholders had agreed to a charge of Rp 150,000 per certificate but had not yet paid. Even today there has been no follow-up and some documents have been returned to applicants with the statement that they are incomplete. Most people feel very disappointed with the lack of progress on certification.

8 Karanganyar District (rural)

A. Gerdu village, Karangpandan Sub-district

Gerdu is one of the villages included in the poverty alleviation program for backward villages some years ago. The topography of the village is steep and houses are some distance apart because they are situated on hills. The road leading to each hamlet is likewise steep but can be used by vehicles, even though surfacing consists only of stones and earth, supplied by a government project in 1997/98. The same project also enabled clean water to be provided for this village. All landholders have received certificates through the LAP but many are disappointed that holdings proved to be larger than what they actually are because surveyors estimated rather than measured much of the sloping land.

Gerdu covers approximately 372.9 ha of land and in 2001 had a population of 2,893 persons or 654 households. Educational levels are less than the last grade of elementary school. Most families earn a living from agriculture, but because of the steep slopes cultivation is difficult. Some of the land is planted with cloves but the trees are not well cared for. Since only one rice harvest can be obtained every year, farmers also plant secondary crops such as cassava and corn but because of shortages of agricultural water, cropping intensity and output are unsatisfactory. Many men therefore seek jobs as construction workers outside the village, while others raise goats and cattle or trade in livestock.

Village activities are well conducted, with various forms of community service that provide continuous care for the village environment. A local *arisan* (rotating credit group) involves the contribution of building materials rather than money, which means that timber, cement and the like are always available for the improvement of individual houses and fences. Although the people themselves live simply and can be described as poor in socio-economic terms, community efforts are reflected in the clean, neat appearance of the village.

B. Girilayu village, Metesih Sub-district

Girilayu is located in a fertile agricultural area adjacent to Gerdu village at an altitude of 600 meters. It is approximately 3.5 km from the sub-district capital and 17.5 km from the district capital. The village covers and area of 311.5 ha; of this 63.9 ha consists of rice-fields with semi-technical irrigation and 98.8 ha of non-irrigated land planted with fruit-trees and vegetable crops. Rice-fields can be planted twice a year since there is a good source of water. Cassava, which is harvested twice year, is grown on part of the agricultural land. In 2001 village population was 3,959 and population density was 1,270 persons to the sq. km. Some 90% of the people are employed in agriculture. Young women usually obtain supplementary income as workers in the *batik* industry while older women weave floor mats from reeds (*mendong*).

This village is the site of the graves of the kings of Java from the Mangkunegoro line in Solo. The graveyard itself covers 9.2 ha of land and is frequently visited by people, especially Javanese, for spiritual reasons. In addition, there is a stretch of 11 ha of forested land; it functions as a water catchment area and as such is of great benefit to the village environment.

The village of Girilayu has never been included in the LAP program. Certificates were provided for 200 land parcels through Prona in 1999/2000 but this represents less than 10% of the total number of parcels in the village. BPN has not selected this village for LAP certification because the people are not considered to be poor socio-economically.

9 Semarang City (urban)

A. Purwoyoso *kelurahan*, Ngaliyan Sub-district

The *kelurahan* of Purwoyoso lies within the western part of the city of Semarang, where rapid expansion is taking place. It is located 7 km from the city center and 1 km from the sub-district capital. Covering 135 ha of land, Purwoyoso is situated partly on the lowland plain and partly on a relatively elevated stretch of flat land. In 2001 the population was 14,736 persons, which gives a density of some 10,915 persons to the sq. km. Housing estates cover three hectares of land within the *kelurahan*. The construction of housing is still taking place here and throughout much of the sub-district of Ngaliyan. At the present time almost 85% of land parcels in Purwoyoso have received a certificate through either Prona or the LAP.

The spread of housing complexes in the southern part of Semarang City and the operations of the steel industry and plastic-producing factories in the northern part have had consequences in the form of a shift in sources of livelihood and in residential locations for the people of the city as a whole. A further factor in this shift has been the inability of many of the people living in the coastal parts of the city to compete with newcomers in the management of fish-ponds (*tambak*). As a consequence, large numbers of people have moved from the northern part of Semarang to the southern part and have settled in Ngaliyan Sub-district and in Purwoyoso in particular. As far as employment is concerned, there has been a shift from the agricultural sector to the industrial sector and to the services sector. In Purwoyoso, most of the 5,970 people who are employed obtain a living as small businessmen (33%), as public servants and employees in private companies (26%), and as workers in services (17%). Others work as carpenters, bricklayers and the like, while some are pensioners and a small number are employed as agricultural laborers.

B. Candi *kelurahan*, Candi Sari Sub-district

Candi is one of the *kelurahan* within the city of Semarang where the LAP land certification has not yet been carried out. The *kelurahan* is located to the Southeast of the city center. It is 4.2 km from the city and 2.6 km from the sub-district center and is situated on hilly elevated land with small valleys. It covers 68 ha of land and consists of both expensive housing areas and densely populated kampongs. In addition there are shopping and office buildings and a number of public facilities. In 2001 the population of Candi was 11,343 persons or 2,364 households. Population density was thus almost 16,700 persons to the sq. km.

The most densely populated parts of the *kelurahan* are to be found in the valleys between the hills. Transport routes consist of narrow lanes and paths that can be used only by two-wheeled vehicles. The families living in these kampongs are very largely indigenous people whose land has been passed down from one generation to the next. Only a very small number of newcomers own land in these kampongs. Residents tend to belong to the lower socio-economic strata of society. For the greater majority of those who have employment (5,596 persons) the services sector and employment as unskilled laborers provides a livelihood (55%). Others are employed as small businessmen in the industrial, trade and transportation sectors, while work in the Public Services and many are pensioners.

Data obtained from the *kelurahan* office show that only about 25% of land parcels, covering 17 hectares in Candi, have a certificate. Almost all of the parcels located in the densely populated parts of the *kelurahan*, including the 8.3 ha of land held by the *kelurahan* as a source of revenue, have not yet been registered.

10 Pekalongan District (semi-urban)

A. Wiroditan village, Bojong Sub-district

The founders of the *batik* industry in Pekalongan District were originally *batik* makers in the village of Wiroditan, which reached the height of its glory as a major center of *batik* production in the 1966-1975 period. By 1975, however, with the expansion that was taking place in the printed *batik* industry in Jakarta factories, handmade *batik* products from Wiroditan could not longer compete. Many small *batik* businesses became bankrupt and large numbers of Wiroditan residents moved to Jakarta to work in the factories that produced printed *batik*. Today only around 25% of the people of Wiroditan work as wage laborers in the businesses that still produce handmade *batik*.

The village of Wiroditan is adjacent to the sub-district capital of Bojong. Most of the village, which covers 96.8 ha of land, is low-lying. Of this land 90% (86.3 ha) is not irrigated. The remaining area of 10.5 ha is rice-land, most of which has fully technical irrigation. Most (69%) of the non-irrigated land is used for home-lots and houses, while 28% is used for dry fields and the remaining 3% for public facilities like roads and graveyards.

At the end of 2001 the population of Wiroditan was 3,079 persons (725 households). The village can be described as semi-urban in nature because the majority of its people no longer earn their livelihood from agriculture. Most earn a living from trade and services. There are also a number of people who are employed as industrial and construction workers, public servants and staff in private companies. Only a small proportion are farmers and agricultural laborers.

The LAP was conducted in this village in the year 2000, when 335 parcels of land were registered and certificated. This was the remainder of the target by the Adjudication Team for another village.

B. Bojong Minggir village, Bojong Sub-district

Bojong Minggir is the administrative capital of Bojong Sub-district and is adjacent to Wiroditan. The LAP land titling program has never been carried out in this village, despite the fact that the Adjudication Team that handled LAP certification in the area rented an office for use as a base camp near the Bojong Minggir village office. Aware of this, local people asked why their village had not been included in the LAP program. The explanation given by the Pekalongan District Land Office, as well as sub-district and village officials, was that in the 1983/84 budget year Bojong Minggir had been included in the Prona land registration program, through which certificates had been issued for approximately 5000 land parcels in the village.

Bojong Minggir village covers just on 112 ha of land, almost half of which consists of rice-fields. The land used for rice-growing (45.4 ha) has technically controlled irrigation, while only 6 ha is rain-fed. Even so, the agricultural sector is no longer the basis of the local village economy. Some 54.4 ha of the rest of the land in the village is used for home-lots and houses, while dry fields cover another 6 ha.

At the end of 2001 the population of the village was 3,312 persons or 785 households. More than half (53%) of these people are employed in the industrial and construction sectors, while 29% earn a living from trade of various kinds. The rest are farmers, agricultural laborers, small-scale business people, public servants, military personnel and pensioners, or else they work in other sectors. Most of the houses in the village are of a permanent nature, which suggests that Bojong Minggir is an economically progressive and prosperous village.

11 Gresik District (semi-urban)

A. Mriyunan village, Sidayu Sub-district

Mriyunan is 0.2 km from the capital of Sidayu Sub-district and 24.2 km from the town of Gresik, which is the capital of Gresik District. It is situated fairly close to the highway that forms an alternative route along the northern coast of East Java from Surabaya through Gresik to Lamongan and Tuban.

Aquaculture plays an important role in the economy of Mriyunan. The village covers approximately 152 ha of land, which consists of non-irrigated land and large fish-ponds (*tambak*), which cover 90% of the area of the village. The remaining 10% of the land is used for home-lots and houses as well as public facilities like a market and a pawnshop. In 2001 the population of the village was 1,956 persons or 410 households. Most of these people are employed in the trade and services sectors of the economy, or else in the aquaculture sub-sector, as might be expected from the spatial extent of fish-ponds within the village. In addition to these sources of livelihood, there are 12 village residents who earn a living from the commercial production of bird's nests.

Prior to LAP certification many people used their P*etok D* documents to obtain credit from the BRI, which has a branch near the sub-district office 0.2 km from the village.

B. Purwodadi village, Sidayu Sub-district

The village of Purwodadi is located quite close to Mriyunan; consequently the socio-economic conditions of both villages are almost identical. Purwodadi covers an area of 125.6 ha and is 2 km from the sub-district capital, 36 km from the district capital and 56 km from Surabaya, the provincial capital. Previously, this area was used for rice cultivation and crops were harvested either once or twice a year; however, production costs were high. Since 1980, after numerous migrants from Lamongan had moved to the area because of frequent flooding in their home villages, the rice-fields were gradually replaced by fish-ponds. In one hamlet in Purwodadi there is a small lake called Rambit, which covers one hectare and is used as a water source to meet the daily household needs of the local people.

At the end of 2001, the population of Purwodadi was approximately 1,259 people or 250 households. A large proportion of these people earn a living as fish-pond owners or laborers, farmers, agricultural workers, or stone masons. Other residents have opened shops and food stalls, while many work as public servants or run small-scale businesses. In addition, there are also numerous businesses that produce bird's nests in operation in the village. They are owned both by local residents and by people from outside the area. Besides migrants from Lamongan, there are other residents who have come from various villages in the surrounding region.

Most landowners in Purwodadi have land documents in the form of a *girik* and or just proof of PBB payment (*Petok D*). Only 11 parcels of land have land certificates. A land certificate program has never been undertaken in this village in the form of Prona or any other type of mass certification.

12 Malang District (rural)

A. Bunut Wetan village, Pakis Sub-district

The village of Bunut Wetan covers an area of 325 ha and is located 1.5 km from the sub-district capital. Numerous small factories and industries have been established in this village. They include businesses producing plasterboard for ceilings, tomato sauce, stoves, cardboard boxess, machine-embroidered goods, traditional wooden clogs and house bricks. Bubut Wetan consists of two hamlets, namely, Krajan and Bora Bunut. At present, approximately 80% of the land of the latter is planted with sugar-cane.

In 2001, the population of Bunut Wetan was 9,094 people. The majority (around 70%) work as agricultural laborers, construction workers and unskilled laborers in roof-tile and plasterboard factories. Almost 30% of the residents in the village are employed as factory employees at the Sampoerna cigarette factory in Malang, while a few others are land-owning farmers, public servants or members of the Indonesian army.

It is estimated that almost 95% of the land in this village has already been certificated, most of it through LAP, by comparison with only 5% before LAP. The land parcels that have not yet been certificated are generally owned by people who live outside of the village.

To date, disputes are continuing between the community and the Indonesian Airforce (that is, the Abdul Rahman Saleh Airforce Base) in connection with the management of sugar-cane plantations that have been controlled by the Indonesian Airforce since 1975. Initially, this land was "borrowed" for a 14-month period from local farmers (through a contract agreement) for the cultivation of cotton and castor-oil. After the period had passed, however, the land was not returned to the community. Instead, part was transferred to the Center for Sugar Research and Development (P3G), and a cotton plantation was established by a company known as PT Kebon Agung. Since this change, it has been revealed that the land was rented to wealthy people from other villages for the cultivation of sugar-cane. The village people want their land back, but so far the dispute has not been resolved, even though the community has carried out demonstrations at the District Office and at the local DPRD building (the district-level People's Assembly).

B. Sumber Kradenan village, Pakis Sub-district

In Sumber Kradenan village, LAP certification has not been implemented because the community has not been particularly interested in becoming involved in the program even though a large number of local land parcels have not yet been certificated.

In location Sumber Kradenan village and Bunut Wetan village are separated by Ampeldento village, which has already implemented LAP. Sumber Kradenan is located two kilometers from the sub-district capital and 7.5 kilometers from the district capital. The village covers an area of approximately 363.2 hectares, with a population of 5,381 persons or 1,497 households. The farming sector still provides the backbone of the economy for the majority of community members, who usually work farmers, farm laborers and laborers on plantations or livestock farms. A small number are also employed as state civil servants or white-collar workers in private firms.

13. Palembang City (urban)

A and B 5 Ulu *Kelurahan*, Seberang Ulu I Sub-district

Both survey beneficiaries and the control group were selected from within the 5 Ulu *kelurahan*, since LAP certification in South Sumatra was focused here. This *kelurahan* is approximately one kilometer from the center of the sub-district and three kilometers from Palembang, the capital of the province. The *kelurahan* is located on the bank of the Musi River and is crossed by three of the Musi's tributaries. Because of swamps and the tidal effect in the Musi itself, some 50 percent of the 284 hectares of land within the *kelurahan* is affected by the movement of river water.

The *kelurahan* can be reached from the city of Palembang in two ways. The first is by taking a public transport vehicle (with two or four wheels) that crosses the Ampera Bridge and goes along the main road. The second way involves travelling along the river in a *getek* (a boat with an inboard motor). Road transport operates throughout most of the day, which makes it easy for local residents to reach places outside their *kelurahan*. Many households, however, have no choice in their means of transport for, in the absence of roads suitable for vehicles or motor-cycles, several parts of the *kelurahan* can be reached only by *getek*.

Most of the residents of 5 Ulu *kelurahan* are newcomers. The original people of the area are today in the minority. The two groups, however, are really one community since the newcomers have been living here for between 10 and 30 years. Some of the latter say that they settled in the area when the banks of the Musi River were still forested. Quite a few large houses constructed in the traditional Palembang style are still to be seen in the *kelurahan*, while there are several others, built around 1912, whose architectural style incorporates Chinese elements.

Like other river-bank settlements along the Musi, 5 Ulu *kelurahan* is densely populated, with a current population of 23,917 persons. The majority of these people earn a living as daily wage workers in the transportation sector, in factories and in markets. Dependence on daily wage work explains why most of the households are quite poor. The settlement pattern is unplanned, and most of the housing areas along the river are linked by well-elevated concrete or wooden paths because they would otherwise be submerged at high tide. The river, which is extremely muddy, provides water for drinking, bathing, washing and sanitation purposes for the greater majority of households. Only a very small number obtain water from wells or from the government Drinking Water Company (PAM).

Land holdings, especially those belonging to newcomers, are generally very small and have been obtained from *tanah usaha*, that is, from once-forested land that has been cleared by an individual. The individual's right to the cleared land has then been confirmed by a statement from the heads of the RT and the *kelurahan*. By contrast, the indigenous residents own large land holdings that have *budel* status (that is, land with ownership rights which has been handed down from one generation to the next). Its ownership status stems from the time of the Dutch colonial government.

Before the LAP was commenced, most of the land holdings of people in this *kelurahan* had no certificates. Only people who were relatively well off could afford to pay the cost of a land certificate through sporadic registration. The success of the LAP is apparent from the fact that most of the people in 5 Ulu *kelurahan* now have certificates for their land.

14 Medan City (urban)

A. Kota Matsum I *Kelurahan*, Medan Area Sub-district

The Kota Matsum I *kelurahan* is located in the center of the city of Medan. It is 5 km from the actual capital of the province and is linked by very good transportation. While part of the *kelurahan* is used for shops and businesses, most of the land is occupied by houses. Apart from a football field, there are no open spaces or empty land in the kelurahan, which covers 0.34 km2 (8% of the sub-district). It has a population of 12,461 persons (2,815 households), many of whom are very poor. Some 30 % of the residents are employed in small-scale trade and run food stalls and shops that sell second-hand goods, which include spare parts for automobiles and car seats.

Kota Matsum I is one of the Medan *kelurahan* in which much of the land has the status of Sultan's Grant land. This land is controlled by a small number of people who are the heirs of the original recipients of the Grant. Even though some parcels of land have already been purchased by people who once rented them, much land is still held by the heirs, who rent it out to local people. On the whole, the people who have purchased this land, like those who still have tenant status, have very small parcels that are usually just sufficient for a house and yard. These tenants have been renting the land for more than 60 years; in fact, quite a few have rented it for hundreds of years. They normally pay an annual rent of around Rp600,000 per parcel to the owner.

At the time when the LAP was conducted, land parcels that had already been purchased were included for certification, whereas those with rented status were excluded. This is one factor that explains why the LAP achieved very low results in terms of number of parcels registered in Kota Matsum I Kelurahan. The present land status situation has caused much uneasiness among tenants for, although they are renting the land, they are the legal owners of the houses that they built at their own expense on that land.

B. Pasar Merah Timur *kelurahan*, Medan Area Sub-district

Pasar Merah Timur *kelurahan*, the control area, is located opposite Kota Matsum I *kelurahan*. It covers approximately 0.75 km2 and is five kilometers from the provincial capital. Many of the residents are employed in the Public Service or in private businesses, while a large proportion earn a livelihood from trade of some kind. On the whole conditions in this *kelurahan* are better than in Kota Matsum I and there are relatively fewer poor households.

Pasar Merah Timur has a population of 11,951 persons (2,697 households), which makes density per square kilometer somewhat lower than in Kota Matsum I. Furthermore, the economic situation of the residents is somewhat better. At the same time there is much less land with the status of Sultan's Grant land. For that reason some of the residents already have land certificates obtained through either PRONA or sporadic registration. This is perhaps one of the reasons why the LAP was not carried out in this *kelurahan*, even though local officials say that there are still a lot of people without land certificates. Those who do not have a certificate very much hope that the LAP will be implemented in their area.

The *kelurahan* is almost completely built up but houses and other buildings follow an orderly plan. Access to the area is extremely easy with various means of transport readily available. Even so, there are certain parts of the *kelurahan* that have poor drainage and slum conditions. Educational facilities from elementary schools to senior high schools are available in the *kelurahan*.

ANNEX 2.1

An example of selection of respondent households

The following table illustrates the selection process. In this research site 75 households in which at least one certificate had been obtained through the LAP, 2 non-participant households, and 35 control households were chosen, giving a total of 112 respondent households.

An Example of Selection of Respondents

Kelurahan	RW	RT	Number of respondent households
1. LAP participants (Sukamaju *kelurahan*, Sukmajaya Subdistrict, Depok City)	01	02	5
		04	5
		05	5
	04	03	5
		05	5
		06	5
	10	01	5
		03	5
		04	5
	21	02	5
		04	5
		05	5
	22	01	7
		02	5
		03	5
Total	5 RWs	15 RTs	77 respondents*
2. Control group (Jatijajar *kelurahan*, Cimanggis Subdistrict, Depok City)	01	04	5
		06	6
	03	01	6
		03	6
	05	03	6
		06	6
Total	3 RWs	6 RTs	35 respondents
Total	8 RWs	21 RTs	112 respondents

* This number includes two households that had had the opportunity to obtain a land certificate through the LAP but had not participated.