TENURE ISSUES IN RURAL DEVELOPMENT PLANNING:
A CASE STUDY FROM CENTRAL SULAWESI

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in cooperation with
THE CANADIAN INTERNATIONAL DEVELOPMENT AGENCY (CIDA)

OCTOBER 1993
The Sulawesi Regional Development Project, Phase II (SRDP II), aims to improve the welfare of rural populations in Sulawesi, Indonesia, by enhancing the capacity of local planning agencies to plan and implement effective regional development programs. Through a carefully designed program of institutional development, SRDP II assists in developing the skills of local planners in midterm and annual planning as well as in the identification, appraisal, design, monitoring and evaluation of projects which will benefit Sulawesi populations.

SRDP II (1990-1995) is a joint effort of the University of Guelph and the Department of Home Affairs of the Government of Indonesia (GOI). The Canadian Government through the Canadian International Development Agency (CIDA) has contributed C$ 24.8 million to support SRDP II. The Government of Indonesia supports the Project, both directly and indirectly through the contribution of funds, labour and commitment.

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Tenure issues in rural development planning: a case study from central Sulawesi

(Discussion paper, ISSN 1192-1439 ; #3)
Includes bibliographical references and index.
ISBN 0-88955-342-4

ABSTRACT

The paper provides background information on access to natural resources in the TTM Sustainable Development Site. The area is the homeland of the Lauje people, who live and farm predominantly in the hills since the coastal plain is very narrow. Part One discusses the traditional system of access to agricultural land, which is subject to strong individual rights. Other natural resources such as fuelwood, rattan and bamboo are collected from reserve areas which are managed by the local neighbourhood group. A transition in resource use and access is taking place in response to population pressure and the opportunity to intensify agriculture through planting commercial tree crops. Rights to land are becoming even more strongly individualized, and borrowing land from kin and neighbours for food production is becoming more difficult. People with few inherited land resources and women could be adversely affected by these changes. Part Two discusses the impact of government programs such as commercial tree planting, agroforestry, garden development schemes, new roads and property taxation on the tenure situation. The views of local officials towards traditional tenure rights are described. It is argued that government initiatives entail risks as well as benefits for the traditional land users. Part Three provides initial recommendations of alternative legal frameworks which could increase the tenure security of the traditional land users while encouraging sustainable economic development. It also discusses practical approaches to incorporating tenure concerns in the design of agroforestry, garden development and road projects. Addressing tenure issues in project design maximizes the potential benefits to the local population, and minimizes the risk that they will be displaced from land and resources upon which they depend.
Figure 1: Tinombo-Tomini-Moutong, Central Sulawesi
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Preface

The Sulawesi Regional Development Project has been active in the province of Central Sulawesi since 1990, assisting to improve the capacity of the district planning board (BAPPEDA) in Donggala district and implementing an integrated area development program. The integrated area development (IAD) site in Central Sulawesi is comprised of three kecamatan, Tinombo, Tomini and Moutong (TTM), covering a very large area along the east coast of Donggala district. This area is home to a large number of ethnic groups. Some of these ethnic groups are recent transmigrants from Java and Bali, while the remainder are a mixture of Sulawesi ethnic groups, both local and from elsewhere in the island.

Recent studies have indicated that the local population lags behind the transmigrants in terms of economic development, standard of living and services. In order to maintain social harmony and more equal development in the area, SRDP decided to focus on providing increased access to government services and development opportunities for the most disadvantaged of these local people.

For this purpose, SRDP selected 11 villages lying on the boundary between Kecamatan Tinombo and Kecamatan Tomini. In this area, the coastal plain is very narrow, and as a result there is little or no land suitable for irrigated agriculture. Most families depend on dryland farming for their livelihood. Since this is a mountainous area with steep slopes and a high population density, environmental degradation is a serious problem. Because of the complex mix of social, economic and environmental problems facing this area, it has been designated as a Sustainable Area Development (SAD) site within the TTM-IAD, and SRDP is attempting to develop an effective integrated program for the sustainable development of the area.

One of the main focuses of the integrated program for the SAD is rural livelihoods. As part of the development of program interventions aimed at assisting local people to improve their livelihoods, SRDP suggested the formation of an interagency Land Tenure Working Group to develop and implement a strategy for improved security of access to and control over local natural resources, in particular land and trees. As part of this approach, the Project hired a consultant, Dr. Tania Li, an anthropologist at Dalhousie University, Halifax, Nova Scotia, to report on 1) research findings concerning traditional and current tenure systems; 2) the situation of the poor and women in relationship to traditional and emerging patterns of tenure; and 3) perceptions, policies and practices of local officials concerning tenure. In addition the consultant was to make recommendations concerning how to resolve tenure issues in a manner favourable to the traditional users of the land while encouraging increased productivity and sustainability of the farming system.
This Discussion Paper is the outcome of the rural livelihoods background study, Access to Natural resources the TTM Sustainable Area Development Site, which was undertaken in 1991. The report has been utilized as input into a subsequent, on-going consultancy being implemented over a three-year period by Ms. Maria Rita Ruwiastuti, an Indonesian lawyer and land tenure specialist, who is providing training and advice to community leaders and local government officials on issues of strengthening control over land resources by isolated and disadvantaged people in the hill areas. This latter work, which will be reported on in due course, is in part intended to develop a model procedure for obtaining formal recognition of land held under indigenous land tenure systems, that may be utilized in similar situations elsewhere in the province.

It should be pointed out that the issue of land tenure is one that is not commonly tackled by development projects in Indonesia, or at least not to any degree that would involve a program of action. This is in part due to the sensitivity of the issue, however, the Sulawesi Project feels strongly that securing control over local resources, and in particular land, is crucial in many of the settings where development activity is proceeding, where populations with relatively unsophisticated understandings of the workings of the national land tenure system may frequently find themselves dispossessed of their holdings. It should be noted that Indonesian agrarian law explicitly recognizes the continuing validity of indigenous systems of land tenure; the problem lies in the extent to which this is understood, attended to, and implemented by local government officials, from the provincial down to the village levels.

September 1993

Tim Babcock, Project Director
Barbara Kirby, Research and Publications Coordinator
INTRODUCTION

Secure access to land, trees and other natural resources is essential to people who seek their livelihoods in rural areas. Secure access provides the incentive to manage the land carefully and invest in long term improvements that increase productivity and sustainability. Traditional tenure systems which have long provided a framework for resource allocation tend to be altered as production pressures intensify due to population growth, market production, and, in some cases, the arrival of outsiders (migrants and entrepreneurs). Government development programs also bring about tenure changes either directly or indirectly. Responsible authorities need to address tenure issues in the context of project planning in order to ensure that the tenure rights of traditional resource users are maintained or enhanced while the productivity and sustainability of the farming system is also increased. In Indonesia, this approach supports the development of a just and prosperous society founded on the national philosophy of *Pancasila*, and supports the specific goals of sustainable and equitable development outlined in the GBHN, encouraging harmony among people, and between people and the natural environment.

All societies have rules governing access to and control over land and other natural resources. National laws and regulations govern land tenure, and traditional local tenure systems also exist. In Indonesia, as in many other countries, national law recognizes the traditional land rights of indigenous people who have continually occupied, farmed and managed specific areas of land, so long as the exercise of such rights is in harmony with national development objectives (MacAndrews 1986, Lynch and Talbott 1988, Dove 1987, Zerner 1990). In the case to be considered in this paper, enhancing the tenure security of the traditional users of the land is an important component of a government program to promote sustainable development in upland areas through the introduction of agroforestry.

This paper focuses on the land tenure situation in a group of ten villages\(^1\) in the Kecamatans of Tomini and Tinombo, Central Sulawesi, which have been selected as a Sustainable Area Development (SAD) site. The site is the homeland of the Lauje people, who number about 20-30,000, forming the majority of the local population. According to Dutch records and to local history, the Lauje have always lived and farmed predominantly in the mountains, since there is only a narrow coastal plain and limited opportunity for lowland agriculture. The farming system on the hillsides is undergoing a period of rapid transition related to the introduction of commercial tree crops, and further changes are expected as government initiatives to develop the area are intensified.

The paper describes traditional and emerging patterns of tenure in the SAD site, notes issues of special concern, and indicates some opportunities and constraints related to current and planned development initiatives.

\(^{1}\) A three month period of field research was undertaken by the author in six of the ten villages in 1990-91.
Part One describes the traditional tenure system of the Lauje people, the tenure impact of current land use changes, and new issues and problems that have arisen. Particular attention is paid to the situation of the poor and of women in relation to traditional and emerging patterns of tenure.

Part Two describes the approach to land tenure currently being adopted by local officials, and analyses the current or expected impact of changes that are being purposefully introduced through government initiatives, such as tree-crop planting, agroforestry, road construction, and the new land and property tax (PBB).

Part Three provides some initial recommendations that could be explored and further developed by appropriate parties with the objective of resolving land tenure issues in a manner favourable to the traditional users of the land, while encouraging increased productivity and sustainability of the farming system. A number of alternatives are explored, with an assessment of their potential to promote secure and decent livelihoods for the people of the SAD site.

PART ONE

1 TRADITIONAL AND EMERGING PATTERNS OF RESOURCE ACCESS AND TENURE

Three agro-ecological zones have been identified in the SAD site. These are the coastal zone, which includes the sea shore, mangrove forests, coastal plain, and the lower foothills used for seasonal corn production by coastal dwellers; the middle hill zone, used quite intensively for the production of food and cash crops (corn, rice, tobacco, shallots and, more recently, tree crops); and the inner hill zone, where farmers grow mainly root crops with some rice and corn, a few grow cash crops (shallots and garlic), and many engage in the extraction of forest products such as rattan and resin.

Some basic principles of resource access common to all of the zones are outlined first. Patterns of resource use and access in the coastal zone and in the hills are then described in more detail, with a particular focus on changes in the traditional tenure system and the nature of current conflicts and problems.

It should be noted that researching traditional patterns of tenure in situations of rapid change requires special care and persistence. If questioned superficially, informants often describe present conditions as if they have always existed, and are vague about when certain changes began to occur. In collecting the data presented here, techniques used included life histories, neighbourhood histories and genealogies, farm inventories, discussions with key informants, and followup probing into specific events or disputes.
1.1 Traditional Patterns of Resource Access and Tenure

In common with other traditional cultivators in Southeast Asia, the Lauje have a complex system for the allocation of rights over natural resources. They recognise three distinct types of rights: rights of individual ownership (hak milik); rights of ownership of inherited resources which have not been divided among the co-heirs (hak milik bersama); and rights to make use of forest and other resources within a certain territory (hak ulayat). Although some analysts have described all traditional resource rights in Indonesia as hak ulayat, several indigenous groups, including the Lauje, recognize strong rights of individual ownership as applying to certain categories of land, while rights of avail (hak ulayat) apply to others (Dove 1987). Ownership rights recognized by the Lauje include the rights to sell or give away land, as well as to pass it on to descendants.

The existence of land ownership rights in the traditional Lauje tenure system can be explained in part by historical conditions. Population density in the Lauje hills is high in relation to the type of land and the farming systems in use, ranging from thirty to eighty persons per square kilometre (Li 1991:27,38). At these densities, land and forest have long been regarded as limited resources in which rights of access are carefully defined.  

1.1.1 Agricultural Land

1.1.1.1 Individual ownership rights established through first clearing

The Lauje recognize the first clearing of primary forest as the basis of a set of strong, permanent, individual rights to the land. These rights include the right to plant short term crops or trees; the right to continue to harvest produce from the land while it is reverting to secondary forest during the fallow period; the right to reuse the land repeatedly by clearing it again for agriculture after a fallow; the right to dispose of the land through gift or sale (in exchange for, goods or cash); and the right to pass land on to descendants. These rights endure even after a long absence or permanent move away from the area, so long as living memory or signs such as fruit trees indicate that the land was cleared by this person.

Historically, these tenure rules developed in response to the specific ecological conditions in the Lauje area. Rainfall tends to be high and irregular in the mountains, so that primary forest is difficult to burn. If the fallen trees burn at all, there is seldom a good yield in the first harvest. Secondary forest has thus been very highly valued, and individual rights to it are firmly established. Lauje terminology distinguishes between doat, which is primary forest and ulat which is secondary forest land to which individual rights apply. Abo is land with light bushes

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2 If data is available, the analysis of census archives could reveal population trends over the past century, making it possible to determine more accurately when population densities began to reach their current levels.
growing within one year since the last harvest, and *gio* is land covered by *imperata grass*. These latter terms describe distinct types of vegetation, but the tenure status of the land is the same as *ulat*, that is, they belong to the first cultivator or their descendants.3

Pioneers who cleared primary forest in previous generations aimed to clear enough land so that their own household and their descendants could farm on secondary forest land in a stable cycle that allowed sufficient fallows for restoring the land’s fertility. They only increased their land area by clearing additional primary forest when population pressures made it necessary. Balancing a number of factors, including the labour required for forest clearing, the difficulty of burning, the rapidity of weed infestation and the time required for the restoration of soil fertility, the preferred fallow period is a minimum of five and a maximum of ten years. The best harvests are said to be obtained from land on which the trees have reached "thigh size", a diameter of about twenty centimetres. Pressure on land resources frequently reduces fallows to a less desirable period of two or three years. Since crops such as cassava, papaya, banana, tomatoes and taro continue to yield for several years with only minimal tending while the forest regenerates after the last corn harvest, land often remains in low intensity agricultural use throughout the fallow period of the cycle.

Ideally, pioneers clear land in a contiguous block that can be used by their descendants for generations to come. In order to find such land, they have to move far into the forest, establish the first garden, and then expand the territory slowly over the decades, a practice known as *nomaloso*. The pioneers first clear the best land, which is relatively level and close to a water source. Over the years they themselves or other pioneers moving in behind them clear the remaining land which was passed over the first time, because of its slope or other characteristics. As a result of these practices, the pattern of rights to secondary forest land varies in different regions of the hills. In some regions, there is a large (five to twenty hectare) block of contiguous land occupied by a group all of whom are descended from a common set of ancestors, and no outsiders except for spouses who have married into the group. In other areas there is more of a mosaic of smaller and more scattered plots of land cleared by unrelated individuals. The average size of a plot of primary forest land cleared in one season is 0.3 - 0.7 hectares.

The right of an individual pioneer to sell land he has cleared has been recognized for at least sixty years, which is the extent of living memory, and probably longer. The traditional recognition of the right to sell land probably relates to the difficulty of clearing primary forest land and the frequent failure of pioneering efforts. A pioneer sometimes succeeds in clearing a plot of land, but if it fails to burn or the harvest is poor the family may be forced to run back to their established secondary forest holdings or their farm plot from the previous year which can

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3 Imperata grass lands are sometimes viewed by outsiders as useless wastelands, but Lauje farmers distinguish between more and less fertile grasslands, and consider the more fertile ones to be especially suitable for growing shallots. Only the most degraded grasslands have been unused for decades, and, as a result of non-use, knowledge of ownership has sometimes lapsed.

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be quickly cleared and planted with food. If another pioneer then decides to try to clear land in the same area, he pays the original pioneer for permanent rights to the plot of cleared land, which he can use as a base to grow food while trying to clear more land in the vicinity. Traditionally, land sales most commonly took place along the forest frontier, and seldom in areas which had been settled for more than one generation. All sales were to fellow Lauje, since no non-Lauje ever tried to clear or buy land within the Lauje area. Axes, knives, clothing, stocks of rice or consumer goods rather than cash were often exchanged for land. Sale agreements in the mountains are commonly not registered with village authorities, but are negotiated directly by the two parties and witnessed by a neighbour.

1.1.1.2 Ownership of land inherited by descendants of a pioneer but not divided among them.

A Lauje pioneer seldom gives full rights to his land to his descendants while he is alive, instead lending farm plots to his children and grandchildren according to their needs. Only a pioneer with more than one wife commonly divides his land between the wives so that it can be passed on to distinct lines of descendants. Any gifts a pioneer chooses to make to his own children or any other party are fully recognized by the descendants, since the pioneer’s right to dispose of his own land is undisputed.

After a pioneer dies, his male and female descendants inherit equal rights to his land. The descendants in each subsequent generation generally do not divide the inherited land, but hold rights to it as co-heirs. The descendants have the right to cultivate the ancestor’s land in turn. They can only plant trees on the land or dispose of it by gift or sale with the agreement of the other heirs who hold rights in the same piece of land.

Trees such as mango and langsat planted by an ancestor are inherited in the same way as land. The descendants share the produce at harvest time, but may not sell or dispose of the trees without the permission of the other heirs. The only property commonly divided among the heirs upon the death of the owner rather than being used by the hiers in rotation is coconut trees. Once individuals have received their personal share of trees from their deceased mother or father, they are free to sell or mortgage the trees as the need arises.

Descendants arrange to allocate the rights to cultivate inherited land in an equitable and flexible manner, responding to the needs of the various households and the condition of the land itself. The number of households sharing joint rights to inherited land varies according to the number of generations since the original pioneering took place. The household wishing to use the land sometimes informs a senior relative of its intentions, but this is not essential since the right of descendants to use the land is clear, even if they have been absent from the area for many years. Before commencing land preparation, the household may also seek the permission of the person who last used the land, especially if signs of cultivation (such as banana trees or taro) are still present. Again, although their permission is asked out of courtesy, the previous user does not have the right to withhold land from co-heirs, especially if well fallowed land is in short supply.
Fallow land is well inventoried by the local community. They know the boundaries of the various land parcels cleared by specific individuals (generally marked by signs such as rocks, streams, gullies or trees); they know the origin of, and consequent rights to, each plot of secondary forest land; and they know which land has been sufficiently fallowed and is ready to be farmed. Only in a few instances, where plots of land were cleared many generations ago, has the precise knowledge of its history been lost. In these cases the local group shares rights to the land on the basis that they are all descended from a group of common ancestors who pioneered the area together.

1.1.1.3 Rights to borrow land for short term use

An important limitation on the land rights of the person who first cleared the land or his descendants is the obligation to ensure that fellow Lauje, especially kin and neighbours, do not go hungry for lack of land on which to grow food. A land pioneer or his heirs are obliged by various social pressures to lend land to others when requested. The household that borrows the land is not entitled to plant trees on it, since the rights given are only temporary, but they may continue to use the field for several seasons and to harvest any medium term crops such as banana or papaya for as long as they continue to yield. No fixed rent in cash or kind is paid under such arrangements, although the person lending the land is expected to visit the farming household once or twice after the corn harvest, carrying home a gift of produce. The extent of land borrowing varies in different areas of the hills. The right to borrow land is highly significant to those households whose ancestors cleared little or no land, and who live far from the forest frontier where primary rights to new land can be established.

Land is sometimes borrowed after it has already been cleared and prepared for planting. Kin may request (or be invited) to borrow a section of a field in which to plant their own crops for one or two seasons. This loan may occur when the land is freshly cleared after fallowing or after one or two harvests have already been obtained. The people who borrow land in this way are usually those who are not capable of the physical labour of preparing the land themselves, and include a man’s wife, his unmarried daughters, his younger sons, his mother or mother-in-law (if they are widowed or their husbands are too old to clear land), nieces, aunts and other female kin, especially widows and divorcees who have no husband to clear land for them. In such cases, the man is lending a portion of land (which may be his or his wife’s inherited land or land he himself has borrowed), and, more importantly, he is making a gift of his labour power in clearing the land for use by others. Such arrangements help ensure that every person, including vulnerable women, have access to land to cultivate. The person who plants crops on another’s field under these arrangements has full rights to the produce, and does not pay any rent in cash or kind.

Rights to borrow land for short term use are an important part of the traditional Lauje tenure system. Every crop growing belongs to a specific individual, and several people’s crops often stand in separate sections of the same field, or replace each other in succession. For this reason, many people’s rights to borrowed land are potentially affected by changes in land use and tenure, not just the rights of the pioneer or his heirs. The type of tenure under which a specific plot of land is held at a given point in time influences the types of crops that can be grown there and,
specifically, whether or not trees can be planted. This becomes a significant issue when land use is transformed, as will be indicated below.

Under the pattern of land tenure described above, each individual Lauje man and woman has clearly defined rights to particular plots of land. These can be individual rights of ownership obtained by initial clearing of primary forest, by gift or by purchase; ownership of inherited land not divided among co-heirs; or use rights to an entire plot of land or a subsection of it borrowed for a specified period of time from parents, senior relatives, or other kin or neighbours. Often, several parties hold different rights in the same plot of land simultaneously. Also, since land rights are acquired equally by men and women, a household may be using land derived from the wife’s family one year, and the husband’s family the next.

The traditional system of land tenure has evolved in response to the conditions of life in the hills, which include the need for flexibility in allocating cultivation rights according to the needs of different households while also rewarding the hard work of pioneering with strong individual, heritable and saleable rights. Many Lauje farmers have never cleared any primary forest gardens themselves. Others have cleared a few plots but still relied mainly on inherited land resources and on land they have been able to purchase from pioneers moving on. As the Lauje state: “those who work hard, add on, the others just rely on the ancestors”.

Very little primary forest land remains in the SAD area, and there is virtually no land suitable for agricultural use which has not already been cleared and brought into active use. Much of the land has been farmed for at least three or four generations. Households move their house location every two or three years in order to be able to guard their growing crops, but they seldom move far, and are often simply rotating between a limited number of field plots as each recovers productivity after a short fallow.

1.1.2 Other Natural Resources

The discussion so far has focused on rights to land for cultivation, since agricultural land is the most crucial resource. In regulating access to other natural resources, two principles are important: individual ownership rights based upon the investment of labour, and rights to use resources based upon membership of a group occupying a certain territory.

1.1.2.1 Ownership rights based on the investment of labour

A person has individual, heritable rights to any resource in which he or she has invested labour, even if the land upon which the resource is located has never been cleared for agriculture in the manner described above. Examples include anything planted or nurtured, such as: reeds sown by women near a river bank for mat making; coffee trees planted by women under the natural forest cover of a river bank without clearing the land; resin trees found in the forest that have been nurtured by clearing competing vegetation and protected from fire during farm preparation by
wrapping in bark; sago palms planted on stream banks; small gardens of taro in the middle of the forest used as a food store when hunting or collecting rattan; and clumps of bamboo wherever they are purposefully planted. Fuelwood that a person has cut and saved beside a field while clearing the land for cultivation is privately owned because of the labour invested, but fallen branches on anyone’s fallow land are free goods since no labour was involved in providing the resource.

1.1.2.2 Common resources accessed by members of the local neighbourhood

Any useful resources that grow naturally in the grasslands, secondary forest fallows or in pockets of primary forest near rivers and streams or on steep slopes can be taken without permission by members of the local neighbourhood for personal use. These include bamboo and vines for fencing, bamboo and timber for houses, emergency staple foods such as ondot, onaun and wubi, wild fruit and vegetables, and game animals. Thus while secondary forests and grasslands are owned by pioneers and their descendants who use them for agriculture, the local neighbourhood shares in rights to the non-agricultural use of the fallow land as a reservoir of food, fuel and other important resources.

The local neighbourhood also shares the right to exploit natural resources such as rattan for profit. Rattan has traditionally been collected by the inner hill Lauje and pared into strips for sale to middle hill and coastal people who use it in housebuilding and fishing equipment. Many inner hill Lauje depend on income from rattan for the purchase of essentials such as salt. Local communities have consciously preserved areas of primary forest as reservoirs for rattan collection, and they guard these areas against rattan collectors from other neighbouring Lauje groups or from anyone who wishes to clear the land for farming. The reservoir land tends to be on very steep slopes quite unsuitable for farming, an added reason for its conservation as primary forest. People from one neighbourhood group who wish to collect rattan in the territory of another group must ask permission first. It is reported that in earlier decades Lauje did not move freely across the territory of other Lauje groups, and hostilities were common.

The definition of a neighbourhood is basically territorial: it comprises all the people living in a certain vicinity, usually named after a river, mountain or other landmark. In social terms, some neighbourhood groups have quite clear boundaries and a sense of identity, while others are less tightly constituted. Tightly knit groups exist where a small group of pioneers, themselves related to one another, cleared a substantial area of forest which has been occupied by their descendants for several generations. Intermarriages, including first cousin marriage, make the group boundaries tighter, although spouses marrying in from outside the group are fully accepted as members. Other neighbourhoods were settled by a group of unrelated pioneers and include several distinct family groupings, who subsequently began to develop kin ties through marriage. The important principle defining resource rights, however, is neighbourhood not kinship: the people who live close to a resource have stronger rights to it than people who live further away.
Territorial considerations and kinship links are important when pioneers are selecting an area of primary forest to clear for cultivation. When pioneers can no longer expand their farmlands into the area adjacent to the existing neighbourhood, they use kin ties to gain a foothold in a new area with good land resources. If there are no kin links, the pioneers formally ask the permission of the group closest to the new area before beginning to clear land, recognizing that the group already uses the land for hunting and forest gathering, and may have plans to expand cultivation there too. Thus even when there are no boundary markers and the land has never been cleared, territorial claims to primary forest land are recognized. As in other instances where livelihood is at stake, however, the group possessing these territorial rights is subject to social pressures to follow Lauje custom by assisting fellow Lauje seeking subsistence, and cannot unreasonably deny them access to land.

In the few locations where primary forest land still exists in the SAD area, it has been preserved in its forested state by the nearest group of Lauje specifically in order to protect the environment and prevent land slides, and to protect their source of natural resources for use and sale. Their traditional interest in, and rights over, the remaining primary forest land is thus well defined, and their protection of original forest land is important to their livelihood strategy.

1.1.2.3 Authority and management

The traditional land and resource management system described here is complex but well established, and disputes seldom arise. There is little or no assertive resource management by local adat leaders, who are more often called upon to adjudicate domestic issues (marriage arrangements, divorce, threats, gossip and so on). Where individual land rights apply, people manage their own affairs. Where joint rights are held by a group of descendants, there is little emphasis on the authority of specific elders, although the opinions and advice of the senior generation tend to be respected. Non-agricultural resources accessed by the local community are protected from outside incursions by the custom requiring outsiders to ask permission before using the resource. However no authority structures have developed to ration the resources within the group. If rattan or house building poles are no longer available in the nearest patch of forest, people go further afield, asking permission from the people living in the vicinity of the resource when appropriate.

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4 Lawry 1989 makes a useful distinction between "minimum" and "intensive" common resource regimes. Minimum regimes are regulated only through rules of access, such as the rule that all local community members can use the resource. Intensive regimes involve explicit controls over the behaviour of commons users and are introduced where, due to technological change or population growth, resource demand exceeds supply. The Lauje currently have a "minimum" commons regime, but may recognize the need to move to a more intensive pattern.
1.2 Resource Access in Transition

Changes in the traditional pattern of resource access are inevitable as land use intensifies, and will occur with or without the presence of government development programs and initiatives. This section describes a significant set of changes that have occurred in the past five years, and identifies issues of special concern. There is a brief discussion of the coastal zone, and a more extended discussion of the situation in the hills. The middle and inner hill zones are described together, since the tenure issues that arise there are largely the same, with some differences in priority or significance.

1.2.1 The Coastal Zone

1.2.1.1 Sea and sea shore

Rights in fisheries resources are not discussed in this paper. Access to the fisheries is limited by capital for investment in basic equipment such as simple boats and lines. Most fishermen have acquired fishing capital and skills from their relatives, making fishing activities a tradition in some families but not others, even if they live on the sea shore.

1.2.1.2 Mangroves

The mangrove forests were traditionally used by coastal dwellers as a reservoir from which they could obtain house building poles and fuelwood. It was also a location for small scale fishing. The resource was abused by outsiders to the SAD region, who removed massive quantities of fuelwood for sale in Palu and for use in local rattan processing (see Li 1991). Subsequently, the mangrove area was divided into plots of one to five hectares and allocated to individuals for the development of fish ponds. The beneficiaries of the official devolution scheme were mostly officials or entrepreneurs from the town of Tinombo or other urban areas in the province. The beneficiaries have not yet received official title to the land, although this has been promised to them. Even without title, many plots of mangrove land have changed hands by means of sale agreements since the initial allocation process took place in about 1989. Sale prices range from 0.3-0.6 million rupiah per hectare, depending on how much digging has already been completed. Only a small percentage of the land was allocated to Lauje villagers, and many of them have subsequently sold their rights because they lack the capital to develop the land themselves. The traditional resource use rights of the coastal Lauje villagers were ignored in the registration and allocation process, and the new land "owners" have begun enforcing exclusionary rights, preventing villagers from collecting fuel wood on the land.

1.2.1.3 Coastal Plain

The majority of the land on the coastal plain became the individual property of Lauje smallholders who each planted from one to five hundred coconut trees upon instruction of the Dutch in the 1910-1930 period. It appears that few if any titles have ever been issued for the coastal land. However clear ownership of the coconut trees was established by the people who
planted them under the traditional tenure rules described above. Over the decades, ownership of coconut trees has been confirmed through registration in village and sub-district files, the payment of taxes, and through other transactions such as mortgage, sale and purchase.

Sale and purchase of trees is formalized through the Akte Jual-Beli Pohon document. Some Acte Jual-Beli documents specify that a sale agreement relates to the trees only (with five meters of earth around each tree), while others relate to a specified set of trees and the land in between them, whatever its dimensions. Although in most cases the land tends, de-facto, to change hands together with the trees, the distinction between the types of sale agreement is important, since it potentially separates tree and land tenure rights. In some cases coastal Lauje are living on land under trees their families once owned, but have sold. Depending on the nature of the sale agreement, they may feel that they are borrowing land on which they have built their house, or that they still own the land, as only the trees were sold. In the latter case, they consider that they have the right to plant new trees on the remaining land. Differences of interpretation on this matter have been a source of dispute.

Parents seldom give ownership of coconut trees to their children before their death, since they rely on the income to support themselves in old age. After death, the usual approach to inheritance is to divide the coconut trees among the heirs, usually with equal shares to women and men. Only if the number of trees is very small (twenty or less), do the heirs maintain the inheritance intact without division, instead taking turns to enjoy the proceeds of the quarterly coconut harvest.

Fewer than fifty percent of the coconut trees on the coastal plain remain in the possession of the original Lauje owners or their descendants, the majority having been sold off to outsiders from Tinombo town or elsewhere in the province to meet tax payments or other expenses. The land rights of most Lauje villagers living under the coconut trees on the coastal plain are the rights of borrowers. They have obtained permission from the tree owners to borrow land on which to build a house of temporary materials (wood and bamboo), and they may cultivate short term food or cash crops but they may not plant trees. If they wish to develop the land by planting new coconuts or other commercial trees, they must negotiate with the coconut tree owner for an explicit, witnessed share agreement in which the owner and the person undertaking the work (who also supplies the seed) each receive half of the new trees once established. Such share agreements are quite common, and are usually witnessed by village officials.

Because the majority of the coastal land is not in the possession of the poorer Lauje villagers but is controlled by the wealthy outsiders who own the coconut trees, development initiatives relating to this land offer few prospects for improved livelihoods. Poor coastal Lauje who wish to engage in farming turn to the foothills for access to agricultural land.

1.2.1.4 The Foothills

Rights to land in the foothills were established by the process of first clearing in the manner described earlier (section 1.1.1.1). In some areas of the foothills, the parties holding inherited
rights can be identified, and their permission is asked before anyone borrows land to cultivate their crops. In other areas, collective memory of the history of specific plots of foothill land appears to have been lost, and the land is freely used by any Lauje farmer living on the adjacent coastal land who wishes to open a seasonal garden there. Foothill land lies in a rainshadow and can only be cultivated once a year. Despite this limitation, the food and short term cash crops grown there are essential to the livelihood strategies of many coastal Lauje who depend principally on insecure wage work (see Li 1991). Where information on the original pioneers has been lost, villagers recognize that the people who regularly use foothill land for agriculture are the people who now have land rights there.

Apart from its agricultural use, the foothill land is a source of fuelwood for domestic use and for sale. The poorest coastal dwellers, including many women, collect firewood in the foothills for sale to wealthier coastal villagers or to the townspeople of Tinombo. Wealthy villagers graze cattle and goats freely in the same area.

Few trees have been planted in the foothills, although there are many live fences that have been established since the mid 1980's. Farmers who build live fences indicate a definite intention to return to the plot of land after fallowing, and are considered to have strong permanent individual rights to the land. Land fencing is essential to prevent the raiding of crops by wild pig, or by goats and cattle owned by wealthy villagers. To save labour, small groups of farmers often work together to establish a single perimeter fence. Within the fence, the field plots are worked individually. Unless it is live, a fence only lasts for one or at most two farming seasons before it rots.

Conflicts over the allocation of rights to land in the foothills have not yet arisen but can be anticipated if the actual or perceived value of the land increases through the introduction of tree crops with drought-resistant qualities. The land is easily accessible to the coastal road, and traditional rights to farm and collect fuelwood there are in danger of being ignored or undermined through development initiatives, just as were the traditional rights to the mangrove forest. If the rights of the traditional users of the foothill land can be secured and enhanced before, or together with, the introduction of new species and technologies that make the resource more productive, the area presents a superb opportunity to improve the livelihoods of the poorest coastal dwellers. Tenure issues related to the planting of commercial trees are explored in more detail below.

1.2.2 The Middle and Inner Hills

The pattern of access to land, trees and other natural resources in the middle and inner hills follows the general principles outlined above. A major transition in land use is taking place through the introduction of tree crops which have become very popular since 1987. Such trees are being planted in large numbers all over the middle hills, and inner hill farmers are beginning to follow the same trend. The general issues raised by this transition are described in detail by Li (1991) and will be only briefly reviewed here as a background to the discussion of tenure problems.
Commercial tree crops such as cocoa, clove, cashew, kapok and candlenut have been introduced to the SAD area since about 1987. In part, they have been promoted by the government via local officials, for reasons to be discussed in Part Two below. In large measure, however, the new tree crops have been adopted on the initiative of hill farmers themselves. In the middle hills farmers need to obtain higher cash incomes in order to buy staples to supplement their declining food harvests. In the inner hills subsistence pressures are less severe, but cash is needed for many consumption items, and farmers believe that tree crops offer relatively high returns to land and labour. Short term cash crops such as shallots, garlic, tobacco and groundnuts have long been grown in the middle hills, so the production of cash crops is certainly not new to Lauje farmers. Because of their long term nature, however, tree crops introduce an entirely new dynamic in the relations between people and land.

Tree crops have been successfully integrated into traditional cultivation systems in many parts of upland Southeast Asia, contributing both to farmer’s incomes and to national export totals, without seriously diminishing the autonomy and security that farmers gain through subsistence food production. In the Lauje case, however, population densities are already high and land devoted to tree crop production will seriously reduce the pool of land available for food or short term cash crops. The market potential of the trees being planted is uncertain, and the quality of planting stock is generally low. Despite the uncertainties of production, quality and price, hundreds of thousands of trees have been planted and farmers place great hopes in this new form of agriculture.

A second innovation in the middle hills is the use of live fencing to enclose plots of farmland. The practice has been known in the SAD area for at least one generation and has become more popular in recent years as raiding by wild pigs has increased. The extent of fencing is limited by the cost of purchasing fence poles, which are only available near the coast, and the large labour investment in carrying the poles inland. A farmer who builds a live fence tends to use it intensively for short term food and cash crop production for a few years, but then finds its fertility declining. Instead of leaving the fenced plot to fallow, the farmer usually plants commercial tree seedlings which eventually shade out the other crops and preclude other land uses. Because trees are planted within the plot and because live fences are themselves composed of useful and purposefully planted trees, the tenure issues raised by live fencing are similar to those raised by the introduction of tree crops. The tenure implications of live fencing and tree crop planting are considered together in the discussion that follows.

Five interrelated resource access and tenure issues arise in the context of planting commercial tree crops and establishing live fences: issues surrounding the allocation of rights to plant trees on inherited land shared by groups of descendants; the loss of rights to borrow land to plant food, with particular impact on women and the poor; unequal access to land, labour and capital to engage in tree crop planting; problems over the commercialization of land, and the brokering of land and information; and the loss of community access to resource reservoirs on land under primary forest or secondary forest fallow. These issues will be discussed in turn. Some tenure issues affect all hill people equally, while others are of particular concern to vulnerable groups. The situation of the poor is highlighted throughout the following discussion, and the situation of
women in relation to emerging patterns of tenure is given special consideration in a separate section.

1.2.2.1 Dividing land for tree planting

As noted in section 1.1.1.1, people who cleared primary forest land themselves, or who purchased land from the original pioneer, have the undisputed right to plant trees on their land, or to sell it to others for tree planting if they so choose. The situation in relation to land cleared generations ago is more complex, since all the descendants of the original pioneer have inherited rights to the land. If one descendent plants trees on inherited land, the other descendants are thereby prevented from growing food, shallots or any other crops there, and the land becomes effectively the private individual holding of the tree planter. Before, the system of collective rights to inherited land worked efficiently to ensure an even distribution of land to farmers according to their short term requirements. Now, the desire to plant trees has led to the need for permanent individual rights to inherited land, which must be definitively divided among the heirs.

Families resolve this matter in a variety of ways, often peacefully but sometimes with acrimony. If the original pioneer is still alive, the matter is easily settled. Where his children and grandchildren would formerly have asked him to lend them land to plant food and shallots, they now ask him to make a permanent gift of the land so that they can plant trees. In one case encountered, a person paid his own father for some land. The pioneers usually distribute the land equitably, but even if they favour one child over another, the others recognize that the person who clears the land has the right to give the land to whoever he chooses, so disputes are rare.

If the pioneer has already died, land division takes one of three forms. The descendants can meet as a group to divide the land between them. This has happened in a few cases. Lauje adat leaders, who are responsible for maintaining harmony and settling disputes, believe that this is a good solution, and that they could facilitate the process if the family had difficulty resolving matters among themselves. A second approach is for the person who wishes to plant trees to consult individually with some or all of the other heirs, especially those in the senior generation: "I went to ask my uncles before I planted trees here. Some did not want to give permission, but I said 'we all have rights here, from our grandfather'". Another approach commonly practiced is for people to begin planting trees on the inherited farm plot they happen to be using at the time, with or without making their intentions known to the other heirs. Since most farmers have planted or desire to plant trees, some people agree with this approach and are prepared to accept that "whoever works harder at planting trees will end up with more of the jointly inherited land".

In a few cases, planting trees without the agreement of other heirs has lead to disputes, and trees have been burned or uprooted. In at least one case in the middle hills the village head was called in to resolve the dispute but, not knowing the situation of the parties in detail, the solution he ordered was not fully accepted by the parties and the dispute still continues. When the story of uprooting trees was recounted to a closely knit inner hill neighbourhood that desires to plant trees, they asserted that they would have no such problems over inherited land so long as
everyone obtained seedlings and was able to progress together. Equal distribution of seedlings would ensure equal distribution of inherited land.

Because of the possible tensions surrounding inherited land, many farmers prefer to plant trees only on land to which they have clear individual rights. If they pioneered or purchased or were given a few plots of land at some stage in their life, these are the plots they plant with trees. Since the land selected for tree planting is selected because of its clear individual tenure status and not for its bio-physical suitability, the pattern of tree planting in the hills does not necessarily reflect sound ecological principles. For example, to take advantage of the opportunities from commercial tree farming while also increasing or maintaining food production on a smaller area of land, it would be better to plant trees on more sloping land and reserve more level land for intensified food production. However the farmer may be constrained from adopting the optimum physical farm layout because of the concern to plant trees only where tenure rights are strongest. Furthermore, the desire to establish definitive individual land rights in order to plant trees has recently led to the clearing of some very steep slopes which previously had been avoided due to the risk of landslides. Resolving tenure issues related to inherited lands will facilitate land use planning by farmers to take best advantage of the slope and soil characteristics of their particular plots of land.

1.2.2.2 Loss of access to land to plant food and short term cash crops

As more trees are planted, land for food production will become increasingly scarce. Although few middle hill farmers are able to subsist all year on the produce of their land, food production is an important component of their livelihood strategy and none of them envisage abandoning it entirely. Indeed, given the uncertain productivity and fluctuating world prices for the commercial tree crops they are planting, they would be ill advised to abandon food farming.

The most serious impact of the shortage of land for short term production will be felt by the people who commonly depend upon borrowing rights. It was noted earlier that people whose ancestors cleared little land are able to borrow land from their neighbours to plant food and short term cash crops. The practice of borrowing is consistent with Lauje philosophy which ensures that every Lauje family in the hills should be able to gain a living from the land. The second group of people who customarily borrow land are women without husbands and old people who are no longer capable of the physical labour of land clearing. They are lent sections of a cleared field which is ready for planting, sometimes after others have already obtained one or two harvests.

As land for food production becomes scarce, and is more intensively used by people who themselves cleared or inherited it, those who customarily borrow land may no longer be able to do so. Instead of allowing land to return to fallow, the owners often plant trees there, precluding other land uses and, most significantly, displacing other land users who previously had rights of access through borrowing. The people most effected by this shift in land use and allocation are those with few inherited rights, and women who may have inherited rights but lack access to male labour for land preparation.
1.2.2.3 Unequal access to land, labour and capital to engage in tree planting

Among pioneers on the forest frontier, land rights can be acquired through land clearing or purchase as a result of personal endeavour. In areas that have long been settled and cultivated, however, land rights are inherited from the ancestors and some family groups have inherited rights to larger areas of land than others. A few people appear to have no inherited rights at all. Under the traditional tenure system, this did not present a problem, since those without rights to inherited land could borrow from people who did have such rights. Few inequities resulted, and an energetic farmer could prosper even on borrowed land.

As noted earlier, people who borrow land are not permitted to plant trees there. Thus people who traditionally borrowed land are potentially excluded from participating in this new form of production. They no longer find it easy to borrow land to plant food or shallots, and they are not able to plant trees. A common arrangement in these situations is for the man or woman wishing to plant trees to enter into a share agreement with the person holding rights to the land. Under this agreement each party receives half the trees (and the land on which they are planted), once they come into production. In most cases the person doing the work also provides the seeds. Share agreements are usually witnessed by a third party, such as a neighbour. Unless there are close personal ties between the parties, people holding land rights are often reluctant to agree to such proposals, preferring to develop their land more slowly themselves. Thus not everyone who wishes to plant trees is able to acquire access to land through share agreements.

Access to land is closely related to access to labour and capital, the other two resources necessary for successful tree crop farming. People with good land resources can fallow land well and obtain consistently good harvests, building up reserves of food and cash. People with poor land resources can rarely produce sufficient food for the family and are forced to seek cash for food by working for casual wages on the coast or collecting rattan or bamboo. The latter group lacks cash to purchase seedlings and food reserves to support an investment of labour in long term crops. Also, they lack additional land to use for food production while waiting the five to ten years before tree crops begin to yield. These factors together result in a situation where some families are unable to plant trees or, if they do try to plant trees, they may be forced to sell them to pay for immediate food needs which cannot be met while waiting for the trees to produce. While households with good land resources and reserves of labour and capital can manage the transition to tree crop production with little problem, for others the transition problems are serious, and may even result in complete loss of land and livelihood.

Ironically, distress sales of land among the poor are made both more likely and more possible through the tree planting process. It was noted earlier that inherited land cannot be sold, since co-heirs also have rights to it. However, once the co-heirs have recognized a person’s individual rights to land by accepting the fact that he or she has planted trees on it, the individual then becomes free to dispose of the land through sale. This sequence of events: privatizing inherited land through tree planting, then selling land and trees, often to non-kin, is beginning to occur quite frequently in the hills.
As a result of the introduction of tree crops, households which lack land, labour and capital are in danger of becoming poor, both relatively and absolutely. They will lose assured access to borrowed land to grow food, a benefit they enjoyed under the traditional tenure system which ensured that their minimal survival needs were met. In comparison to their neighbours, they will be excluded from the long term benefits to be gained from productive trees. In some cases the poor end up selling their land to neighbours who are expanding their tree crop holdings, especially during the dry season in the middle hills when food reserves are at their lowest.

The problems described in this section are more acute in the middle hills than in the inner hills, where basic subsistence is better assured through the cultivation of taro and land is less degraded. In the inner hills all or most people appear to have rights to some inherited land where they could plant trees with the agreement of the co-heirs, and there are still a few small pockets of primary forest land that could be used for tree groves.

1.2.2.4 Brokering of land and information in the context of land sales

In a society with few written records, memory is the main source of information about the status of particular individuals or groups in relation to specific areas of land. In general, this information is widely shared within each local community in the hills, in so far as it relates to the land in their vicinity. In the current context of tree planting and land sales, close neighbours and kin know who a particular piece of land belongs to and, if it is being offered for sale, whether the person offering the land actually has the right to sell it.

Since the introduction of tree crops, people from the middle hills and the coastal plain who have some capital are seeking to purchase land in order to expand their tree crop holdings. They often seek land outside their own immediate neighbourhood. In such cases they usually do not have detailed information about local land rights, and are forced to rely upon the word of their contact person regarding the ownership status of the land. Inaccurate or misleading information leading to illegitimate land sales has become a common source of dispute in the hills. In some cases, particularly near the border of the inner hills, an older individual claims that he himself pioneered a plot of land, while others assert that it was cleared by their father or grandfather. In other cases, an individual sells inherited land to an outsider as if he had exclusive rights to it, without consulting his co-heirs or sharing the proceeds of the sale with them. These cases cause serious disputes among kin, although the person's right to the land purchased is usually not challenged if he was genuinely misled and was not himself at fault.

In one particular area which lies on the border between the middle and inner hills problems have arisen when a local leader was asked by the village head to act as a broker and allocate "empty" land to coastal people who wished to plant tree crops. He ended up allocating land which belonged to other individuals, or to groups of co-heirs, including his own group. Cash compensation was promised in some cases, but did not always materialize. The land allocated in this manner was secondary forest fallow, to which, as we have seen, the Lauje recognize strong ownership rights. Thus according to traditional Lauje practice the land was not "empty" but encumbered with definitive rights. The definition of "empty" land is one of the most serious
areas of disjunction between Lauje tradition and rules stated by local officials, and will be discussed in more detail in Part Two below.

1.2.2.5 Loss of community access to resource reservoirs in primary forest or secondary forest fallows

It was noted in section 1.2.2.1 that people seeking land to which they can establish definitive individual rights in order to plant trees have been tempted to clear sections of forest land which are very steep and unstable. These are areas which were previously preserved in order to prevent land slides and to serve as reservoirs of rattan and other useful forest products, including building materials and emergency food. The areas concerned can be small, consisting of a few meters near a river or stream, or larger expanses especially further inland where the mountains are steep and rocky. Some of these areas are now being cleared by people from the local community, by people from other parts of the hills or by people from the coast.

In a number of places stakes have been placed and trees marked indicating that remaining areas of primary forest have been "claimed" even though, according to traditional Lauje practice, land is not individually owned until it is actually cleared. Of the three examples encountered, one involves the claim of a sub-district official covering an area of twenty hectares in the inner hills. A second involves a group of middle hill residents staking a claim to land in the inner hills with the support of the village head. The third involves an inner hill pioneer who has decided to follow the new trend and stake out the land he proposes to clear both for the use of his descendants and for sale to outsiders from the coast. If these claims by means of staking are held to be valid, then the reservoir of forest for rattan and other useful products will be reduced, and remaining pockets of forest suitable for conversion to farmland to meet the needs of local residents will no longer be available.

The second form of resource reservoir traditionally accessed by the local community is land left to fallow under secondary forest or grass. It was noted earlier (1.1.2.2) that local residents may collect firewood, bamboo, wild foods and other useful products from the fallow gardens of their neighbours without needing to ask permission. As more land is placed under tree crops, less will be left to fallow, and firewood and other resources found in the secondary forest will become scarce. As such resources become scarce, it can be predicted that rights to them will become more exclusive, and that those with fewer land resources will feel the effects most severely.

The burden of exclusion from common lands will be felt equally by men and women, since both are responsible for gathering family firewood and house building materials. There is some specialization in wild food gathering, since men find fruit in the deep forest while out hunting, while women search for the emergency food on dot in secondary forest and grasslands.
1.2.2.6 The situation of women in relation to emerging patterns of tenure

Women and men have different roles and responsibilities in Lauje society. This section analyses the role of Lauje women in farm production, and considers the impact of emerging patterns of tenure upon them, focusing upon the middle hills where the changes described above are most advanced. Lauje women are prominent in all economic activities and are also independent property owners. However women are less active than men in political activities, such as managing neighbourhood relations with village authorities, dispute settlement, brokering of land, or the presentation of information to outsiders, especially if the outsiders are men. In periods of rapid change in land use and tenure, when long term interests are at stake, it is necessary to consult women directly in order to identify their roles and aspirations.

In Lauje society, a married couple is jointly responsible for the provision of food for themselves and their children, and men and women work together in the fields to accomplish this task. In growing cash crops such as shallots, however, husband and wife frequently have their own separate gardens, in which they plant their own seed, and from which they enjoy their own individual profits. Widows and divorcees grow food to feed their families as well as cash crops. Unmarried girls are encouraged by their parents to plant their own groundnuts and shallots, and the girls spend their money as they wish. Many women, unmarried, married, divorced or widowed have already planted their own commercial trees, and others plan to do so. Thus Lauje women have a great deal of autonomy in agricultural activities, and have to be regarded as farmers in their own right.

Lauje women have traditionally held the same rights as men to inherited agricultural land. All the descendants of a pioneer, both men and women without distinction, are equally entitled to use inherited land. After marriage, a couple farms the land of either the husband’s or the wife’s family, depending largely on which family has better land resources. Sometimes the couple spend a few years with each side of the family in turn, keeping kin ties strong and activating their inherited land rights on a regular basis. The only distinction between men and women in relation to land rights is that women do not clear primary forest land, and thus never establish individual rights through pioneering as some men do. Widows together with their children inherit rights to land pioneered by the husband, and can sell the land if they all agree. Some state that children have to ask their mother for permission to farm the deceased father’s land, acknowledging her role as land manager. If a man has two wives, each wife with her children inherits the land that the pioneer cleared specifically for their use.

Men’s main task in the gender division of labour is the clearing and preparation of land, whether primary or secondary forest or grassland. Women’s labour predominates in all subsequent stages of agricultural production. Thus in order to be able to farm, women must have access to male labour to clear a field for them. For a married couple, the husband clears the land, although women have been known to borrow cleared land from other male relatives if their husband fails to clear land for them. Unmarried girls wishing to grow shallots ask for a section of a garden from their father or an uncle or other relative. As noted earlier, widows and divorcees ask for a space in a cleared garden of their relatives in which to grow food and cash crops to support their
families. Alternatively, they enter into explicit exchanges in order to obtain access to male labour. For example, in two separate cases a widow who had inherited rights to good land invited a land-poor neighbour to clear the plot of land for her, in return for which he could borrow half the plot for a few seasons.

There are four tenure issues of special concern to women in the transition to tree crop farming. The first concerns loss of access to land for short term food and cash crop production, particularly for widows and divorcees who rely on borrowing sections of cleared gardens for this purpose. This issue has already been discussed (1.2.2.2). The second issue concerns fairness in the process of dividing land among groups of descendants holding common inherited rights. The third concerns the division of land, trees and profits from trees between husband and wife both while they are married and in case of divorce. The fourth relates to official views of women’s tenure rights as demonstrated through procedures such as registration for tax. Items two and three will be discussed here and the fourth will be addressed in Part Two below.

As noted above, women and men have equal rights to land inherited from their pioneering ancestors. This principle of equality is frequently stated by both women and men, including adat leaders. However there is some question as to whether women will be able to secure their full and equal share in the process of dividing inherited land for tree planting. Part of the problem lies in the manner in which the division of inherited land is taking place. When land division takes place as a result of a large family discussion, perhaps with the participation of adat leaders or village officials, the claims of women descendants may be overlooked, particularly if they are widowed or divorced and have no man to represent them. As noted briefly above, the economic rights of Lauje women are strong, but their voice in public matters, particularly large group discussions, is weak or absent.

When land division takes place as a result of planting trees without discussion or negotiation, women may be disadvantaged if they have less access to tree seedlings, or are slower to stake their claims. Men tend to have more information about the location and condition of particular plots of inherited land than women do. It is men who scout for suitable land to clear for cultivation and negotiate for use of the land with their own or their wife’s relatives. Superior access to information is important when definitive land division is taking place.

In a few cases, men concerned to secure a larger share of inherited land than their co-heirs have begun to question the tradition of equal land rights to women and men. They have begun to suggest that, since it is men, particularly older siblings, who helped their father or grandfather pioneer new land, they have rights to more land than their sisters or younger brothers who did not participate in this particular form of work. This view is certainly not accepted by everyone, but it indicates that, as land pressures increase and new issues arise, tradition itself may be reinterpreted by people with personal interests at stake.

Women’s concerns over the division of land, trees and profits between themselves and their husbands are also significant. When a married couple grows food together, the produce is consumed by the family, and the land they use, which may belong to either the husband or the wife’s family, does not become their private property. If the husband or wife grow shallots,
individually or as a joint venture, they share the profits with their partner or keep them to themselves, but no long term assets are created. Should the couple divorce, one partner usually returns to his or her home territory, taking seeds, tools and a half share of household goods with them but not leaving any major assets behind.

Trees introduce a new dynamic into the conjugal relationship. Like shallots, they can be planted by husband or wife alone, or as a joint venture in which they agree to cooperate with each other. Some men dispute that women can own trees individually, saying that the seedlings are too heavy for women to transplant, and the ground too hard for them to hoe. They argue that men must be involved in the work and therefore have a right to a share of the trees. However there are many examples of married and unmarried women planting trees alone, and claiming full individual rights to them. There are some cases of married men claiming individual rights to trees to the exclusion of their wives, especially if they paid wage workers to prepare the ground, plant and tend the seedlings, and their wives were not involved in the work.

The most common conjugal arrangement is for husband and wife to cooperate in planting and tending trees together. In these cases, the agreement or expectation is that the husband and wife should each receive half of the profits at harvest time and that, if they divorce, they are each entitled to half the trees. Cases have already occurred in which a couple have divorced, everyone agrees that the wife is entitled to half the trees which the couple planted together, but the wife has been powerless to actually collect her rightful share of the harvest or to enforce her rights to the trees. Since trees are permanent, unmoveable assets, people who divorce cannot take their share with them. The rights of women are particularly vulnerable in these cases, since, as noted above, their social power to defend their interests is generally less than men’s, although their acknowledged rights are the same.

For the reasons discussed here, some married women are not fully confident of their ability to collect their share of the benefits from trees when planted together with their husbands, which is why they prefer to have their own individual trees. If they do engage in joint tree planting with their husbands, wives feel more secure if they supply some of the seeds or seedlings, and if they participate fully in the decision making and in the cultivation process. Women do not seem to be concerned about whether the land upon which the trees are planted derived from their own or their husband’s family, labour investment being a more significant issue in establishing their ownership rights.

It should be noted that there are some clear advantages to women in having secure ownership of their own productive trees. Once established, trees require little labour and can be managed by women alone. With trees to provide some income, widows or divorcees will be less dependent on male kin or neighbours to prepare land for them.

Part One has discussed the traditional and emerging patterns of tenure in the coastal, middle and inner hill zones of the SAD area, describing issues which are a cause of tension or conflict, and indicating the special concerns of vulnerable groups, women and the poor. Recommendations
addressing these issues and concerns are found in Part Three.

PART TWO

2 THE IMPACT OF GOVERNMENT PROGRAMS AND INITIATIVES UPON RESOURCE ACCESS AND TENURE

This section analyses the impact of government programs and initiatives upon resource access and tenure in the SAD site. It describes the perceptions, policies and practices of local officials concerning land tenure, tree tenure and tree crop expansion. Their perceptions influence both the programs that are proposed and the manner in which related tenure problems are resolved. This discussion is followed by an analysis of the likely tenure impact of changes that are being purposefully introduced by the government. These include tree-crop planting, garden development schemes, agroforestry, road construction, and the new land and property tax (PBB).

2.1 LOCAL OFFICIALS' PERCEPTIONS OF HILLSIDE FARMING AND TENURE

Village and kecamatan officials in the SAD site seldom or never visit the hills, especially the inner hills, but they tend to have definite ideas about the conditions of life there. Some of their views are based on inadequate information and misconceptions but, since they influence the approach taken by officials to tenure issues, their views need to be described here.

A village official with a large inner hill population described their condition of life as "less than zero". Another stated that hillside farmers were "not producing anything, just moving around". The village and kecamatan authorities deem the farming practices of the middle and inner hill people to be unproductive and damaging to the environment. Some believe that hill farmers move their farms each year over a large and random area. Most believe that the inner hill area is heavily forested, that the people there are currently cutting into the primary forest on a large scale, and that there are plentiful "unused and empty" land resources. In fact, as noted above, the middle and inner hill land was converted to secondary forest some generations ago, is densely farmed and settled, and is subject to precise traditional rules of tenure. There is little or no empty land, except that which is too steep to farm. Moreover the traditional farming systems are well adapted to the difficult mountain conditions, and have provided livelihoods for many generations. Farmers in the middle hills have successfully diversified into short term cash crop production which supplements their income while not displacing food production. Inner hill farmers, considered by some officials to be quite primitive, are still self sufficient in food and supplement their incomes through forest gathering.

The perceptions of officials noted above are highly relevant to the tenure situation in the SAD site. Their low regard for the lifestyle of hill farmers, especially those in the inner hills, suggests to local officials that interventions are necessary to bring "civilization" to the mountains. This is to be accomplished through the building of roads and the encouragement of coastal migration.
to the hills. The perception that the land is forested and empty leads local officials to believe that there is plentiful land for newcomers who could move into the area without conflicting with existing land rights. The perception that traditional farming is unproductive and environmentally destructive leads to the view that nothing would be lost by abandoning current farming practices, including food and cash crop production, and focusing exclusively on commercial trees.

Definitions of empty land, the relation between land and tree tenure and the interpretation of government rules in the local context are the most serious issues on which the perceptions of Lauje hill farmers and local officials differ. These three issues are closely interrelated, and are explored here in some detail.

2.1.1 Definitions of Empty Land

Many local officials are fully aware of traditional Lauje land rights, and they know that hillside land is not "empty". Their recognition of traditional rights is demonstrated when, seeking hillside land for their private use, local officials follow established practice and negotiate with the individual holding rights to the land in question. Coastal villagers always expect to pay (ganti-rugi) for hill land for tree planting. In entering land negotiations, newcomers from the coast are concerned to be on good terms with nearby farmers, who may help to guard their crops and provide labour services of various kinds. Because of the general acceptance of traditional rights whenever they deal with individuals from the coast, Lauje hill farmers feel quite secure in their possession of the land, and fully expect to be able to return to a plot of land after leaving it to fallow to recover its productivity. Tensions that arise in the context of land sales to individuals from outside the local community arise not because the outsiders refuse to recognize traditional rights, but more often because the insider who arranged the sale of the land did not have the full right to do so. These issues were discussed under the heading of brokering above.

When not involved in personal land purchases but commenting generally about the tenure status of hillside land, however, local officials are less inclined to recognize traditional rights. Some state that the Lauje have no tenure system, or that the system they had has been abandoned or has been rendered invalid by government rules. Such statements are usually made in the context of describing plans for official land development schemes. A number of official garden development schemes have been planned for the SAD site, each intended to cover large blocks of land of fifty to two hundred hectares. Such schemes would not be possible if traditional land rights were recognized, since all land suitable for agriculture is already owned by the long term hill residents. In order to plan large scale land schemes, local officials together with officials from the district center have to be able to claim that the land is empty, regardless of the traditional tenure rules operating in the area.

Local officials use a variety of specific criteria to determine whether or not an area of land can be considered "empty". Empty can mean that the land currently has no crops growing there, or that it has no permanent tree crops growing there, or that no one has traditional ownership rights to the land, or, finally, that no one has officially recognized rights.
There is some reluctance among officials to recognize that land used for food and short term cash crop production is really used, especially since the conditions of cultivation in the hills require such land to be left to fallow periodically. A village head stated that a block of land he had designated for official garden development was empty because it "had nothing growing on it, just corn". For some officials, only when commercial trees are planted on the land is it really in proper and continuous use, and only then are individual tenure rights recognized. This view poses a problem for hillside farmers who, whatever their enthusiasm for tree planting, still plan to reserve some land for the production of short term food and cash crops, and still need to allow some of their land to fallow periodically.

Officials who recognize that the traditional tenure system does include definite land rights state a number of rules that attempt to distinguish between fallow land, to which ownership rights are still recognized, and "empty" land, where officials deem that ownership rights to have lapsed because the land is not "in use". These rules are said to be derived from government directives, but the sources have not been verified. One official stated that any land which had not been used for a period of six months was deemed to be empty and could be taken over without compensation. Other officials stated that the cut off period for land to revert to unclaimed status is five years. An alternative version stated by one official is that any land on which the trees are big enough to be cut with an axe rather than a parang is empty, while another defined the limit in terms of the size of the trees, waist size being the cut off point.

At the local level, the discussion over the tenure status of hill land often takes place in terms of the definition of the Lauje terms doat and ulat. As noted earlier, doat is the Lauje term for unclaimed primary forest land. It is recognized by the presence of beringin and other tree species. Ulat is secondary forest land to which ownership rights apply. In most cases, ulat is in regular use in the cultivation cycle, recleared for farming every three to five years, and, often, continuing to yield some taro or other useful products during the short fallow. If the secondary growth is for some reason left unused until it is very old, the forest is known as ulat apangkat or tall secondary forest. This type of forest is distinguished physically from doat by the absence of beringin, by the huge trees stumps which do not entirely disintegrate, and by other signs. Most significantly, ulat apangkat is still considered to be owned by the pioneer or his descendants. Rights to it do not lapse. It never becomes doat again. Thus doat and ulat are terms which refer not just to vegetation but to the status of the land and whether it is owned or not owned. Traditionally, the price for which the owner would be willing to transfer secondary forest land to another party tends to decrease with the age of the forest, because the new owner would have to invest more labour in reclearing the land for cultivation.

Serious problems occur when officials or coastal people define secondary forest or grass land as "empty", and attempt to take it for their personal use or for government schemes without due process and reasonable compensation. Precise definition of the tenure status of hillside land has only recently become an issue. Prior to the interest of coastal people in using hillside land for commercial tree production, officials paid little attention to the tenure situation or farming practices in the hills, and would probably not have disputed that the hill farmers "use" their land, or that they maintain rights to their land while it is in fallow.
A few officials are inclined to deny that the Lauje have any rights to the hillside land, because they have no documentation or official permission to use the land for farming. As one official stated "they have no permission, no papers and no rights". The permission referred to is the permission of the Camat or the Bupati to clear public land of one to five hectares for farming. No hill farmers have ever applied for this kind of permission, nor is it clear that they need to do so since their traditional land rights are already recognized by the Indonesian land law.

Most officials recognize that traditional rights exist, and are concerned not to displace the Lauje from their land but to increase the productivity and sustainability of the hillside farming system. In the sections below, the tenure implications of some specific government programs and initiatives are examined. It will be argued that each of these initiatives involves both risks and possible benefits for the hillside farmers, and that the benefits can be greatly increased by careful attention to tenure issues.

2.2 Tenure Implications of Government Programs and Initiatives

2.2.1 Tree-crop Planting

The tenure implications of tree crops were explored in some detail in Part One and are briefly reviewed here. The discussion in this section relates to government programs to encourage the planting of trees on the plots of farm land to which farmers already have traditional rights, either as individuals or in common with a specific group of co-heirs. Larger scale tree planting in government schemes is discussed separately below, since its tenure implications are quite different.

Commercial trees can make the livelihoods of hillside farmers either more or less secure. The positive benefits of trees for livelihoods relate to potentially increased income with relatively low labour investment. The livelihood risks relate to uncertain productivity and fluctuating prices, together with the displacement of food and short term cash crop production which can no longer be pursued at all, or are relegated to steep and unstable slopes. The latter problems can be avoided or mitigated by careful land use planning and the designation of land for short term crops as well as forest reserves in an integrated agroforestry program of which commercial trees are just one component.

Commercial trees have both positive and negative effects on tenure security. Land tenure according to traditional rules is already clearly defined and quite secure. As noted in Part One, tree planting strengthens individual land rights, and weakens various collective rights. Tree planting potentially reduces tenure security and/or access to land for two specific groups of people: women and men who do not receive their full share in the division of inherited lands; and those who are deprived of land access through borrowing, especially land-poor households and widowed and divorced women. Tree planting may increase the tenure security of tree owners in the view of officials who are reluctant to recognize traditional rights to land for food and short term cash crop cultivation. At the same time, any official definition of tenure that recognizes only rights to land covered with trees immediately jeopardizes the traditional rights to land used
for other purposes, including that which is in fallow.

When land tenure becomes insecure and people face displacement from land to which they have traditional rights, livelihood is threatened. Conversely, insecurity of livelihood also threatens tenure, since people may be forced to mortgage or sell land to meet debts or buy food for survival. Because of this double linkage between livelihood security and tenure, any innovations which promote one also promote the other. For example, programs to increase production of food crops or short term cash crops will assist farmers to withstand fluctuations in commercial tree crop prices and reduce the risk of distress land sales. For this reason, an integrated agroforestry program is more likely to promote long term tenure security than a program emphasising only the production of commercial trees.

The issues outlined above are of major importance, and concern the overall design and emphasis of government development initiatives for the SAD site. Recommendations for addressing these issues are found in Part Three.

2.2.2 Agroforestry

Some of the tenure implications of the introduction of agroforestry are the same as those outlined above for tree planting on individual plots, since many trees will be planted as live fences and as barriers to prevent erosion. In order to participate in the agroforestry program, farmers will need to have clear individual rights to some land on which trees can be planted. The main difference between commercial tree farming and agroforestry is that agroforestry involves growing trees in support of traditional farming systems, rather than the wholesale displacement of food and short term cash crops by trees. As noted above, maintaining a diverse and flexible set of production activities reduces some of the tenure risks introduced by tree planting.

Agroforestry requires a comprehensive approach to land-use planning, and the designation of certain areas for food production, short term cash crops, or forest reserve. Some land may still be fallowed periodically, at least until production reaches more intense levels. Thus the tenure issues that need to be resolved for the introduction of agroforestry involve the whole mountain landscape, not just those areas where commercial trees will be planted. Some of the tenure issues can be resolved in a participatory manner as program planning and implementation proceed. Specific recommendations are found in Part Three.

2.2.3 Garden Development Schemes

Two types of garden development scheme have been proposed for the SAD site. Both involve coastal dwellers establishing commercial tree groves in the hills. One program encourages individuals to acquire land piecemeal from hill residents. The other involves designating a larger area of 50-200 hectares as an official garden site, and inviting coastal people to register for a share of the land. In both cases, the land rights of the traditional land users are threatened.

A scheme of the first type is already underway on the border between the middle and inner hills
in one village in the SAD site. The scheme is promoted by the village head. At least ten coastal people have already planted trees in the designated area, ten more have acquired land but not yet commenced work, and a further ten are reported to have indicated their intention of joining the program. A neighbourhood leader has been acting as broker, allocating "empty" land, or acting as intermediary in negotiating purchase agreements between local residents and newcomers. Tenure issues related to brokering were discussed earlier. Although some local residents have sold land to newcomers apparently willingly, many are concerned about the influx from the coast. Local residents perceive a threat to their land tenure security and have responded in a number of ways. Some have speeded up the planting of commercial trees in order to prevent their land from being deemed "empty". Others have given definitive land rights to their children long before they normally would, in order to encourage the children to plant trees and thereby secure their land. Some kin groups have stated adamantly that they will not sell any more land to outsiders, since they fear that they will not have enough land for the use of themselves and their descendants, and they recognize that there is no more primary forest suitable for farming.

The larger scale commercial trees schemes present the most serious risks for the livelihoods and tenure security of the traditional land users, since they involve the declaration that the land covered by the scheme is "empty" while in many cases it is already owned and in use by local residents. Recommendations for addressing the tenure concerns raised by garden schemes are found in Part Three.

2.2.4 Road Construction

The construction of roads into the interior would be welcomed by many hill farmers, since it would increase the accessibility of markets and government services such as education and health. However it has been the experience in Indonesia as in many other countries that new roads in isolated locations draw in migrants and speculators. The rights of traditional land users are threatened as their land is taken for government development projects or bought up by outsiders, often through the mediation of brokers who misrepresent existing ownership rights. Officials plan roads in order to develop "empty" or "unused" land, expecting to bring progress to an area, and they do not recognize that roads bring risks as well as benefits to local people. Some of the risks can be mitigated by careful design, and clarification and defence of the tenure right of the traditional land users. Some suggestions for addressing these concerns in road project design are found in Part Three.

2.2.5 Land and Property Tax (PBB)

The new land and property tax (PBB) is in the process of being implemented in the SAD site. It has several implications for the tenure situation. Few farmers in the middle and inner hills are yet aware of the tax, and very few have registered their land for tax purposes. Those who are aware of the tax have only registered a small portion of their land, usually that portion that has tree crops on it. The tax rates have been set on a basis of about Rp2-4000 per hectare. Farmers whose tree crops have not yet begun to yield find this sum expensive, and some plan to wait until the trees yield before registering the land. Legal education is needed in order to assist farmers.
to understand the national tax system and its requirements.

The PBB tax system is designed for individually owned plots of permanently cultivated land, such as that used for wet rice. It does not fit well with the situation of hill farmers who have traditional rights to relatively large areas of farm land (an estimated average of four hectares per household), but who must leave part of the land fallow in order to restore its fertility. Moreover some of this land is inherited and rights are held in common with the other descendants. The hill farmers also have traditional rights to forest reserves, which are important to their livelihoods. It is unclear how these types of land rights fit in with the national PBB tax system.

Local officials have begun to state that any hillside farmer who does not register and pay tax on a plot of land which he or she claims to own under traditional tenure rules loses all rights to that land. The land can freely be taken by anyone who wishes to use it, and in case of disputes the officials will refer to the tax register in order to determine ownership. As one official stated "whoever pays tax on it, it belongs to him" or, as stated by another, "if you pay taxes on it is yours, otherwise it is not yours (bukan miliknya), it is only borrowed". Without a resolution of the issues of "fit" and legal education raised above, such an approach on the part of local officials puts the traditional land users at serious risk of displacement from their land.

Local officials do not verify on the ground that the land being registered for tax does in fact belong to the person who has come forward to register it. Since the division of inherited land is incomplete and subject to various tensions, and since coastal people are trying to acquire hill land for tree planting, accepting unverified tax declarations as proof of ownership may permit abuse and displacement. No such cases have yet been reported, but systems need to be put in place to prevent their occurrence as pressure on hillside land for tree planting increases. Tax registration records should be checked to monitor how closely they correspond to the ownership situation on the ground.

According to local officials, only men have registered hillside land for taxation, despite the fact that half the land and trees belong to women. It was noted earlier that women inherit land rights from their ancestors equally with men. They also plant trees alone, or together with their husbands. In the latter case they are considered to own half the trees and the land upon which they are planted. If all land and trees are registered in men’s names, women may be seriously disadvantaged in the case of disputes over inheritance or divorce. Local adat leaders or village officials, if called to intervene in disputes, may refer to the tax records as "proof" of men’s exclusive ownership. Women may also be disadvantaged in any process of individual land titling that may take place, and in their ability to mortgage or sell land or obtain credit. If men are thought of by coastal officials as the land and tree owners, women may be bypassed in agricultural assistance and extension programs. These issues are of particular concern to widowed or divorced women, who are supporting themselves and their children. They are also of concern to married women, who, as noted above, traditionally engage in agricultural production activities separate from those of their husbands.

On the positive side, the PBB tax helps to prevent individuals from either inside or outside the
SAD site from laying claim to areas of land that do not really belong to them, since they are afraid of incurring taxes, especially before the land can be brought into production. For hillside farmers generally, registering land for taxation provides a form of documentation of their land holdings and thus increases their tenure security without going through the lengthy titling process. Although the PBB tax system is not intended as a stand-alone form of land tenure, it may begin to act that way at the local level. While this possibility could benefit some farmers, it seriously jeopardizes the tenure security of others who fail to register for the reasons noted above.

PART THREE

3 RECOMMENDATIONS FOR CONSIDERATION

The preceding discussions have indicated a number of tenure issues of concern in the SAD site. Some of these issues arise from changing land use patterns and tenure trends within Lauje society, while others arise more directly from current or proposed government programs. Overall, the tenure situation in the SAD site presents both opportunities and constraints for initiatives to increase the productivity and sustainability of the farming system and improve the livelihood security of the traditional land users. Part Three offers some initial recommendations on ways to overcome tenure constraints and build upon opportunities in order to support government goals for sustainable and equitable development in the SAD site.

Opportunities for enhancing the tenure security of hillside farmers in the SAD site exist at the level of legal regimes and at the level of program and project design. The first section below outlines some legal options, and the advantages and disadvantages of each alternative. The second section outlines some features of development project design which could be highly constructive in resolving tenure issues, minimizing risks and maximizing benefits to the livelihood security of hillside farmers. Tenure-related design issues in agroforestry projects, garden development schemes and road construction are described.

3.1 LEGAL TENURE OPTIONS FOR THE SAD SITE

As noted in the introduction to this paper, national law in Indonesia recognizes the land rights of traditional land users who have settled and farmed in a specific area for countless generations. Their rights are legally protected so long as they maintain their traditional resource management rules and practices, and so long as their continued occupation and management of the land is not in conflict with government development priorities.

The description in Part One indicated that the Lauje people occupying the SAD site have a set of traditional rules for allocating access to natural resources, including a developed sense of land as an individually owned or jointly-inherited resource. The intensification of land use and production, in particular through the planting of commercial trees, is stimulating a transition in Lauje tenure practices towards greater individualization of land rights, primarily through the division of inherited land among the heirs. This transition is necessary and inevitable, given the Lauje view that tree planting both requires and establishes individual land rights. Emerging Lauje
tenure practices and their strong desire to plant trees are consistent with government concerns to increase the sustainability and productivity of hillside farming systems. The Lauje people’s occupation and management of their traditional lands is not therefore in conflict with government development priorities, and so continues to exist as a secure legal right. The hill farmers enthusiasm for commercial tree planting and their readiness to intensify land use and management is in complete harmony with government programs to develop the area, particularly through agroforestry, and close cooperation between farmers and officials could be achieved.

An important issue that needs to be resolved is the legal tenure status of Lauje lands during the process of transition to more intensive forms of farming, and once the transition is completed. Some options are outlined here for consideration and further discussion by relevant parties including government agencies and representatives of the Lauje community. Each option is briefly described, and its advantages and disadvantages noted. All options are worthy of careful consideration even if in some cases the disadvantages appear initially to outweigh the advantages.

3.1.1 Individual Title

Advantages: This is the strongest type of land right recognized by the Indonesian legal system. Individuals could develop the land as they wish, but environmental protection could still be ensured through the use of zoning rules regulating land use on steep slopes.

Disadvantages: The process of documenting individual title is long and expensive, and exceeds the current administrative capacity of the relevant government agencies. The degree of tenure security provided by title may not be necessary in order to obtain the development benefits desired for and by hillside farmers in the SAD site. Titles are easily mortgaged or sold and have often led to the permanent displacement of traditional land users, since the opportunity to acquire titled land attracts wealthy outsiders who might attempt to take over the hillside land.\(^5\) Program design features described below can mitigate the risks of displacement through distress sales. It should be noted that land sales are already taking place, even without titles, as it is individual land rights rather than titling that appears to be the critical factor.

3.1.2 Communal Title or Long Term Land Lease

This approach entails establishing and mapping the perimeters of the land belonging to the community; registering all community members; incorporating the group as a whole or an organization representing the community, and vesting that corporate legal entity with title or long term contractual land lease.\(^6\)


\(^6\) For arguments in favour of communal titling or long term contractual land leases in the Philippines see Lynch and Talbott 1988 and Prill Brett 1986. For recommendations in favour
Advantages: Communal title provides maximum protection from outside encroachments, since the territorial perimeters are legally established, and since community members are not permitted to sell land to outsiders. Traditional or modified rules can be applied by community members to organize the distribution of land and other resources within the communal perimeter. Internal allocation rules can specify forest lands to be reserved as commons thereby protecting the environment. Traditional mechanisms can be used for dispute settlement. The process for establishing a single perimeter is very much less time consuming and expensive than the titling of individual plots.

Disadvantages: While communal titling arrangements are being made with increasing frequency in the Philippines, and considerable experience exists with regard to their mode of operation, they have not yet been used in Indonesia. They could be instituted in Indonesia without change to existing law, but the official approval process is likely to be very slow due to the novelty of the approach. Communal titles are most appropriate where outside encroachments are the main tenure problem, but other program level mechanisms to strengthen tenure rights could also be effective in achieving the same goal (see 3.2). Specifically in relation to the SAD site, the most serious threat of outsider encroachment arises in the context of government programs (garden schemes, roads) not individual land grabbing or lowland migration pressures as in the Philippines. At the practical level, the Lauje people number 20-30,000 and, given the inaccessibility of their terrain, it may not be feasible for them to act collectively to negotiate a single communal agreement. The usual unit of resource allocation and management is the neighbourhood, comprising twenty to forty families, often related by kinship. Communal agreements at the neighbourhood level would be more likely to promote active local resource management in the interests of sustainability, but could be less effective in preventing outside encroachments on the Lauje area as a whole.

3.1.3 Individual and/or Community Licences to Develop Specified Areas of Land

Using the authority of the Bupati and the Governor to allocate public lands for development purposes, licences could be issued to individual Lauje covering their own farm plots, and to neighbourhood groups covering reserve forest land in their vicinity. Agencies involved would include forestry and agriculture, recognizing that the land has been used for agricultural purposes for countless generations although some of it is officially designated as forest.

Advantages: The licences could have only restricted transferability, limiting the dangers of displacement posed by full individual titles. They could specify preferred land uses for individual farm and communal reserve land according to criteria such as slope. Specifications would need to be realistic in relation to existing land pressures and the long period of time required for a full transition to intensive and sustainable land use (probably ten to twenty years).

of communal titling or land leasing specifically in Indonesia, see Zerner 1990 and Mitchell et al 1990.
Disadvantages: Dangers exist in any process which attempts to "allocate" lands to which traditional land rights already exist under Indonesian law. First there is the danger that the new rights would be allocated to people from outside the area who are not the traditional land users. There is also the danger that some Lauje could cheat others of their land through the allocation process. Even if the traditional users do succeed in obtaining the licenses and the licenses correctly coincide with their actual farm and neighbourhood lands, further questions arise about the legal status of the licenses themselves. Careful assessment is needed to ensure that the licenses could not arbitrarily be withdrawn, leaving the farmers more vulnerable to displacement. Licences which extinguish existing traditional land rights, or offer fewer rights and less legal security than existing traditional rights should be avoided since they reduce rather than enhance tenure security for traditional farmers.

3.1.4 Strengthen Existing Legal Rights Under Traditional Tenure

Lauje hill farmers already have traditional rights to their land recognized by Indonesian law. These rights can be further strengthened by supporting farmers to use and manage the land in ways consistent with national goals for sustainable and equitable development. Under this option, no new arrangements with legal implications would be made in the short term, and tenure options could be reviewed at a later stage if deemed necessary. Most of the development funding and administrative capacity available to the area would be used to strengthen tenure through program and project level interventions, especially agroforestry.

Advantages: This approach builds upon existing rights rather than attempting drastic changes in tenure status. It minimizes the risk that farmers will be displaced by a scramble for land either from within the Lauje community or from outsiders. It reinforces the principle that long term residence in the hills is the basis of the strongest existing rights to the land, and that outsiders moving in who are not the traditional land users have fewer rights or indeed no rights at all, unless they go through official land application procedures.

Disadvantages: Earlier discussion noted that some officials are not inclined to recognize the traditional land rights of the Lauje hill farmers, even though these rights are based on Indonesian law. If any ambiguity over the status of traditional rights exists, the situation needs to be clarified to the satisfaction of officials at local and provincial levels. Traditional rights as defined by law remain vulnerable to government programs that can allocate the land to other uses and other users in the national interest. Traditional rights may also be a weak mechanism for excluding encroachers should the lands in the SAD site become strongly desired by outsiders due to the improvements to infrastructure and to the land itself that are envisaged under government development programs for the area.

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7 Dove 1987:269 writes that "whenever the government is involved in the devolution (and/or development) of land, an opportunity is created for economic and political elites to misappropriate it". See Raintree 1987 for further discussion of the dangers of land grabbing in the context of development schemes, especially those which involve tree planting.
A clarification of the status of PBB tax declarations in relation to traditional land tenure situations is needed, to avoid displacement through failure to register and/or through land registration by people who are not the traditional land users (see 2.2.5). As it is presently being implemented in the SAD site, the PBB has the potential to undermine traditional land rights, especially those of the more remote people who have less access to information, and those of women whose individual property is not registered.

3.2 Tenure Considerations in Development Project Design

An expert on land tenure has written that "a given land tenure situation is pregnant with both opportunities and constraints. A project develops land tenure 'problems' only if it is unrealistically designed, with constraints ignored and opportunities overlooked" (Bruce and Noronha 1987:121). This section describes some features of project design which could be constructive in resolving a number of the local level tenure issues described in Parts One and Two above, as well as strengthening the legal tenure security of hillside farmers through improving their land management practices.

The recommendations presented here draw upon the international literature on tenure issues in agroforestry project design, and take into consideration the current land tenure situation in the SAD site. Incorporating some or all of the suggested design features would not require extra development funding, and could realistically be accomplished with the administrative and extension services available through the development initiatives already planned for the area. Since the main characteristics of the approach are careful design and extensive community participation, a self sustaining development process will evolve, with the government providing a supportive context and essential technical assistance.

3.2.1 Tenure Issues in the Design of Agroforestry and Tree Projects on Farms

3.2.1.1 Work with individual farmers on extant holdings

Development initiatives which work with farmers to increase the productivity of resources they already control help to strengthen existing tenure rights, and avoid attracting outsiders who may be tempted to take over "new" or "open" resources. The agroforestry project planned for the SAD site uses this approach.

3.2.1.2 Modify and improve upon existing farming practices

Farmers have extensive knowledge of the potentials and limitations of their natural environment, and have evolved farming strategies in response to those conditions. They should not be required to abandon all traditional practices and substitute an entirely new farming system without an appropriate period for experimentation and adaptation. The farmers in the SAD site are already experimenting and innovating with commercial tree species, and technical project assistance should build upon and support farmer's own initiatives. This approach minimizes the risk of technical failures (failed new grain varieties, poor seedling survival) which hillside farmers can
ill afford, and which may force them to divert labour from agriculture to wage work or take drastic measures such as selling land.

Agroforestry techniques such as contour fencing should be introduced in support of the production of food and short term cash crops, not as alternatives to displace them. The techniques selected should have a high potential to increase fertility and yields, since immediate livelihood is the key concern of farmers. Long term conservation strategies, though important, may take a lower priority initially. As noted earlier, initiatives to make livelihoods more secure also help farmers to retain and develop their land.

One sequence of initiatives with rapid pay-offs that could be undertaken step-wise is the following: begin with live perimeter fencing around individual plots or around a number of neighbouring plots (internally subdivided). This would permit farmers to plant corn and cassava intensively without losses to the wild pigs, which commonly devastate crops. The additional food production and reduced labour investment in guarding crops would help to meet immediate food needs and free labour for investment in subsequent project initiatives. Established perimeter fences would then serve as a source of fence poles for contour fencing at a later stage.

Another activity which is needed urgently and could reduce the opportunity costs and livelihood risks of commercial tree planting is basic training on the selection of tree species in relation to land characteristics (slope, fertility, rainfall), layout requirements such as spacing and shade trees, and techniques for care and pruning. This activity builds on farmer enthusiasm for tree planting, but recognizes that the SAD hill farmers have no previous experience with tree crops and that, without training, their current efforts are frequently met with failure. If the trees that are planted can be made productive, there is a better chance that they will be able to match or surpass the economic benefits of the food and short term cash crops they are supplanting, making livelihoods more rather than less secure.

3.2.1.3 Maintain diversity and flexibility

Diversity and flexibility are characteristic of traditional farming systems. Lauje farmers in the middle hills often have five or more farm plots in different locations, planted with different crops at different times, and managed by different family members. The advantage of this system is that it spreads the risk of crop failure due to weather, pests, family illness or other contingencies, and balances food and short term cash crop production. Reducing this flexibility increases the risk of serious production failure. Development projects need to recognize the significance of diversity in farmer's strategies, and note that intensive labour investment in one plot using agroforestry techniques may be unrealistic and also risky for the farmer. Once the recommended innovations have begun to prove their effectiveness and are yielding more per unit of labour than other more extensive farming methods, hill farmers will themselves take the initiative to apply the techniques to more of their land. The time is right for introducing intensive cultivation methods, but their uptake will not be immediate or complete. Appropriate farmer caution should not be mistaken for lack of interest in improvement. Cross farm visits to successful mixed agroforestry sites are a proven educational tool which can greatly speed the rate of adoption of
innovations such a contour fencing.

3.2.1.4 Recognition of local tenure rules and land suitability criterion when encouraging tree planting

Government officials need to be aware of traditional land tenure rules, and avoid making plans for tree planting which cause conflicts among villagers. In the SAD site some village heads have ordered every household in the hills to plant a certain number of trees regardless of whether or not the household has rights to plant trees on the land in question. In one case, villagers were ordered to build their houses and plant trees alongside the main foot path, but many of them had no land rights there, resulting in confusion. The land was dry, eroded and quite unsuitable for cocoa trees, the crop recommended. Many of the new houses were left empty, because they were too far from the household’s corn garden, which required guarding from wild pigs. Careful consideration of the physical suitability and tenure status of each plot of land is required before a farmer can make the decision to plant trees there. Local officials argue that tree planting by anyone on whatever land is better than leaving land "empty", but underestimate the strength of the traditional tenure system and the viability of traditional farming practices in relation to the hillside environment.

3.2.1.5 Undertake a complete census of each hillside neighbourhood

Because development projects involving tree planting have major implications for the permanent distribution of land among hillside farmers, the full and complete participation of whole neighbourhoods is essential. Any household overlooked or excluded from the project is likely to find its livelihood endangered because the land resources upon which it once relied have become subject to exclusive individual ownership. Tree planting has the potential to permanently eradicate the land rights of many people if not carefully introduced.

A complete census needs to be undertaken for each hillside neighbourhood in turn. For the middle hills, the RK system provides neighbourhood boundaries. For the inner hills, place names (rivers, mountains) can be used to delimit neighbourhoods.

The lists of residents maintained by village officials for the middle hills are incomplete and outdated, and there are no lists for many inner hill areas. The lists that exist tend to emphasize core neighbourhood families descended from prominent ancestors, and special attention needs to be paid to the registration of categories of people commonly overlooked. These categories include the following: households which currently farm in one neighbourhood but are officially registered in a different RK or dusun, or even a different desa where boundaries are unclear; households that have few inherited land rights and mostly borrow land from kin or non-kin; households where the husband is often absent collecting rattan or is for some reason socially marginal to the neighbourhood; households headed by women such as widows or divorcees, whether living in their own house or sharing house space with kin; unmarried adult men or women living with kin. It will be noted that the categories of people commonly omitted from official lists are also the people who are especially vulnerable to the loss of land rights as tenure becomes more exclusive through the process of tree planting. Knowing who these people are is a crucial first step towards
ensuring that they are informed of project initiatives and benefits, participate fully, and have their land tenure and livelihood security improved rather than diminished by the project.

Hill farmers are often reluctant to provide their names in formal registration processes. Some have been threatened by local officials with forced relocation, and fear that a registration process, especially one connected with the word "proyek" (locally associated with resettlement/transmigration) is intended to punish rather than assist them. Others, especially in the inner hills, fear forced conversion to Islam. Because of these concerns, the registration process should be undertaken as part of participatory process of community organization, once people fully understand the nature of the project intended to assist them.

Particular care is needed for registration activities in the inner hills, since the terrain makes direct verification very difficult, and lack of existing information could mean that whole neighbourhoods are left out. Each inner hill neighbourhood needs to represent its own membership without relying on brokers who could convey inaccurate information. Coastally based officials would often like to deal with just one or two inner hill leaders as representatives of the whole group, but this is quite unrealistic as the groups are dispersed and people from one neighbourhood do not know local conditions in other areas in any detail. Whenever intermediaries are used, whether they are coastal authorities or hill people themselves, there is a risk of information being misrepresented by groups trying to capture a higher proportion of project benefits for themselves. This risk is particularly acute when dealing with inner hill neighbourhoods, some of which claim to have been promised various forms of assistance in the past, but find the goods never arrive or the "administration" fees demanded by intermediaries are too high.

3.2.1.6 Foster community organization and participation in land management

Community participation and organization is the key to resolving a number of tenure issues. The census process described above is one example in which the neighbourhood is responsible for defining its own social boundaries and listing its membership so that all are included in project activities impacting on tenure.

Using enlarged air photos, neighbourhood groups could be responsible for identifying the location of the reserve areas that they commonly access and developing an informal agreement among their members regarding land use. As noted earlier, reserve land is often steep and unsuitable for farming, and it is the source of many natural resources for use or sale. With the new desire to plant tree crops, reserve land is under pressure, and neighbourhoods may agree that there is need to retain the land as a reserve, not available for conversion to farmland by their own members or people from other neighbourhoods. Such agreements build upon the existing tradition of local resource management, and could be further strengthened by the support of local officials should disputes arise between neighbourhoods. Also using air photos, the group could discuss the soil, slope and other characteristics of their land with technical extension personnel, thereby helping farmers make their own decisions about the best use of their land.
Issues surrounding the division of inherited land for tree planting are also best resolved at neighbourhood level, with the participation of local adat leaders should disputes or disagreements arise. As noted earlier, neighbourhoods are often comprised of close kin, some of whom co-own inherited land. Community development workers supporting the adat leaders could monitor land division agreements on the basis of the complete list of neighbourhood members, ensuring that no parties are excluded. Village officials can support equitable solutions when their intervention is requested.

Finally, neighbourhoods can themselves be responsible for establishing procedures for the distribution of project inputs, ensuring that everyone on the complete list receives their fair share. Open information sessions, in which all neighbourhood members hear exactly what inputs are expected, will permit members to monitor the efficiency and equity of their own distribution process. Neighbourhoods are also expected to select members to receive agroforestry training the substance of which will then be conveyed to others.

3.2.1.7 Work with individuals rather than households

As noted in section 1.2.2.6 Lauje women take an active and independent role in agriculture, and husband and wife often have separate farm plots, especially for cash crops. Unmarried boys and girls over the age of fourteen also engage in private production to earn their own cash. Widowed or divorced women who are sharing house space with kin still farm independently in order to support themselves and their children. Since it is the individual, not the household, that is the unit of production, it is appropriate to make individuals the focus of agricultural improvement programs. Training in land selection and maintenance for commercial trees, contour fencing, and techniques to maintain soil fertility under intensive use, as well as any material support such as fence poles or seedlings, should be given to all individuals. The complete registration list provides a means to monitor participation.

The advantages of this approach in relation to tenure are that it spreads benefits widely and ensures that women as well as men secure land rights through tree planting. This is important to all women, whether or not they are married. It also ensures that women, who do the majority of agricultural work, understand and can experiment with new techniques. In relation to the younger generation, it has been noted that young families with small children are often extremely poor and insecure (Li 1991). If young unmarried men and women are able to establish productive gardens early on they will be better equipped to provide for young children and to plan for their health and educational needs.

When inputs are distributed to individuals, the recipients can decide for themselves if they wish to plant them in cooperation with others, sharing a perimeter fence. This is consistent with traditional Lauje practice, in which a number of people commonly own crops on within one field. The difference is that some of the people will have to negotiate for permanent land rights instead of borrowing rights, but having actual seedlings to plant will help them to do this.
3.2.1.8 Use project economic leverage to promote equitable land distribution

Project economic leverage could be used to encourage an equitable distribution of permanent land rights among heirs, and even help to secure some land for those who have inherited little from their ancestors or those who live at some distance from their ancestral lands due to marriage or other reasons. This approach involves the use of trees to help resolve tenure problems. Two alternative variants could be considered.

One variant relies on distributing inputs equally to all individuals over aged fourteen, as discussed above, and leaving them to negotiate with kin and neighbours for a space to plant some commercial trees or a live fence. Those with inherited rights should be able to acquire land from their co-heirs, while those without inherited rights should, at worst, be able to secure land to plant their seedlings on a half share basis. The bargaining position of women and land-poor households will be strengthened by their independent possession of valued inputs such as fence posts and seedlings. The project inputs themselves can help people to acquire land.

The other possible variant of this approach depends more on neighbourhood level responsibility and incentives. A neighbourhood group, once fully registered, could be offered a certain amount of inputs, such as perimeter fence poles sufficient for half a hectare per person. They then have to resolve land distribution issues in such a way that every registered individual has a place to plant their poles, and acquires definitive rights to a section of land within a perimeter fence. If this phase is completed satisfactorily, the group can be given a second set of inputs, for use on the same land or a further half hectare plot per person. This approach uses project economic leverage to encourage the group to solve land distribution problems, with the promise that the whole group will benefit as a result. The neighbourhood adat leader, RK leader and other senior men and women of the neighbourhood will have to be fully involved in this process. The project would have to decide whether share-crop agreements are acceptable solutions for the land poor, or whether the group is to be required to ensure full land rights to the designated plots. A further advantage to this approach is that it may encourage cooperation and rationalization of perimeter fencing, utilizing live fence poles more effectively.

An incentive system at the individual or neighbourhood group level could also be used to discourage land sales, especially sales of land which has received project inputs.

3.2.2 Tenure Issues in the Design of Land Development Schemes

Land development schemes have a place in improving livelihoods if designed with care. Suitable lands in the SAD site might include some inner hill forest reserves; some areas of the middle hills with extensive grasslands; and the forested sections of the foothills which are seldom farmed due to lack of rain. Land development schemes should not be used to encourage any influx of people from one area to another, since government-sponsored population movements tend to displace local farmers. Ideally, development sites could be designed for the coastal, middle and inner hill zones for the benefit of the people of that zone, reducing pressures of one zone upon
another. For example, developing the coastal foothill land would reduce the pressure of coastal people trying to acquire land for tree planting in the inner hills. Developing the inner hill land would strengthen tenure rights there and reduce the risk of encroachment from the middle hill or coastal zone. Some suggestions for tenure-sensitive project design are presented here.

3.2.2.1 Design the project with and for the local neighbourhood residents

Garden schemes should be designed with the participation and for the benefit of the traditional resource users nearest to the proposed site. The local residents should determine whether or not they wish to make the land available for a multi-hectare development, and define how the project will be organized and the benefits distributed. Only in rare cases will it be appropriate to encourage outsiders to move into an area to occupy truly "empty" land.

3.2.2.2 Thorough investigation of existing traditional tenure rights

A thorough investigation of the tenure status of the designated land needs to be undertaken, in order to determine whether the land is really empty and unclaimed, or whether it is the farmland of local residents, either in current use or in fallow. Where traditional rights exist, due process and just compensation should be offered.

Even if the land has never been cleared, and is not owned by the individual who first cleared it or his descendants, it may still be a reservoir area of importance to the local residents. It was noted in Part One that groups of Lauje in the inner hills have protected certain areas of primary forest from misuse or incursion in order to enjoy long term group benefits such as hunting, rattan collection, and food gathering. These lands are thus part of the traditional system of land use and any loss of rights to these lands needs to be acknowledged and compensated.

3.2.2.3 Include women as independent beneficiaries

At least one of the land development schemes currently in process in the SAD site has made it an explicit policy not to permit women to register as participants. Since women are independent farmers, they can benefit equally from any program designed for agricultural improvement, particularly programs involving the permanent devolution of land.

3.2.2.4 Conduct an environmental review

Since the pressure on farm land in the SAD site has been high for some time, it is likely that any land not yet cleared for farming has been left under its forest cover only because it is very steep and vulnerable to land slides. Thus a careful environmental review is necessary before such land can be approved for large scale clearing and the development of commercial gardens. The risks of erosion, pests and crop disease should also be considered in assessing the environmental impacts of converting primary forest land to commercial use, particularly if only a limited variety of crops is to be planted.
3.2.3 Tenure Issues in Road Project Design

3.2.3.1 Clarification, documentation and defence of traditional land rights

It is important to clarify and, in some cases, document the rights of the traditional land users to both farmland and reserve land in the vicinity of the road before construction begins, or, preferably, even before the road plan is even announced. The area potentially affected by a road in an isolated area is large, extending to every neighbourhood that becomes more accessible via the road than via the regular footpaths to the coast. Once the documentation is complete, officials and hill farmers need to be prepared to defend the validity of the land rights that have been recognized. This can be difficult where powerful outsiders or even senior officials place stakes in the ground and declare the land along the proposed roadway to belong to them. Legal education and support of the land defence efforts of both local officials and villagers is therefore important. Where stakes have already been placed, as is apparently the case in the vicinity of the new road in the interior of Bobalo, legal issues may arise over the validity of the claims made by these means.

3.2.3.2 Determine a policy on land sales in the vicinity of new roads

Decisions need to be made about whether or not to permit traditional land users to sell their rights to outsiders seeking land. Pressures to sell will certainly occur, and have indeed already become serious in the Alau area of Bobalo where many plots have been sold since the building of the new road commenced. In some cases, sales take place because of the acute poverty and distress of the hill family. In one case, gambling debts were involved. In other cases, the cash offered appears large to the farmers in the short term, and they may not yet realise the long term implications of reducing the land area in the family’s possession. As noted earlier, problems often arise when land sales are "brokered" by local leaders or by anyone who does not himself have full individual rights to the land in question. In such cases there is a risk of false claims and the displacement of the traditional land users.

A final recommendation which applies to all development activities in the SAD site is the need for monitoring: local, district and provincial officials, community development and extension personnel, and community members need to continuously monitor who is planting trees, and where they are being planted. As noted throughout this study, planting of commercial trees and live fencing is a necessary and useful part of the process of agricultural intensification. Because of its implications for land tenure, however, it entails risks of permanently displacing people from the land. People can be displaced by the actions of their own kin and neighbours, or by the actions of outsiders, especially where project inputs are available but poorly distributed. With careful planning and monitoring, the opportunities for increasing the tenure and livelihood security of the traditional land users can be maximized, and the risks reduced.
REFERENCES


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