

INDONESIA



1. GENERAL

1.1 Indonesia is one of the world's largest archipelagos stretching across 5×10^3 km and is the fourth largest in population after China, India, and the United States of America. It is estimated that its population will grow to between 2.6 and 2.8×10^8 in less than 29 years before it stabilises at a zero growth rate. Indonesians live on about 6,000 islands within an Archipelago of well over 17,000 islands and a land area of 2×10^8 ha. Some of the larger islands are very sparsely populated while islands such as Java, Madura and Bali are very densely populated. The land varies in topography from high mountainous peaks to low wetlands and lush tropical forests.

1.2 In 1969, the population stood at 1.2×10^8 people. With rice imports of 2×10^6 t, the country was the largest importer of rice in the world.

1.3 The eco-system is one of the richest in the world and is home to many diverse species of plants, animals, birds and insects. There is great ethnic and linguistic diversity and in the remoter regions there are still many traditional people whose perceived interests are often in conflict with the concepts of modern economic development.

1.4 Until about 1985, the country maintained a relatively low profile in the international, economic and business arena. Things changed dramatically in the late eighties and early nineties leading to unprecedented economic expansion and an influx of businesses and investment from foreign sources.

2. PRESENT SITUATION OF WATER

2.1. Indonesia also has abundant water resources almost in every region. At present it is estimated that the total water resources reach about $4.032,266 \times 10^{12} \text{ m}^3$ per year or equal to 2,110 mm/year. It is estimated that with this amount of water resources there are about 2.4×10^6 ha of new irrigation which can be opened. However, the use of these water resources is still not entirely recommended. More than 80% of the present water resources are used for agriculture.

2.2. The average annual availability of water is $1.4 \times 10^4 \text{ m}^3$ per capita is large at first glance adequate for all the country's needs. But things are very different on a regional basis. Of the 90 major river basins into which we have sub-divide our water resources, more than 20 face critical water shortages. Furthermore catchment degradation threatens food security and rural prosperity.

2.3. There are several hundred river basins spanning the country. On a national scale, water resources have been classified into 90 river basins ranging in catchment areas from about $2 \times 10^3 \text{ km}^2$ to over $1 \times 10^5 \text{ km}^2$ for some of the less developed basins. The population supported by some of the major river basins on the densely populated island of Java exceed 1×10^7 people, while other basins in more sparsely populated regions support less than 1×10^6 people.

The average annual rainfall varies from 1×10^6 mm to 5×10^6 mm with an average of about 2.7×10^6 mm. The total average yield from all the river basins was estimated to be of the order of $1.4 \times 10^7 \text{ m}^3$ per capita per annum in 1990. There are, however, wide regional differences and the per capita availability in some of the basins in Java is less than a tenth of the national average. There are also seasonal and longer term variations which cause serious concerns about water availability. Unless the storage capacity of reservoirs is raised two or three times the present total of about $1 \times 10^{10} \text{ m}^3$ will not meet the nation's future needs. A large part of the present storage capacity is confined to a few very large reservoirs in Java and Sumatera.

2.4. Starting from about 1975, the government invested heavily in new projects for water resource development primarily for irrigated agriculture. These included irrigation and drainage systems, reclamation of permanently or periodically flooded low lying wetlands, water conservation, flood control and river basin management. At that time most of the government's efforts to improve the infrastructure for irrigation and drainage was concentrated on what were described as government managed systems. The total area of irrigated land was about 5×10^6 ha with an average size of about $6 \text{ ha} \times 10^2$. Well over a third of the total government unmanaged irrigated area was served by systems of less than $5 \text{ ha} \times 10^2$ each.

2.5. Concerns arose at that time about the shortcomings of operation and maintenance (O&M) of new and rehabilitated systems. The wisdom of continuing investment in irrigated agriculture when even the cost of O&M was not being recovered from the beneficiaries was in question. Following a comprehensive review of the performance of irrigated agriculture as a whole the government introduced a set of six policies related to the O&M of irrigation and drainage systems. As part of the 1987 Policy Statement on O&M it was decided to introduce an Irrigation Service Fee on all irrigated systems and also to hand over systems serving less than $5 \text{ ha} \times 10^2$ to Water Users. The Government introduced a well coordinated programme to physically upgrade water systems and to establish and strengthen water user's associations.

2.6. The irrigated area at present is just over 5.5×10^6 ha excluding the farmer managed systems which serve an additional 1.6×10^6 ha. Most irrigation is run -of- the- river systems and the lands cannot be defined as arid or semi-arid using terminology and definitions from other countries which have significant areas under irrigation. Most agricultural areas receive abundant rainfall. The problem is with the availability of water at critical times in the food-crop growing process. There is also a highly pronounced dry season in most areas during five to six months of the year. Lands which look lush and green during the wet months need irrigation for sustainable food crop production during the dry monts.

2.7. Roughly a third of all government managed systems serve less than 5×10^2 ha. About 4×10^5 ha of these smaller systems have already been handed over to Water User's Associations after upgrading them and strengthening the institutions.

2.8. Starting from about 1974, the government studied several small and medium scale irrigation systems serving between 1.5 and 5×10^2 ha. An integrated approach was used involving social, agricultural, environmental and engineering aspects. Some of the schemes had been started by farmers in newly settled areas of Sumatera and Sulawesi and involved a substantial amount of land clearance and levelling for irrigated rice fields and development of tertiary systems. The Sederhana or simple irrigation development program has continued from its origins until recently, focussing on integrated development and the establishment and strengthening of water User's Associations in a large number of provinces.

2.9. Outside the Government managed area there were many smaller irrigation systems serving areas of less than 1.5×10^2 ha, some as small as two to five ha. These were spread throughout the densely populated rural and uphill areas mainly on Java, Bali and Sumatera. A study of these farmer managed systems showed that there was great potential to raise agricultural production through relatively small outlays on the rehabilitation of headworks and provision of simple structures mobilizing local skilled people for their construction. With a good approach it would also be possible to involve farmer groups from the very early stages of planning with the result that the sense of ownership and optimization were automatically enhanced. Farmers were often the instigators of the rehabilitation and were prepared to contribute in labour or in kind if not in cash up to 59% of the construction costs. No major impediments existed to obtain full benefits within a very short period and there was no further burden to the government with respect to O&M.

Rapid progress was made in the 1990s on the rehabilitation and improvement of almost 1.6×10^6 ha of these small farmer-managed systems which now contribute a significant part of the rice production, especially in Java, Bali and Sumatera.

2.10. Several lessons have been learnt with respect to the development and transfer of small scale irrigation systems. At present estimates, these systems serve a total irrigated area in excess of 3×10^6 ha, and are the main source of livelihood for about 1×10^7 farm families or approximately 4.5×10^7 people. However, the investment has not yielded the anticipated benefit in all cases because of shortcomings in inter-sectoral coordination, the expense and logistical coordination of large scale transmigration programmes and the slower than expected pace of establishment and strengthening of water user's groups and farmer's organizations. The transfer of smaller systems serving less than 500 ha as envisaged in the 1987 O&M Policy Statement has not proceeded to the full area of 1.5×10^6 ha.

The implementation of an Irrigation Service Fee for the O&M of larger systems was not very successful. The result is that the government is still carrying a large portion of expenditure on efficient O&M especially for the major headworks such as dams and head regulators and for the main conveyance systems.

2.11. With agricultural activities consuming 80% of the water supplied from our storage and irrigation systems, urban areas suffer substantial strains on the quality and quantity of water available for domestic, municipal and industrial use. In densely populated basins water use for irrigated agriculture will be more and more in direct competition with domestic, municipal and industrial supplies as well as for tourism and recreational uses.

3. PRESENT SITUATION OF FOOD

3.1. Rice is the staple food of most people in Indonesia. Though it is also possible to cultivate rice in several agro-ecosystem, most paddy is cultivated in wet land. In a few cases, paddy is also cultivated on dry land swamp areas. In addition, secondary crops, particularly legumes, play a significant role because they are the main protein source for most people.

Food self sufficiency is now an emerging issue in Indonesia. It is realized that with the economic turmoil facing the country, a stable food production system is critical. Food import grows year by year due to the unstable domestic production. However, Indonesia still has an abundant food resource.

3.2. Agriculture in Indonesia in 1996, not including Maluku and Irian Jaya, covered 5.92×10^7 ha. The largest area of agricultural land is used for estate crop (1.45×10^7 ha or 24.5%), followed by dry land (1.16×10^7 ha or 19.5%), woodland (9.4×10^6 ha or 16.0%), and paddy fields (8.5×10^6 ha or 14.1%).

Food crops are mainly produced on wetland paddy (9.9×10^6 ha and 4.56×10^7 ton), maize (3.4×10^6 ha producing 2.7×10^6 ton), followed by dryland paddy, cassava and soybean. Wetland and dry land paddy is mainly found in the islands of Java and Sumatra, followed by Sulawesi and Kalimantan. Secondary crops such as maize, cassava, sweet potato, groundnut and soybean are cultivated and produced throughout Indonesia, mainly in the islands of Java and Sumatra. The highest in total production is cassava (1.5×10^6 t), followed by maize (8.8×10^6 t) and soybean (1.43×10^6 t). Fruit crops are planted on all islands, mainly on Java, Sumatra and Sulawesi. Vegetables are cultivated on the islands of Java and Sumatra, but also on all other islands with smaller harvest areas and lower production. There are two different kinds of estates, namely large and small estates. Oil palm represents the largest area in large estates and coconut is the major crop in small holder estates. Cinchona is typically planted in large estates as well as sugarcane. No data are available from the small holders estates.

Animal husbandry includes seven kinds: dairy cow, beef cow, buffalo, horse, goat, sheep and pig. Cows, goats and sheep are mainly found in the island of Java as well as goats and sheep. Buffalo are on Sumatera and horses on Bali, Nusa Tenggara and Sulawesi. Poultry includes domestic hens, layers, broiler and ducks which are mainly found on Sumatera, Java and Sulawesi. Fishery is divided into marine fishery or wild fish which are caught and fish culture which includes open water, brackish water and fresh water fish culture. With these food resources, the average availability of calories, protein and fat per capita is 2.833 kcal, 65.27 g and 53.23 g respectively.

Regarding paddy fields, more than 50% of our wetland has been irrigated with a variety of technology. Wetland is the main area for paddy cultivation and secondary crops. Wetland is agricultural land, compartmentalized and separated by small dykes to hold water, where the main crop is usually wetland paddy without considering the status of the land. It includes land that is registered at the land income tax office, regional development contribution, 'village community' land, illegal ownership, swamps for rice cultivation, and newly opened lands. Wet rice fields includes irrigated rice fields, rain-fed fields and valleys.

3.3. Government plans place a great emphasis on the well being of the majority of rural people who are engaged in agricultural activities. Almost 90% of the people in the rural areas are farmers and their dependents. The combined policies of investment in irrigated agriculture and improved water management were to establish and strengthen village-level institutions and cooperatives which help to secure food self-sufficiency especially of rice, and thus prosperity in rural areas.

3.4. Since 1965, food production has been considered synonymous with rice production because there was a great shortage of this staple food. Almost 85% of the rice was grown on irrigated lands and more than 80% of water abstracted from our rivers and from groundwater sources were used for irrigated agriculture. Investment in agriculture in general and in the rehabilitation, improvement and expansion of irrigation and drainage systems in particular, resulted in the country reaching self sufficiency in rice by 1984, when the population had reached about 1.6×10^8 .

3.5. The main features of irrigated agriculture of that period was that, except for a small area of sugar cane, rice was the predominant irrigated crop and was grown on small land holdings of less than half a hectare on average. In densely populated Java and Bali, the average land holdings are even less than 0.25 ha. A major proportion of rice was produced on the irrigated lands using traditional methods of flood irrigation on small land holdings.

3.6. For the past two decades, since 1970, the government of Indonesia has devoted its effort to a sustainable increase in food production. Many programs have been implemented and resulted in the remarkable achievement which, by 1984, Indonesia reached self-sufficiency of rice. At present, many programs are still being implemented as rice self sufficiency was achieved only for two to three years. Since then, Indonesia faces a rice and secondary crop deficit.

The current program for increasing food production consists of several actions as follows :

- (i) Intensification program. This program is aimed to increase yield on existing land. In particular, the program involves continuous improvement of intensification by providing assistance to farmers in acquiring production inputs through providing agricultural credit (KUT), introducing new technology, mechanization, and improving the irrigation infrastructure through INSUS (Special Intensification) and SUPRA INSUS (Improved Special Intensification) programmes.
- (ii) Agricultural land extension. Indonesia still has an abundant land resource, which is suitable for agriculture. As part of the effort to fulfill the demand for food, one strategy is to open new agriculture areas. Every year about 6×10^4 ha of new land is opened. Meanwhile, since 1994, a remarkable land area (1×10^6 ha) have been opened as a crash program for food production.

4. PRESENT SITUATION OF RURAL DEVELOPMENT

4.1 The rural areas account for 80% of Indonesia. It is the living area of about 70% of Indonesian households which are mostly engaged in agriculture. In 1993 the number of agricultural households were about 78.46% of the rural households. During the period from 1983 to 1993, the agricultural production area has increased significantly, except for food crops which only increased slightly. Significant contributions are from fisheries, forestry, small holder estate crops and livestock. At the same time, non-agricultural sectors increased rapidly and consequentially provided a greater variety of work opportunities in the rural areas. In 1983, the variety index of work opportunity in the rural areas was about 2.93, in 1993 it increased to 4.94. Another remarkable achievement during the period of 1983 to 1993 was that the absolute income of rural households increased by 16.5%. The table below shows a comparison of income structure of rural households between 1983 and 1993.

Structure of Income of Rural Household by the type of sources (percent)

Source of Income	1983	1993
A. Agriculture Sector	54.97	50.00
1. Food crops	29.07	19.26
2. Estate crops	13.86	15
3. Livestock	8.58	6.53
4. Fishery	2.56	4.49
5. Forestry	0.90	4.72
B. Non Agriculture Sector	10.99	10.74
C. Non Business	0.75	4.03
D. Laboring	25	21.99
E. Others	8.29	13.24

Source: Proceeding of Rural Dynamics Workshop, 1998

4.2. Irrigated agriculture provides employment and income for over 50% of the working population of Indonesia. In the rural areas almost 90% of the heads of households are engaged in farm related activities. We erroneously assumed in the 1980s that through subsidies on fertilizers and the programmes of intensification and extension services provided by the Government, we would bring prosperity to the farmers. Indeed, up to a certain point, it was true that there was an element of prosperity with better housing, transportation and access, more educational and health facilities etc. Farmers and their cooperatives owned motor vehicles, there was increased literacy among the children, banking facilities were introduced into the sub-districts and villages, and radio, television, and newspapers, penetrated even the most remote villages. In spite of this development, there was rapid urbanization and the incomes, employment and facilities in the metropolitan areas, especially Jakarta and Surabaya and the conglomerations around those big cities, life became far more comfortable and affluent than anything which had been enjoyed by the villagers in the rural areas. We imposed controls on the price of rice with the result that it was more affordable to the urban dwellers. These policies marginalised those who were engaged in agriculture.

4.3 In general, farming is seen as an activity fit for only the least educated in modern terms. This is further aggravated by false perceptions such as the low economic well being of those engaged in agriculture, and low personal esteem because farming is considered dirty or ungentlemanly work. There is a very accelerated migration of younger more educated people from the farming areas to urban areas where they seek work as industrial labourers or domestic servants because anything appears to be better than the drudgery of working under traditional farming conditions.

4.4. The size of land owned and cultivated determines the income of a household. In rural areas an average agricultural household occupies 0.86 ha. However, a recent survey shows that about 50% occupy less than 0.5 ha.

4.5 The development in rural areas has improved significantly within recent years. In particular, since the 1970s, the government has introduced improvements to the rural infrastructure by introducing the INPRES Program (Presidential Instruction). This program covers budget assistance at the village level for road pavement, elementary school buildings, health centres and electricity. It has significantly improved the rural infrastructure and benefited many the rural people. An overview of this rural infrastructure development follows :

4.6 Road: According to the Central Bureau of Statistics (CBS), 80% of the rural villages can now be accessed by four wheel transportation which has supported improvement of marketing agricultural products. In addition, 8.7% are accessible by water transportation.

4.7 Electricity: The rural electricity program has supported the development of pumped irrigation of groundwater as well as surface water. The program has supported also the development of home industries and other small industries in the rural areas.

4.8 Potable water. The development of a clean water infrastructure in rural areas has been improved significantly. In 1993, the percentage of households which acquired their water from a pipeline reached 14.7%, from groundwater pumping 10.4%, and from wells 52.3%. The water supply infrastructure development in rural areas has grown at about 7% per year. However, there are still 22.6% of the households which get their water directly from springs and rivers.

4.9 Despite the rural development that has been programmed, there is still significant evidence of poverty in rural areas. According to CBS (1994), in 1993, 25.9×10^6 people in Indonesia (13.7% of the total population) were still living below the subsistence level. Among them, 17.2×10^6 lived in rural areas.

4.10 Based on years of experience, we should now involve the villagers far more, starting from the initial feasibility of multi-sectoral projects to integrated planning and implementation within clearly defined concepts, frameworks, objectives and targets.

5. THE FUTURE

5.1. FOOD

5.1.1 Generally the policy objectives of the Indonesian agricultural sector include improving the economy of the rural poor, improving food security and enhancing the export capacity of some agricultural commodities. Within the context of improving food security, achieving self-sufficiency in rice and other basic commodities is an essential measure as it will also control inflation and save scarce foreign exchange. Policy measures are focussed on ensuring that there is an adequate supply of basic inputs such as fertilizers, quality seeds and approved pesticides for integrated pest management. Policy measures have also been taken to improve the efficiency of irrigation and water resource management, since the improvement of agricultural productivity is focussed on the existing irrigation schemes, especially in Java, Sumatera, Sulawesi, Bali and Lombok, and in reclaimed tidal land swamp areas.

5.1.2 Agricultural diversification should still be an important goal for longer term growth in rural areas, particularly in enhancing export driven commodities such as cash crops, horticultural crops and coastal fisheries.

5.1.3 In the future, Indonesia is willing to reduce its rice consumption per capita by introducing a greater variety of food such as fish, meat and poultry. It is expected that in the year 2025 rice consumption per capita will drop to about 100 kg per year which will lead to a significant reduction in the demand for rice. However, the decline will be followed by an increase in the demand for livestock cereals.

5.1.4 Under the new policy, the demand for unhusked rice in 2025 (population will be about

2.8×10^8) will drop to only 2.8×10^7 t from about 3.3×10^7 t at present. Considering these projections, the level of self-sufficiency in rice production will be attained in 2025.

5.1.5 The increasing demand for feedstock cereals which generally require less water, there will be no significant increase in the demand for water. However, there will need to be an adjustment in irrigation infrastructures from a 'wetland paddy type' to a 'dry land secondary crop type'.

5.2. RURAL DEVELOPMENT

The direct consequences of a strong agricultural sector growth are clear. It will raise their comes of some of the poorer citizens and it will also provide a safety net for the newly unemployed by giving earning opportunities to returning migrants from urban areas until broader economic conditions improve. Clearly, the more rapid the agricultural growth, the stronger the anti-poverty benefits. Given the macroeconomic imperative of encouraging flows of resources into agriculture and rural development, the greater will be the benefit to the economy as a whole.

5.2.2 It is also expected that the size of farmlands will increase as the growing rural economics will support rural people in other services, such as merchandise, commodity cooperatives and small industries. Mechanization will be widely applied in food crop agriculture and more professionally hired labour will be needed.

5.2.3 The Indonesian economy, despite having a gloomy short-term outlook, retains several potential bright spots which, in combination with firm, consistent implementation of the on-going government reform programs will rekindle growth. Agriculture, for example, is expected to recover gradually and faster relative to other sectors, adding to local incomes, demands and revitalizing other sector activities. Export of cash crops, livestock, and fish could rise significantly even in the short term. At some point in the next few years Indonesia will resume growth, albeit not at the pace of recent decades.

5.2.4 The economy continues to possess significant strengths because of the untapped potential of rich natural resources, a large domestic market, innovative farmer communities, an increasing number of educated people, a reserve of water resources and an infrastructure already in place.

5.3 WATER SECTOR

5.3.1 Several river basin territories are considered strategic. Therefore policy measures must continue to be taken. For instance, the implementation of the Coordinated and Integrated River Basin Management Plan is a necessary condition for successful national economic development.

Within the spirit of decentralization of various aspects of economic development, the participatory irrigation management policy needs to be reformed. Over time the role of the water users association will be strengthened and empowered. It will gradually be given a larger jurisdiction by taking into account the limited financial and operational capacity of the local rural community.

5.3.2 The management of water resources which is eco-regional specific is needed to support the growing peri-urban horticultural commodities and an expanding coastal shrimp industry. Development of micro-irrigation is needed to support peri-urban agriculture and adequate flows of water are needed to ensure a water supply for shrimp culture. This implies immediate efforts to develop key integrated water resource management procedures and guidelines. These procedures include inter-sectoral water allocation and reallocation, introducing and sustaining water user fees, integration of groundwater and surface water management, and allocation of responsibilities for the maintenance of key river structures and flood control management.

5.3.3 Other areas of concern include the coordination and management of water resources and their conservation and utilization in a sustainable manner. A series of legislative measures and organizational changes were made in the early 1990s to accommodate these concerns, including the elevation of water resources to a separate sector of the economy.

5.3.4 We expect that in the near future there will be an increased degree of urbanization and industrialization. The economy has been diversified to a number of non-oil and non-food sectors, thus raising competition for water from sectors other than agriculture. However, food and agriculture remain the primary concerns and with a resumption of the importation of rice and several other very important foods and commodities the water resources sector has to respond in a positive manner to increase the efficiency of agricultural production through better water management and the enhancement of yields through better agronomic practices.

5.3.5 Realizing the increasingly complex long-term investment challenges and management problems, the government will continue the reformulation of the water sector. Structural adjustment, which had been started and will support food security programs, public health, and prevention of environmental damage will also be reformed. The reform will handle the inappropriate and ineffective legal structures, regulations, policies and institutions by changing sector policies, using more effective institutional frameworks, improving planning and management systems as well as increasing beneficiary participation.

5.3.6 The specific objectives to improve sector reforms:

- The national institutional framework for the development of water resources and management, will consist of :
 - (i) establishing a sector coordination framework;
 - (ii) reviewing current policies and procedures and adopting a National Water Resources Policy;
 - (iii) providing stakeholders with participatory institutions;
 - (iv) improving data networks and management information systems; and
 - (v) improving the National Hydrological and Water Quality Data Collection and Management System.
- The organizational and financial framework for the management of river basins will consist of :
 - (i) setting up basin level provincial management units in less developed river basins;
 - (ii) establishing self-financing, autonomous river basin management corporations in strategic river basins; and
 - (iii) establishing a formal national water and water quality rights framework.
- Regional water quality management regulatory institutions and implementation which will consist of :
 - (i) regulatory powers for water quality management; and
 - (ii) establishment of basin water quality management institutions.
- National irrigation management policy, institutions and regulations to enhance participatory irrigation management will consist of:
 - (i) the empowerment of farmer irrigation organizations;
 - (ii) the reorganization of irrigation agencies which will give more participation to the water users associations (WUA);

- (iii) financing of WUA activities by revision of the existing irrigation service fee procedure to get sustainability, efficiency of O&M and rehabilitation activities; and
- (iv) transferring the responsibility for irrigation O&M financing to local governments.

6. CONCLUDING REMARKS

Looking to the first 25 years of the 21st century in the third millennium, the vision for the sector must concentrate on the following issues which have already been identified:

6.1. Make rural development in general and particularly agricultural activities in terms of job satisfaction and income as attractive as any other sector of the economy, including marketing aspects, rural banking and information technology. Otherwise, it will be impossible to persuade enterprising and well educated young people to consider farm related enterprises as viable occupations.

6.2. Rank water and food related activities, including farms, with other activities and make them as transparent. Make small and medium scale enterprises commercially viable and increase training programs to prepare individuals, groups and rural cooperatives in handling better financial and human resource management to improve the business efficiency of their enterprises.

6.3. Reform the existing water policies, strategies and regulations to strengthen the management and development of the water sector.

6.4. Enhance the integration of activities on water and food to make seed farms, nurseries, hatcheries, extension services, post harvest handling, marketing and distribution of foodstuffs as science and technology oriented disciplines.

6.5. Encourage rural people to participate actively in discussions between the pros and cons of conserving a sustainable environment whilst pursuing food production and other activities in amenity sports, recreation, parks, sanctuaries, tourism, research and development especially in rural areas.

6.6. Make the rural areas attractive enough to become commuter belts for the urban workers without reducing fertile farmland for agriculture. The challenge is to avoid the feeling that rich urbanites are exploiting poor farm workers. Minimum wages must apply in all locations so that people have enough for their basic needs of food, clothing and shelter in a modern economy.

6.7. Reintroduce institutional and legislative reform at the grassroots level, including the traditional rules and regulations, so that rural people are again aware of their rights and responsibilities to participate in national development programs.