


No. 01

*Case Study*  
*on*  
*Integrated Agricultural and Rural Development Project*  
*in*  
*Southeast Sulawesi Province, Indonesia*

*March 1997*

*Japan International Cooperation Agency*

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Case Study on Integrated Agricultural and Rural Development Project in Southeast Sulawesi Province, Indonesia March

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## *Foreword*

Japan International Cooperation Agency (JICA) has been complied "Integrated Agricultural and Rural Development Project in Southeast Sulawesi Province" (the Project) in Indonesia as a project type technical cooperation since March 1, 1991 to February 28, 1998 for 6 years including 1 year extension, and follow up cooperation is now under implementation by February 28, 1998.

Objectives of the Project is to contribute to improve living standard and increase farmer's income, increase of agricultural productivity and diversification of crops, by means of transfer of technology and knowledge on agricultural and rural development agreeable with natural and socio-economic conditions in the rural areas in where development has been left far behind.

The characteristic features of the Project are emphasis of participatory approach and improvement of rural entire economy through multilateral measures necessary for the rural development promotion such as improvement of diversified crop production technology, extension service system in farm level and activation of farmer's organization including women and youths. In addition, the development of agricultural and rural infrastructures including small scale irrigation systems for paddy cultivation is the forwarding core of the Project.

The case study has compiled the records of the planing, implementation and monitoring of the Project, and arranged the lessons and suggestions acquired through the verification of their acitivities aiming to be of reference for other project type technical cooperation. We hope this report will be valuable to many people in the field of agricultural and rural development cooperation.

This case study has been completed by Japan Agricultural Land Development Agency, and we would like to express our gratitude to the Project's team of expert led by Mr. Nobuyoshi Kayano.

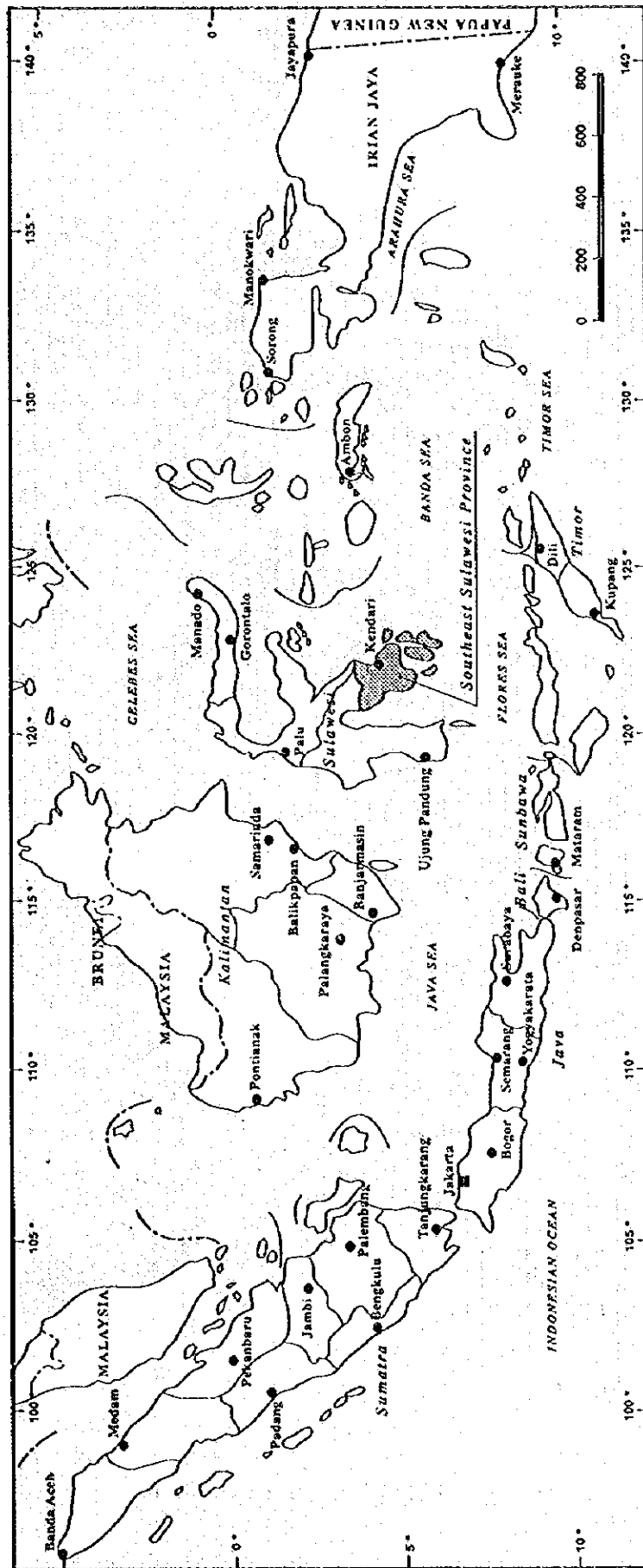
Besides, the contents described in this report are taken by way of example of agricultural and rural development with forwarding core of productive infrasturcture improvement including small scale irrigation systems, and it si noticed that this report will not represent an opinion of JICA in the field of agricultural and rural development cooperation.

March 1997

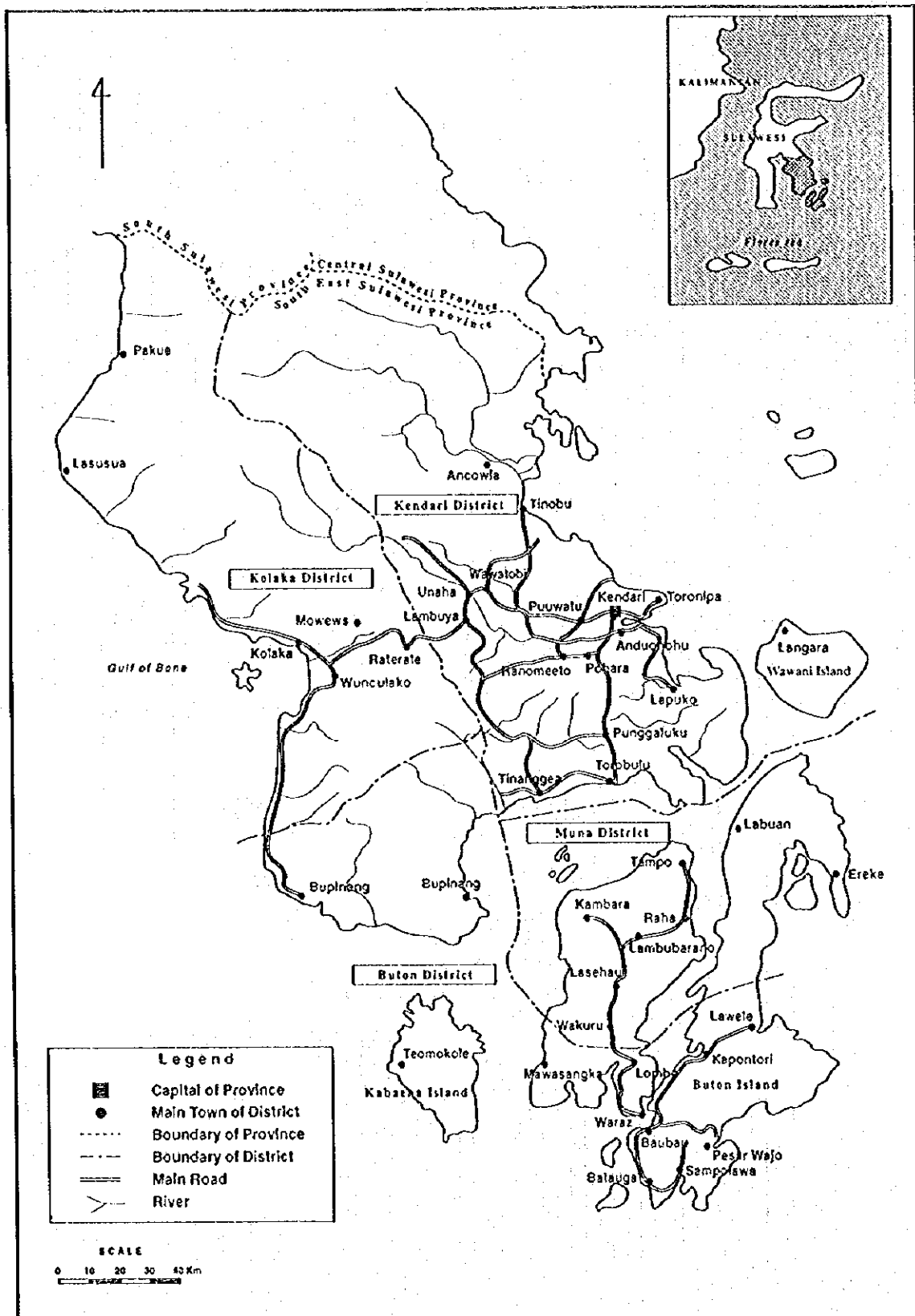
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Director of Agricultural Development Cooperation Department

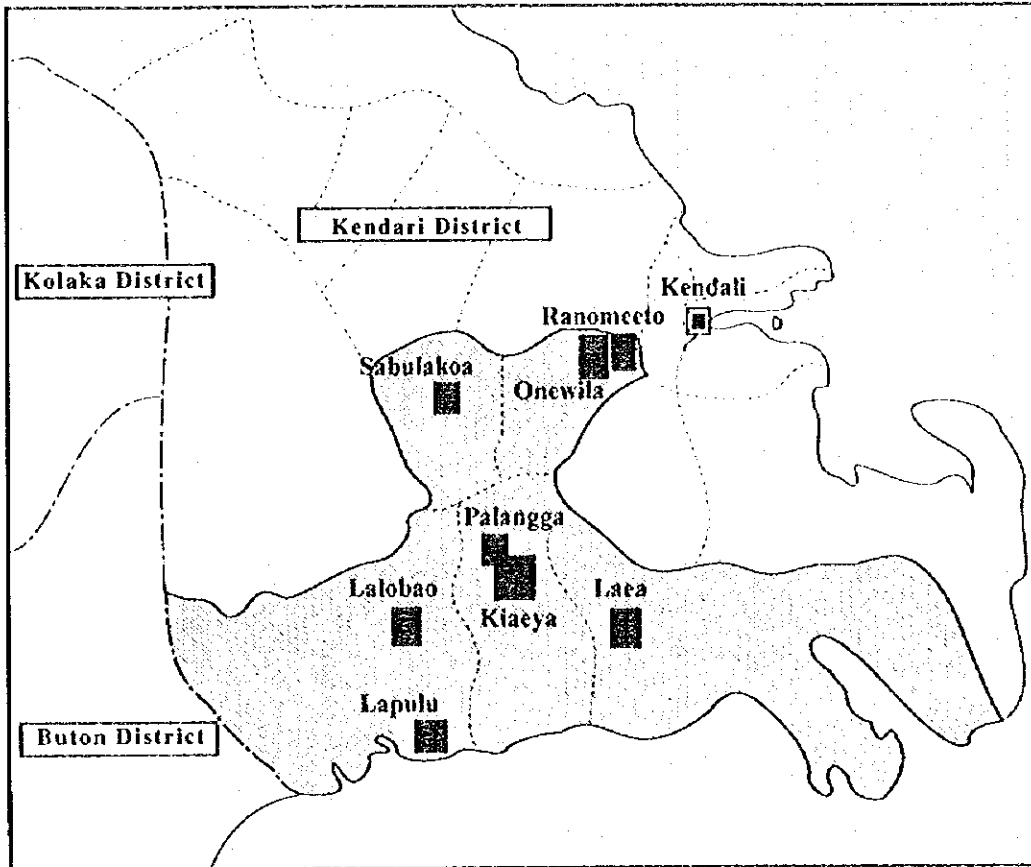
JICA



**Indonesia General Map**



**Southeast Sulawesi Province**



- Project Site : 5 districts in West North of Kendari**  
**Project Office : Kendari City**
1. Kendari → Ranomeeto/Onewila = 15km - 20 km (30 minutes)
  2. Kendari → Sabulakoa = 30 km (1hour)
  3. Kendari → Laea = 50 km (1.5 hours)
  4. Kendari → Palangga/Kiaeya = 70 km (2.5 hours)
  5. Kendari → Lalobao/Lapulu = 85 km (3 hours)

### **Project Site of South East Sulawesi Province**

### Abbreviation

Abbreviation	Bahasa Indonesia	English
1. ABRI	Angkatan Bersenjata Republik Indonesia	Indonesian Armed Forces
2. AD	Angkatan Darat	Army Ground Forces
3. AL	Angkatan Laut	Navy
4. AU	Angkatan Udara	Air Forces
5. BALITRO	Balai Penelitian Tanaman Rempah dan Obat	Research Institute for Spice and Medicinal Crops
6. BAPPEDA	Badan Perencanaan Pembangunan Daerah	Regional Development Planning Agency
7. BAPPENAS	Baadan Perencanaan Pembangunan Nasional	National Development Planning Board
8. BBD	Bank Bumi Daya	Bumi Daya Bank (Government Bank)
9. BDN	Bank Dagang Negara	Dagang Negara Bank (Government Bank)
10. BI	Bank Indonesia	Bank of Indonesia
11. BIMAS	Bimbingan Massal	Mass Guidance
12. BIP	Balai Informasi Pertanian	Agricultural Information Center
13. BNI	Bank Negara Indonesia	BNI Bank (Government Bank)
14. BPD	Bank Pembangunan Daerah	Pembangunan Daerah Bank (Regional Government Bank)
15. BPP	Balai Penyuluhan Pertanian	Agricultural Information Center
16. BPPT	Badan Penerapan dan Pengkajian Teknologi	Assessment and Application of Technology Agency
17. BRI	Bank Rakyat Indonesia	Rakyat Indonesian Bank (Government Bank)
18. DEPAG	Departemen Agama	Ministry of Religious Affairs
19. DWPDAG	Departemen Perdagangan	Ministry of Trade
20. DEPDAGRI	Departemen Dalam Negeri	Ministry of Internal Affairs
21. DEPDIKBUD	Departemen Pendidikan dan Kebudayaan	Ministry of Culture and Education
22. DEPHANKAM	Departemen Pertahanan dan Keamanan	Ministry of Defense and Security
23. DEPHUB	Departemen Perhubungan	Ministry of Communication
24. DEPHUT	Departemen Kehutanan	Ministry of Forestry
25. DEPKEH	Departemen Kehakiman	Ministry of Justice
26. DEPKES	Departemen Kesehatan	Ministry of Health
27. DEPKU	Departemen Keuangan	Ministry of Finance
28. DEPKOP	Departemen Koperasi	Ministry of Cooperatives
29. DEPLU	Departemen Luar Negeri	Ministry of Foreign Affairs
30. DEPNAKER	Departemen Tenaga Kerja	Ministry of Labor
31. DEPPARPOSTEL	Departemen Pariwisata, Pos dan Telekomunikasi	Ministry of Tourism, Post and Telecommunication
32. DEPPEN	Departemen Penerangan	Ministry of Information
33. DEPPERIN	Departemen Perindustrian	Ministry of Trade
34. DEPSOS	Departemen Sosial	Ministry of Socials Affairs
35. DEPTAN	Departemen Pertanian	Ministry of Agriculture
36. DEPTRANS	Departemen Transmigrasi	Ministry of Transmigration
37. DIRJEN	Direktorat Jenderal	General Directorate
38. DPRD TK. I	Dewan Perwakilan Rakyat Daerah Tingkat I	Head of Province Level
39. GBIN	Garis-garis Besar Halwan Negara	The General Principles of National Development
40. GERSAMATA	Gerakan Desa Makmur Merata	The Equitable Prosperous Rural Movement
41. HANSIP	Pertahanan Sipil	Civil Defence



### Abbreviation

Abbreviation	Bahasa Indonesia	English
42. IDT	Inpres Desa Tertinggi	Presidential Directive for Backward Village
43. KABID	Kepala Bidang	Head of Division
44. KAKANWIL	Kepala Kantor Wilayah	Head of Regional Office
45. KANWIL	Kantor Wilayah	Regional Office
46. KASI	Kepala Seksi	Head of Section
47. KB	Keluarga Barenana	Family Planning
48. KDH	Kepala Daerah	Head of Province
49. KDHTK. I	Kepala Daerah Tingkat I	Head of Province Level I (Governor)
50. KDHTK. II	Kepala Daerah Tingkat II	Head of Regency (Regent)
51. KPK	Kepala Pertanian Kecamatan	Head of District Agriculture (Kecamatan)
52. KUD	Koperasi Unit Desa	Rural Unit Cooperatives
53. LBH	Lembaga Bantuan Hukum	Legal and Society
54. LIPI	Lembaga Ilmu Pengetahuan Indonesia	The Indonesian Academy of Sciences
55. LKMD	Lembaga Ketahanan Masyarakat Desa	Village Social Activities Group
56. IMD	Lembaga Musyawarah Desa	Village Discussion System
57. MENTAN	Menteri Pertanian	Minister of Agriculture
58. PJA	Perhimpunan Petani Pemakai Air	Water Users Association
59. P3K	Pertolongan Pertama Pada Kecelakaan	First Aid
60. PBB	Perserikatan Bangsa-Bangsa	United Nations
61. PDAM	Perusahaan Daerah Air Minum	Municipal Waterworks
62. PELITA	Pembangunan Lima Tahun	Five Year Plan
63. PEMILU	Pemilihan Umum	General Election
64. PERTANINA	Perusahaan Pertambangan Minyak dan Gas Bumi Ne	Indonesian State Owned and Company
65. PELUMTEL	Perusahaan Umum dan Telekomunikasi	National Telephone & Teleraph Corperation
66. PKK	Pembinaan Kesejahteraan Keluarga	The Family Welfare Organization
67. PLN	Perusahaan Listrik Negara	State Electricity Enterprise
68. PMI	Palang Merah Indonesia	Indonesian Red Cross
69. POLRI	Polisi Republik Lapangan	Indonesian Police
70. PPL	Penyuluh Pertanian Lapangan	Extension Workers
71. PPN	Pajak Pendapatan Negara	National Income Tax
72. PPS	Penyuluh Pertanian Sepesial	Senior Extension Workers
73. PPUP	Penyuluh Pertanian Sepesial	Agricultural Extension Workers
74. PU	Pekerjaan Umum	Public Works
75. SEKAB	Sekretariat Kabinet	Cabinet Secretariate
76. SEKAP	Sekretariat kabinet Pembangunan	Development Cabinet Secretary
77. SEKDALOPBANG	Sekretariat Pengendalian Operasi Pembangunan	Supra Cabinet Level Coordinator of Development Operations
78. SEKJEN	Sekretariat Jenderal	Cabinet Secretariate
79. SEKWILDA	Sekretaris Wilayah Daerah	Regional Secretary
80. TNI	Tentara Nasional Indonesia	Indonesian National Armed Forces
81. UNHALU	Universitas Haluoleo	Haluoleo University

Currency conversion rate and standard labor wages table

Year	Month	¥/US\$	Rp/US\$	¥/Rp	Rp/¥	Year	Month	¥/US\$	Rp/US\$	¥/Rp	Rp/¥	
1991	6	140	1939	0.072	14	1995	5	105	2153	0.048	21	
	7	140	1948	0.072	14		6	107	2158.5	0.048	20	
	8	140	1951	0.072	14		7	104	2163.5	0.046	21	
	9	140	1957	0.072	14		8	101	2158.5	0.047	22	
	10	135	1964.5	0.069	14		9	102	2185.75	0.046	21	
	11	135	1973.5	0.068	15		10	100	2169.88	0.046	22	
	12	133	1981.5	0.067	15		11	100	2165.5	0.046	22	
	1992	1	130	1986	0.065		15	12	101	2172	0.046	22
		2	130	2000.5	0.065		15	1	102	2185.5	0.047	21
		3	130	2006.5	0.065		15	2	101	2208.5	0.048	22
		4	135	2013	0.067		15	3	100	2208.5	0.045	22
		5	136	2018.5	0.067		15	4	92	2226.5	0.042	24
6		133	2024.5	0.066	15	5	85	2223.5	0.038	26		
7		128	2029.5	0.064	16	6	87	2219.5	0.039	26		
8		128	2030.5	0.063	16	7	87	2223.5	0.039	26		
9		128	2030.5	0.063	16	8	90	2226.5	0.04	25		
10		125	2032.5	0.062	16	9	100	2259.5	0.044	23		
11		125	2044.5	0.061	16	10	102	2260.5	0.045	22		
12		127	2053	0.062	16	11	102	2260.5	0.045	22		
1993	1	127	2056.5	0.062	16	12	103	2275.25	0.046	22		
	2	128	2059.5	0.062	17	1	103	2280.5	0.046	22		
	3	123	2061.5	0.06	17	2	107	2284.5	0.046	22		
	4	119	2065.5	0.058	18	3	107	2311.5	0.046	22		
	5	114	2068.5	0.055	18	4	107	2328.5	0.046	22		
	6	112	2073.5	0.054	18	5	109	2325	0.047	21		
	7	109	2082.5	0.052	19	6	108	2324.5	0.046	22		
	8	109	2090.5	0.052	19	7	110	2317	0.047	21		
	9	107	2096.5	0.051	20	8	110	2342	0.046	22		
	10	108	2105.5	0.051	20	9	109	2333.75	0.047	21		
	11	111	2099.5	0.053	19	10	111	2314.75	0.048	21		
	12	111	2100.5	0.053	19	11	114	2321.25	0.049	20		
1994	1	114	2104.5	0.054	19	12	113	2335.5	0.048	21		
	2	114	2109	0.054	19	1	116	2358.75	0.05	20		
	3	108	2138.5	0.05	20	2	122	2367.5	0.052	19		
	4	107	2146.5	0.048	20	3	124	2388.7	0.051	20		

Standard labor wages

year	1990	1991	1992	1993	1994	1995	1996
Wages(Rp)	2,813	3,300	3,500	4,500	5,760	5,693	5,693

### Currency Conversion Rate and Labor Wage Table by F/Y

Fiscal Year (Apr. - Mar.)	Currency Conversion Rate				Standard Labor Wage
	¥/US\$	Rp/US\$	¥/Rp	Rp/¥	Rp/day
1991	135.30	1,970.75	0.07	14.50	3,300
1992	128.58	2,037.83	0.06	15.92	3,500
1993	111.33	2,094.54	0.05	18.25	4,500
1994	102.50	2,358.51	0.05	21.33	5,760
1995	97.08	2,254.31	0.04	23.50	5,693
1996	112.75	2,338.10	0.05	20.83	5,693

Remark : Currency conversion rates in 1991 are averaged from June 1991 to March 1992.

**Case Study on Integrated Agricultural and Rural Development Project  
in Southeast Sulawesi Province, Indonesia**

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## ***I      Agricultural and Rural Development***



## **1. Concept of agricultural and rural development**

### **1.1. Objectives of agricultural and rural development**

The scope and subjects of agricultural and rural development vary somewhat between countries, but, in the narrowest definition, they start with expansion of the production agricultural produce, particularly staple foods and produce for export. Beyond that, rural development has aimed to improve and expand distribution facilities and systems, and promote cooperation with agriculture-related fields. Recently, an additional aim has been enlargement of the basic social capital through the conservation of resources, environmental protection and the creation of amenities to bring broader improvements in agricultural production, the rural environment and the way of life of rural people.

However, technical assistance projects in the past have concentrated on the training of technical instructors in government agencies and there is a considerable time lag before the benefits of this assistance trickles down to the level of the farmers who are the end users. This problem has highlighted the necessity of participatory cooperation projects which could put the farmers at the center of the project.

For this kind of project the first prerequisite is that the inhabitants of a candidate village must have a strong will to develop their own village and improve their own lives and the way they practice agriculture. They must also be ready and willing to work together as a group, they must have quality leadership and must have strong potential for immediate organization.

Integrated agricultural and rural development of participatory approach is implemented with the enthusiastic cooperation and participation of the local population to improve and reclaim their farm land and living environment, which are central to their lives and their agricultural production. The aim is to achieve harmonious and sustained development of rural areas. These are rural development projects of the people by the people and for the people.

Villages are built from their people, from the farmers and the work of their inhabitants. The farmers are the ones who reclaim the land of the each hamlet as a whole, which becomes the base for empowering the organizations which build villages.

Rural development with the full participation of the population aims to bring improvements in four main aspects.

(1) Productivity

Stable improvements in the productivity of farm land and labor, which are necessary for intensive and diverse land use, require the buildup of rural infrastructure such as irrigation and drainage, and layout of farm roads. These improvements are necessary prerequisites for greater productivity. The introduction of improved post-harvest techniques and small villages enterprises should also be considered. These would bring greater productivity in agriculture-related industries, which would in turn improve the supply of manufacturer's goods, facilities and equipment and increase farmers' incomes, as well as adding value to agricultural produce. In short, facilities and methods are needed to raise the total productivity, including non-agricultural income in farming villages.

(2) Equity

Infrastructure improvement and management should be based on the equitable distribution of increased production and its benefits and the reduction of income disparities in farming villages. Such projects must be devised to ensure that people can receive the same benefits regardless of their wealth or poverty. Consideration must also be given to the creation of employment opportunities as a way to alleviate the poverty of landless and small farmers by absorbing them into other industries. The key point is to aim for equitable expansion of employment opportunities.

(3) Sustainability

The design and construction of new infrastructure must be planned carefully to ensure that it provides sustainable benefits for the people and their agricultural productivity. Furthermore, the management of this infrastructure by residents' organizations must be reinforced. Naturally, rural development must give consideration to environment protection and the conservation of natural resources, so in addition to the sustainable use of land and water, the agricultural methods employed must value soil protection and balanced productivity in sustainable production systems that harmonize with the environment. It should be a natural assumption that the productivity mentioned in (1) above must be sustainable the employment opportunities and increased income of (2) must also be sustainable, rather than coming at the cost of damage to the natural environment and human habitability.

(4) Quality of life

The ultimate objective of rural development is to improve the lives of people living in the areas concerned. A sustainable way of life and the equitable increase in income act in concert with living space and housing, public health services, transport and communications, educational facilities and other elements to improve the public way of life. In short, rural development must be

integrated rural development, which aims to improve the standard of living and has as its core the hard aspects of infrastructure improvements, which are overlaid by the soft aspects of services to the people.

## *1.2. Rural development and participation*

### *(1) Objectives and background of rural development*

Until the late 1970s rural development in developing countries concentrated in raising productivity. From that time onward the emphasis began to move to providing the rural poor with their basic needs. This shift was brought about the reflection on the failure of previous growth-oriented development policy to achieve the expected results in the relief of poverty. Despite the economic growth of the country as a whole, this did not necessarily lead to greater productivity and welfare for the people of the country. Rather, the socioeconomic disparities between regions and between social strata have gone on widening as the population grows rapidly. In rural regions the poverty of small farmers became particularly apparent. The new policy direction had two major objectives.

- a) To provide for the basic needs of rural people (particularly the poorest), and improve the quality of life by helping people to escape from poverty, creating employment opportunities, increasing agricultural production, and making improvements in areas such as medicine, public health, education and housing.
- b) To encourage rural people to participate spontaneously and independently in the development process, to achieve development at the village and hamlet level which is evenly distributed on the national and regional scale. This approach creates an organized framework which can effectively bring together government efforts and the energy of the people.

This kind of rural development began to be taken seriously in Asia when the problems of farming people and rural areas, that is to say polarization and poverty in farming classes and the deepening socioeconomic divide between urban and rural areas, became so extreme that they posed a threat to political stability. The factors that led to this situation differ between countries, but some common points are discernible.

For example, the so-called "green revolution" introduced high-yielding varieties, which made a major contribution to increasing the production of staple crops. However, the main beneficiaries were the landowners and the landless farmers and agricultural laborers were left out of the benefits. The green revolution actually exacerbated class division between farmers. Similarly, the advance of industrialization, which was centered on the cities, caused the decline of handcraft

industries which had been a source of secondary income for small farmers, deepening the problem of rural unemployment.

Development policies aimed at economic modernization have spawned problems far different from initial expectations, and these are now being recognized as threats to social and political stability. As a result, current rural development policies have departed from the pursuit of greater productivity above all else and now turning to the mass of rural poor in an effort to bring social stability and encourage fair distribution of the fruits of development. The promotion of rural development is now supported by a more realistic political perspective, which recognizes that rural poverty leads to constriction of domestic markets and hinders economic development through industrialization.

(2) Significance of participatory rural development

The fruits of development are increasingly expected to be distributed evenly, without inequalities between the beneficiaries. At the same time, the issue of regional disparities and their correction is gaining prominence. In response to these trends, the organizations for rural development are now forming into comprehensive coordinating organizations which emphasize comprehensive rural development policy unifying the structures and functions of various related agencies.

As rice production has increased, more emphasis is being placed on the production of commercial crops other than rice and some are experimenting with other combinations of crops. Rural development measures have shifted to land reclamation, which expands the area of farm land and enables it to be worked in a diverse but intensive way. Policy has shifted from the expansion of agricultural production and the greater supply of staple foods to the promotion of cash crops and livestock. Other new policies plan improve the distribution, processing and marketing of agricultural produce and improvement of the living environment.

There have long been calls for expanded opportunities in farm villages so that the increase in agricultural income can be accompanied by increased income for other village residents. However, shortcomings in regional policies, the difficulty of generating non-agricultural jobs in farming villages and other difficulties meant that the expected results were not achieved in many areas.

However inhabitants and farmers in the region do not consider great deal that the regional development plan is immediate plan to themselves in comparison with developed countries, implementation of rural development project by participatory approach is expected to establish the project to be a regional development for themselves.

## **2. Approach to cooperation**

### **2.1. Approach to rural development**

In most countries, villages are commonly viewed as being uniform items. As a result, there is a strong tendency to apply village development targets to the improvement of the national standard of living. It is rare for varied and appropriate approaches to be devised for different groups, such as landless peasants, groups of small farmers, lower-class and poor groups and others. This latter approach selects villages which appear to be backward in social or economic conditions and applies targeted government support to them. Differing methods can be applied where village communities are classified according to their socioeconomic characteristics. For example, in Indonesia the development strategy is to classify villages according to their level of development as traditional villages (*swadaya*), developing villages (*swakarya*) and developed villages (*swasembada*). Villages are then encouraged to move up between levels, and policies have been prepared for each stage. In Thailand the same approach was taken to the eradication of poverty in farming villages as an element of the Fifth National Plan for Social and Economic Development. This method tried to define poor regions under certain criteria and direct targeted government assistance against them.

These approaches to treating whole village communities appear to be planned and executed on the basis of certain preconditions. There is the assumption that traditions of interdependence and mutual support still exist in these communities and these old traditions can revived with suitable government support. The background to this idea is the identity of the village as a fundamentally harmonious group society. It is well understood that government intervention should build up this group harmony and unity and avoid conflict of interests wherever possible.

This approach to villages is valid provided traditional forms of village management are still functioning. However, many pieces of research have indicated that the intrusion of the market economy and the sweeping changes in village society are erasing traditions of interdependence. Furthermore, the benefits of government assistance are monopolized by the wealthy classes who have no need of assistance, so that benefits are unlikely to trickle down to the truly needy. So there are no few cases that stratification within villages is further promoted.

Therefore, in regions where the stratification of rural society is advanced, where there are great differences between residents in their social and economic conditions, it may be appropriate to proceed with an approach which focuses on certain specific social measures. Some examples of this kind of approach are the rural development projects of the Malaysian Federal Land Development Authority, which concentrate on the settlement of landless farmers, and the

Philippine KKK Program (National Livelihood Movement), which aimed to alleviate the plight of the rural unemployed. Of course, the village community approach and the target group approach can never operate in complete isolation from each other. Rather, the two approaches should work in cooperation or combination as appropriate with reference to currently ongoing social changes. Research towards achieving such combinations is urgently needed to find a new angle on rural development planning which will help disadvantaged rural groups such as landless laborers, tenant farmers and unemployed youth.

## *2.2. Tasks for the administration of rural development*

Rural development requires a wide range of projects to build the agricultural base, supply production materials and services and other social and consumer services. Such projects involve a large number of government agencies. The task of rural development administration is to coordinate the efforts of these agencies so that they work together synergistically while retaining their own functions.

Looking at the approaches taken to this task in various countries, one approach is to establish an independent agency to adopt and implement the special rural area development method which combines many diverse functions. Another is to set up a mechanism for inter-agency coordination. Examples of the former approach in Malaysia are the Federal Land Development Authority, which is responsible for the settlement of landless farmers and the Area Development Authority, which is responsible for the overall development of existing agricultural areas. Beyond land reclamation, these agencies have broad powers over the supply of production materials and services. The Philippines used the Integrated Area Development method, which is similar to Malaysian efforts, but they emphasize the use of a specific lead agency to coordinate the rural development efforts of all the agencies concerned.

The latter approach, aiming to provide coordination functions, is being enthusiastically pursued by many countries. At the national level a coordinating committee comprising the head of state and others at the same level is set up to coordinate the policies of all the government agencies concerned. Similar committees are also set up at the regional level. Rather than coordinating individual policy measures, the central committee is mainly concerned with creating a framework for overall policy direction and budget allocation. On the other hand, the committees at the regional administrative level are expected to consider both the policy guidelines emanating from the center and the needs and demands of the region's inhabitants to revise and coordinate measures in each field.

In general, the traditional role of regional administration is to preserve the peace and

stability of the region while obediently implementing the policies of the central government. With the introduction of rural development policies, however, the role of regional government expands considerably. For example, one aspect of regional government's role is to accurately reflect the village-level needs and demands in the implementation of rural development projects at the regional and village level. In particular, if the planning of rural development projects in the field is to be effective, it requires detailed and responsive work at the grassroots administrative level. To that end, each country is making all possible efforts to strengthen and coordinate planning and execution ability at the regional level.

In many cases, however, regional government is no more than a collection of the local agencies of the central government, presided over by a head who is appointed by the central government (although they are elected in the Philippines). In practice the local branch departments are largely occupied by staff dispatched from the central ministries and each office has a separate budget allocated from the center. This means that the authority of centrally-appointed governors and mayors is limited, which is a considerable handicap to effective coordination of rural development at the regional level.

### *2.3. Participation and planning from the grassroots*

There are two ways of encouraging the enthusiastic participation of rural people in development. The first is to establish Village Development Committees at the lowest level of regional administration. These committees, which comprise the village head instructors for each level of the village, promote project planning and implementation based on the needs of the villagers. They receive technical support from regional government agencies and in some cases there are systems for financial support for village development. Examples of such systems include the Indonesian Village Development Fund (Impress Desa) and the Thai Kampung Development Fund on Village Committe.

On the other hand, the organization of rural people, who are the recipients of services provided through government channels, has moved ahead into many areas, including farmers' associations, credit unions, water users' associations, and women's associations and youth groups to improve standards of living. These people's organizations at the village level aim to build channels to link government-led development to the spontaneous efforts of the public to improve their lives. At the same time, they also allow the people themselves to act as partners in the village development process through their independent mobilization of local resources. In many cases these organizations, regrettably, become inactive once their government funding ceases. Another common problem is that organizations created for village residents can become dominated by a few powerful individuals.

The second way is to systematize the bottom-up planning system at the village level. This method brings villagers a unity of purpose through mutual discussion and cooperation. It can also deal with problems beyond the efforts of single villages. On the other hand the representatives who participate in this kind of planning process are usually lacking in experience and knowledge. This makes the assistance of regional officials, who have more technical and administrative knowledge, and necessity. This participation can easily diminish the independence and dominance of the villages.

#### *2.4. Formation of agencies at the village level*

Experience in many countries has demonstrated that the existence of agencies at the village level is extremely important for the progress of rural development planning and, by extension, for the improvement of villagers' lives. Generally speaking, agencies which have been formed by local initiatives are highly effective in the development of farming villages. In many cases they receive government help to broaden the range of services they are able to handle. This happens because the use of such village-level agencies has been recognized to be politically useful, for the following reasons:

- a) They reduce the risks of social unrest and dissent and broaden the base of political direction.
- b) In order to implement rural development in the direction set by the government, a third party must be created which can exert pressure on bureaucratic structures.
- c) Local subscriptions must be collected from villagers in order to implement rural development projects. This has made governments very keen to harness the support and energy of villagers through agencies at the village level. The areas listed below are those in which governments can maintain productive relationships with village-level agencies.

##### *(1) Budget allocation*

In most developing countries, there is a general tendency to weight the allocation of public investment towards industry and the cities, while the importance of public investment in rural development is recognized by politicians and bureaucrats. It is, however, well understood that there is never enough budget for everything and financial resources must be used effectively. Therefore, the government must try to produce a budget allocation which meets the needs and priorities of rural people and implement rural development programs which reinforce their spirit of independence. Governments can easily lapse into paternalism, tending to foster a feeling of government dependence among rural people. To avoid this situation, governments must keep a grip on real needs and priorities through regular investigative meetings. Village-level agencies can



play a useful role here as intermediaries between the government and the villagers.

(2) Assistance to village-level agencies

In many countries, village-level agencies are used as regional instruments of political control, thus losing the trust of the villagers. Rural development projects targeting the poor can be run by a handful of influential people, exacerbating public distrust of the government. Training villagers involved in village-level agencies in management and other relevant knowledge should prove effective protection against this kind of external pressure and influence. Plans for this kind of training should be drawn up or selected to match the needs and priorities of the community.

(3) Administrative reform

Governments must rely on bureaucratic mechanisms to deliver aid and services to villagers, but in many cases the lack of the staff, the facilities and the right organization to deliver proper support services to village-level agencies.

a) Reform of administrative agencies

Support for village communities must be routed through existing civil channels, rather than passing exclusively through bureaucratic channels. For example, the private sector can be used to distribute agricultural materials through the civil distribution network, leaving the government agencies free to concentrate on supervision and coordination, and assistance at the village level can be entrusted to non-governmental agencies.

b) Decentralization of administrative authority

Most government are trying to devolve some authority to the regions, but in most cases the process is taking a long time to show results. A rapid devolution of authority over project implementation and management to local governments is desirable.

c) Raising the morale of field staff

The way local field staff work in establishing links with villagers and in assisting them to establish and run agencies can be greatly enhanced through systematic training. In the case of field workers who must find out the conditions facing the rural poor and take effective action, their special training must be based on experience in the field. The success of rural development plans depends on the morale of the field works who have to actually put them into practice. Ordinary field workers are working under conditions far inferior to those enjoyed by their counterparts in head offices and great consideration must be given to personnel management which will boost their

morale.

**2.5. *Methods for agricultural and rural development planning***

- (1) Concrete plan concept
  - a) Target region for the plan

The subjects of rural development are, naturally, villages, but their size, and their possession of offices able to perform the administrative functions of independent authorities, vary between countries. For example, in Japan in the mid-Meiji era, "villages" were smaller than they are today, their administrative ability was not great and the level of education of the villagers was much lower than it is today. Furthermore, the "hamlets" which were the constituent units of villages lacked any kind of office with administrative and executive powers. When village development is being planned in such a situation, the subject for the plan should not be moved up to the district level. Even if the village does not have the level of executive ability which would be found in its counterparts in developed countries, it should still be the planning unit. For villages which should be targeted for assistance, the scale reached by the village units which correspond to the mid-Meiji Japanese villages varies between countries, but the above principle should still be applied. In short, the "villages" which will be taken as the subjects of planning in this report should be taken to mean "the smallest unit of local government which possesses independent administrative power and is capable of making independent judgements on the planning process".

- b) Relations with higher-level plans and with plans in adjacent towns and villages

In Japan, for example, the higher-level plans covering cities, towns and villages are the wide-area municipalities sphere and local life circle plans, and the next level up are prefectural and municipal plans. When future plans are made for villages, they must be considered in the context of higher-level plans and plans for adjacent villages to avoid interference and inconvenience. Even if there are no such higher-level plans and adjacent plans which require coordination, there can still be problems, depending on the country's level of development. These difficulties should be avoided and, if at all possible, the development plan for the district overlying each village should be studied as a model case as part of the planning process. This level of coordination is probably too much to expect.

Situations differ between countries and it is not possible to do more than setting guidelines on a case by case basis, but if a self-centered plan is drawn up for a single village alone without reference to its surroundings, there is a strong chance that the plan itself and the projects which spring from it will fail to take root in the region. The basic approach must be to consider the

broader situation so that cooperative projects do not end up like potted plants, isolated from their surroundings.

c) Plan content

Even rural development plans which take the promotion of agriculture as their dominant theme must be devised with a holistic view of the future progress of the village. The content of the plan must make clear how many people at what economic level will use what resources (land, water etc.) and what sort of natural and living environment they want to be in. The specific points which must be clarified are:

- a) What mix of industries and what industrial workforce will achieve the target economic level.
- b) What resources (land, water etc.) should be used, and in what way.
- c) How can the necessary improvements be made to the industrial base.
- d) What should be the usage and restrictions on the use of land and other resources and what land improvements will be required to achieve the target environmental level.
- e) How these improvements should be achieved.

(2) Planners and data

a) Planners

The planners in charge of devising plans are experts dispatched from Japan and their counterparts from the partner country. These planners from the partner country can be viewed as specialists from the kind of village halls mentioned above, or from regional administrative agencies, or from consultancies. If the partner country in the cooperative project is expected to have effects as far-reaching as those of the town and village improvement program of mid-Meiji Japan, the project should not end with the planners on the Japanese side simply providing plans. Rather, it would be valuable to use the planning process as a chance to transfer knowledge and techniques to the planners of the partner country, so that they can handle the planning for other villages themselves.

b) Statistical data and other information needed for planning

Whatever the country, there is no guarantee that the statistical data, maps, related planning documents and other information will be accurate or will be available when required. In principle the data which can be obtained in the village concerned should be central and should be supplemented through field surveys by the project team. If this supplementary investigation

becomes excessively extensive or complex, there is the risk that the enthusiasm or potential of the local planners for creating further plans after the end of the project will actually be reduced. As a rule, the project should be planned on the basis of the necessary minimum of information, with a flexible, case by case approach to information gathering.

c) Participation

It is, of course, desirable to have the plan reflect the opinions of the residents concerned. The nature of the residents' participation in planning and of the local study group which assists the planning process will vary, depending on the educational level of the residents, their leaders, relationships with social and residents' organizations etc. Methods and ideas will have to be devised flexibly each time to match conditions in the partner country.

(3) Survey and diagnosis

a) Fact-finding survey

The existing conditions are studied and the results used to diagnose what problems are currently faced and what is required from cooperative activities in the future.

i) Population

1) Population divided by age and gender

The numbers of the people by gender at five year interval should ideally be obtained in the village over the last ten-years.

2) Population outflow and inflow

The numbers of people moving into and out of the village should be distinguished from natural changes in population and should be obtained for a five-year period, broken down by gender at five year intervals.

3) Working population in each industry

Within the total workforce, figures for the population looking for work, the actual number in employment (broken down by industry and gender) should be obtained, ideally for at least five-years.

4) Commuting population

Figures should be obtained for the number of villagers commuting to work outside the village and the number commuting to work in the village from outside, ideally for at least five-years.

ii) Land and water resources

Ideally, topographical maps at a scale of 1/50,000~1/10,000 should be obtained. In addition, the state of land use, land ownership and the demarcation of any legal restrictions on land use must also be investigated.

Water resources such as rivers, lakes and ponds, springs and other water sources, reservoirs, and the usage of water must also be investigated.

iii) Climate and hydrology

The climate of the village, including its air temperature, hours of sunshine, rainfall, wind speed and direction, dew and frost, typhoons and other natural hazards should be studied with particular reference to agriculture in the region.

iv) Soil

The soil survey of agricultural land and land which is being considered for development into agricultural land should make particular reference to the selection of suitable crops and means of improving the fertility of the soil.

v) Economic level

The average income per household and the income per household in each industry (particularly the income per household in agricultural and non-agricultural households) must be investigated.

vi) Industrial production

A study of industrial productivity, particularly, in agriculture, cropped area, production, shipping and collecting volume etc., is necessary for the consideration of measures for the promotion of agriculture.

vii) Industrial base

A study of the facilities of the industrial base in each industry, particularly agricultural land, improvement level, irrigation and drainage facilities, farm roads, collecting and shipping facilities, processing and storage development, etc. in agriculture, is necessary for the consideration of measures for improving the agricultural base.

viii) The amenities of the living environment

The number and condition of facilities such as mains water supply and sewerage, parks, meeting halls, hospitals, religious buildings must be surveyed.

ix) The state of public infrastructure

A survey of the development of roads, rivers, railways, ports, electrical power, communications etc. is needed in connection with the production, processing and shipping of agricultural produce within village development.

x) Environmental conservation and disaster prevention

The state of pollution of air, water and soil, the preservation of the ecology of animals and plants, the occurrence of disasters and the measures taken to prevent them must be surveyed.

b) Diagnosis

The level of population control, the industrial composition, levels of employment and unemployment, levels of income, agricultural productivity, the usage of land and water, the level of infrastructure development, the level of environmental conservation and other factors must be compared against averages for the country as a whole and for other countries. A diagnosis must be reached by a suitable method on these factors as well as the content of the survey data obtained in the country, the ability of local planners and other factors. This process must be implemented with an awareness of the opinions of the people being surveyed and a consensus must be reached between the planners and the Village Development Concept Study Committee (provisional name). The content of the diagnosis varies between cases, but the following elements are necessary.

i) Population

- Compared to the village's population assimilation capacity, is the population within the allowable scale for the village?
- Is there any distortion in the population breakdown by age and gender? Are the inflow and outflow of population within desirable limits? If they are beyond desirable limits, are there any corrective measures (limitation of the birth rate etc.) which should be taken?
- Are the rates of employment, unemployment and work outside the village within acceptable limits? If they are beyond desirable limits, are there any corrective measures (creation of large-scale new job opportunities etc.) which should be taken?
- Is the breakdown by industry of the working population within desirable limits? If not, are there any corrective measures (limitation of the birth rate etc.) which should be taken?

ii) Land and water resources

- Is there land available for future development?
- What is the potential for future development, considering the distribution of developable resources?

iii) Climate and hydrology

- Are the current crops suited to the climatic and hydrological conditions?
- Is there any potential for the introduction of new crops?

iv) Soil

- Are there any problems of soil erosion or soil maintenance?
- Are the current crops suited to the soil?
- Is there any potential for the introduction of new crops?

v) Economic level

- Is the economy at a desirable level? If it is at an inadequate level, are any wide-ranging improvement measures required?

vi) Industrial productivity

- Particularly with reference to agriculture, are there any problems with the level and stability of production, the quality of produce and the collecting and shipping system?
- If increased agricultural production is necessary, what are the major obstacles to be overcome?

vii) Industrial base

- Particularly with reference to industry, is development of the infrastructure base within a desirable range? If not, what are the most important points for improvement? (e.g. measures to overcome drought).

viii) Amenities in the living environment

- Is development of the living environment amenities within a desirable range? If not, what are the most important points for improvement? (e.g. improvement of mains water supply). What are the residents' complaints concerning hazards in their environment?

ix) The state of public infrastructure

- Is the level of development within a desirable range? If not, what are the most important points for improvement? (e.g. construction and improvement of main roads linking villages to major regional cities).

x) Environmental conservation and disaster prevention

- Is the level of development within a desirable range? If not, what are the most important points for improvement? (e.g. water pollution in rivers).

(4) Setting plans

a) Setting targets

Target values should be set to be attained by plan target years (e.g. ten years from plan inception). The setting of targets requires a consensus between the planners and the Village Development Concept Study Committee (provisional name). The types of targets to be set vary from case to case, but those listed below are generally applicable.

- i) Total population, workforce, working population, population employed in each industry, population employed in agriculture.
- ii) Average income per household, non-agricultural household income, agricultural household income.
- iii) Productivity in each industry, agricultural productivity.
- iv) Areas of land used in each application, area of farm land.
- v) Level of development of the living environment.
- vi) Level of public infrastructure development

b) Examination of strategies for attaining targets

The means of attaining each target must be studied and strategies clarified. For example, it should be decided which targets will be attained by projects based on the country government project scheme, which should be attained by Japanese aid projects, which should be attained through administrative guidance and which can be expected to be attained naturally if present trends continue. This study requires a consensus between the planners and the Village Development Concept Study Committee (provisional name).



c) Setting plans

i) Population planning

• Total population

Planned total population in the region should be calculated from the population by age group and gender at five year intervals, planned remainder rate (national average etc.), planned birth rate (national average etc.), rate of emigration from the region, rate of immigration to the region.

• Total working population

The planned population of working age by gender and age band the percentage seeking work can be used to calculate the planned total number of people in the region seeking work. The population commuting or working outside the region should be taken into account to calculate the total population seeking work in the region. What proportion of these people may be able to find jobs in the region must be considered in the industrial planning stage. The rates of employment and unemployment in that case can vary widely according to the states of industry and the economy in the country.

• Working population in each industry: Classify into primary, secondary and tertiary industries.

• Population employed in farming: Classify the portion of the population employed in primary industries who are employed in farming.

ii) Planning the usage of land and water resources

• Land use planning

The land use demands contained in plans for population, industrial promotion, living environment development, environmental conservation, disaster prevention and other aspects from each department should be totaled, and suitable land should be zoned for each application. Coordination between different needs will be needed where conflicts occur.

• Water use planning

As for land use, the demands from each department (industry, habitation, environmental conservation) should be totaled. Where the development of additional water resources is required, the possibilities should be studied and coordination between different needs will be necessary where conflicts occur.

These deliberations must proceed by repetitive trial and error through the proposal of

draft plans, the examination of costs and chances of successful completion, examination of inter-departmental priorities, feedback of the results of these deliberations and re-examination of the initial draft plan.

iii) Economic planning

Targets for average income per household and per farming household etc. should be examined to determine whether they can be achieved with the backing of industrial promotion plans in each branch of industry. Unattainable targets must be reconsidered.

iv) Industrial promotion plans

The targets for working population and income per household in each branch of industry should be examined to determine whether they can be achieved. Unattainable targets must be reconsidered. However, with the exception of agriculture, the content of industrial progress plans (for example, attraction of factories in manufacturing, plans for construction, production, employment, wages etc.) is not necessarily attainable in any country, even when the plans contain specific proposals based on accurate data. A flexible response is required, based on actual conditions in each case (for example, setting targets on the basis of current trends etc.).

In agriculture the main measures to achieve the future development called for in village development plans must be clarified. These measures include, for each main crop, planned cropped area, planned production and planned volume and value of shipments. When the key points for improvement in village development plans centered on progress in agriculture are selected, the planners must work together with the Village Development Concept Study Committee and the villagers, to exchange views on priorities and cooperate in deliberations (possible key points include the large-scale reclamation of farm land, major increases in the productivity of land that is already cultivated, radical improvements to irrigation and drainage facilities and major enhancements in distribution).

v) Plans to develop the industrial base

Plan the development of the production base required to achieve plans for the promotion of each branch of industry. In agriculture, plans are needed for each type of land for farm land reclamation, land development, irrigation and drainage development, farm road development, collecting and shipping facilities, and processing and storage facilities.

vi) Plans to develop the infrastructure of the living environment

Plan the improvement of the environment of hamlets and the development of facilities such as mains water supply and sewerage, parks, meeting halls, schools, hospitals, and places of worship.

Development already scheduled under the partner country's own development schemes should be incorporated into the plan.

vii) Plans to develop public infrastructure

Plan the development of roads, rivers, railways, ports, electrical power, communications etc.

Development already scheduled under the partner country's own development schemes should be incorporated into the plan.

viii) Plans for environmental conservation and disaster prevention

Plan the specific measures which will be necessary to meet conservation targets for atmosphere, water, soil and other aspects. The necessary specific measures must also be planned for the conservation of animal and plant ecology, and for the prevention of disasters.

Development already scheduled under the partner country's own development schemes should be incorporated into the plan.

d) Formation of project proposals and examination of priorities

The implementation of the above plans must be costed and formed into a number of specific projects. The budget for implementing these projects is, of course, limited. The approximate limit of cost must be calculated from the budget of the partner country's development scheme and the project budget from Japan. This total budget must then be divided between the development plans of each department. The development targets for each project schemes are limited, and it may not be possible to implement comprehensive development spanning all departments. Projects which have little realistic prospect of successful implementation should be excluded from the plans. The priorities of each project should be examined and a priority ranking assigned to determine the sequence of implementation.

(5) Plan checking and formation of a consensus between residents and the agencies concerned

a) Checking the administrative ability to run the project

The personnel in local governments who will be made responsible for administrative and for planning and implementing the construction and managing subcontractors, should be considered, and guidelines laid down for the content of problems and how to deal with them. If there is major difficulty with the progress of a project, the development plans for each department should be reviewed and revised.

b) Checking environmental impact

Investigate the overall impact of each project on the environment in the event of its implementation and clarify the interrelation between the nature and degree of the impact and targets which have been set for environmental protection.

c) Agreement with residents and with government agencies

Explain the plans in their final form to the residents and gain their approval. Similar agreements must be reached with the agencies involved in higher-level plans and other related plans.

(6) Miscellaneous

The discussion above is based on the assumption that it is comparatively easy to obtain the reference data required for devising plans and that the level of training of the planners from the partner country who participate in planning is comparatively good. It is also expected that in the future the partner country's own planners would be able to devise such plans by their own efforts. These conditions differ between countries and cases, so some adjustment to the approach will be required in each case in the light of the content and methodology of the planning process.

*2.6. Methods for transferring the techniques of construction*

(1) Introduction of technology to Japan in the past ("Wakon Kansai"; Japanese spirit combined with Chinese learning)

"Wakon Kansai" was espoused by Michizane Sugawara (845-903) who emphasized the assimilation of the knowledge imported from China while maintaining a Japanese spirit. The Japanese and Chinese languages were structurally completely different, so the adoption of Chinese characters was extraordinarily difficult for our forefathers. Nevertheless, the Japanese learned to write Chinese characters and even devised ways of expressing their spoken words using the sounds of Chinese characters, through the development of kana phonetic characters. The kana writings of the Heian Period are highly regarded now for their literary merit, but most of the writings from that time are worthless, in literary terms.

In 1853 (Kan-ei Year 6), the American "Black Ships" led by Commodore Perry appeared in Edo Bay and forced the opening of Japan, which had been a completely closed country for 200 years. Japan at that time was not an undeveloped country, but rather an advanced one, with a culture which had developed along completely different lines from Western culture. Education was prevalent at all levels of society and the literacy rate was said to be higher than in the majority of

European countries at the time (See p168 of "Japan", volume 20 of the Life History of the Human World Series, published in August 1969 by Time Life Books). This has enabled Japan to preserve most of its cultural traditions, or to put it another way, to retain its foundation in a deep spiritual culture, while readily accepting and assimilating western culture. Wakon Kansai was the approach taken in the "civilization and enlightenment" of the early Meiji era. This kind of superior cultural basis spurred the interest of Japanese workers in new western technology, and they were able to learn from it rapidly. Japan's commerce and banking sectors were well advanced at the time and their adaptability and flexibility enabled them to mesh easily with western practices. Before long, Japan had managed to catch up with and even surpass the West.

(2) Blending "Northern science" and "Southern science"

Over half a century has passed since the end of the Second World War (1939-1945). The rapid growth of population in Southern nations over that period, and the need to support it, has pushed the world to inter-racial North-South cooperation, regardless of East-West divisions.

In the late 1980s the number of Southeast Asian countries able to achieve self sufficiency in rice. This was the bright fruit of 40 years of North-South cooperation. It was made possible by the successes of international agencies and bilateral cooperation in extending technical and financial support in both hard and soft fields, such as the improvement and reclamation of rice-growing land, the introduction of high-yielding varieties and manuring practice. This input brought remarkable rises in the performance of the land in Southern countries, but at the same time the rising negative impact of development became increasingly clear. These ill effects included the fall in the international price of rice, population drift from rural to urban areas, and problems with the operation and maintenance management of large-scale irrigation projects which had been constructed.

Major, modern irrigation facilities made possible by the introduction of foreign capital were planned and designed with technical guidance from the donor side. Once the projects were completed, all the future operation and maintenance management of the giant dams, headworks, pump houses, and irrigation and drainage canal systems was left to the local government and the beneficiary farmers. In particular, the beneficiary farmers have been told that they themselves should carry out the operation and maintenance management of tertiary canals.

In practice it was rare for these facilities to receive adequate operation and maintenance management. Many cases have been reported where they received crippling damage within their design lifespan and were left unrepaired. Most aid agencies put these failures of operation and maintenance management down to inadequate administration by local government agencies, the lack of a budget for operation and maintenance management, lack of training in the management of

the facilities, lack of enthusiasm on the part of the beneficiary farmers for maintaining the facilities, and other problems. These are all real problems, but it is also true that "There comes nought out of the sack but what was there."

The following passage is an extract from an editorial which appeared in a special supplement to *Agricultural Civil Engineering* (then the magazine of the Society of Agricultural Civil Engineers, volume 15, issue 2/3, September 1943) entitled "Agricultural Civil Engineering Projects Throughout the Co-prosperity Sphere".

.... when directing agricultural development projects to meet necessary demands in the Co-prosperity sphere, consideration of water use problems must be separated from conventions and traditions for a while to produce a conclusion firmly rooted in scientific observation. This conclusion must then be adapted into a plan which gives full consideration to local conditions and peoples. With this preparation, trained technicians, wherever they are, should be able to meet the challenges of responsibility without major mistakes. ... If Japanese technology, which developed under very different conditions, is applied on the continent and Southern countries which are dominated by traditions and conventions, the success of the enterprise is very much in doubt without thorough scientific observation. .... (Unchanged from the original manuscript, by Kanichi Kachi, Professor in the Faculty of Agriculture at Kyoto University, taken from "Differences in Basic Observations on Agricultural Water Use in Countries of the Co-prosperity Sphere").

The Club of Rome report entitled "The Green Revolution" (B. Schneider, Simul Press 1987, pgs. 167-169) examines how development in the Third World should be evaluated in future and what we should think about it. It suggests that "Most developing countries are radically shifting their development strategies (and ideals). Rather than taking the pattern of large-scale economic development, as seen in developed countries, as their model, and pursuing catch-up policies to bring their own economies into line with those of developed countries, they are coming to emphasize endogenous growth which springs from the self-help efforts and participation of their own people".

Asia has many developing countries with a high level of market development. Their climate and natural features and their social and cultural makeup are at least closer to those of Japan than to those of the West. They want what Japan has experienced and what has sprung from Japan. Japan's agricultural sector is one of the last few major industries in the country which still has the potential for major growth. The applied technology we try to make use of and the processes we experiment with, are likely to fit the "selection criteria" of these other countries very closely.

In 1990 there was a fivefold disparity between standard wages in Japan and those in

advanced developing countries. With other developing countries, the disparity is as high as 15~20 times. This difference completely overturns Japan's established experience and common knowledge of the share of construction estimates taken by labor costs and the arrangements for planning and implementing construction. What seems to be obvious common sense in Northern countries does not necessarily hold true further south. The combination of rhythms, customs and ideas in the lives of people in Southern countries are naturally deeply rooted in the traditional and religious base of each country. This base has, in turn, been shaped by the history and character of the land. As a result, the criteria by which people judge and evaluate things differ between North and South. Northern science and ideas must be reconstructed to make them more suitable for the character of Southern countries (more rooted in the land) before they can be used there.

Even if people are participating in the construction process, this will be their first attempt in the field of technical cooperation and even if the work goes according to the plan at the time, problems can be expected to arise later and these must be overcome. Particularly in the case of directly managed construction, there are many aspects which must be considered. Can farmers' organizations be put to good use, how should the large construction expenses be paid to these organizations, how should disasters and losses during construction be dealt with, and how much sustained development can be expected if the construction in each village is completed within a year?

Moreover, there are not many precedents to refer to concerning the forms of people's participation in projects and the methods which can be applied to make the project yield sustained development. By gathering and examining cases of participatory projects implemented by developed countries in Indonesia and elsewhere, and by following this project as a case study for reference, we hope to make an important contribution to establishing planning methods, modes of implementation and concepts of cooperation which will serve for future rural development projects.

### *2.7. Methods for forming organizations*

What is the point of rural development projects overseas? When the aims are limited to, for example, construction of access roads, electrification, formation and reclamation of farm land, irrigation and drainage, land improvement, and the introduction of modern farming practices such as new rice varieties to increase production, the objectives are quite clear. Other measures such as improving the finance system for farm villages and strengthening cooperative organizations between farmers, are widely understood and accepted. Most of the rural development projects implemented in third world countries with aid from developed countries fit into the categories listed above. However, these individual projects are no more than that individual projects. They are not the sort of project which can be described as "village building".

Rural development projects find a direction in the wishes of the majority of the villages for how they want their village to be. They then present this direction to both the villagers and the local government and try to bring the two sides together to achieve it. We would now tentatively define this type of project as a kind of pilot project. In rural development project implemented overseas, it is difficult for the donor country to spread its aid over a very wide range, because of the personnel and the costs involved. Therefore, they tend to emphasize experimental pilot projects which can establish a model for future reference.

In this report, we hold that the following conditions are necessary for progress in overseas rural development projects as seen above.

- 1) Survey methods which can find out "What is the right direction for our village to go in?".
- 2) Villagers' organizations which can serve as a safety net.
- 3) The issue of links between local governments and villagers' organizations.

We will attempt to develop a general theory on these points, drawing on experience gained in Bangladesh.

(1) Survey methods for rural development projects overseas

The search for an answer to "What is the right direction for our village to go in?" is identified with "the key question". The "key question" is a phrase which first began to be used in research into farming systems. It referred to the stripped-down core problem of existing farm systems. A survey to find the key question in village development must deliver at least the following information on the selected village.

- Population breakdown by gender and age.
- Level of education.
- Breakdown of employment (jobs held by heads of households and by all workers).
- Behavior (use of time).
- Interchange between towns and villages.
- Junior high and high school education, leisure activities, festivals, markets, non-agricultural employment, working away from home, remittance of money.
- Household budgets of farmers.
- Social organizations in farm villages.
- Traditional social organizations, communal labor, leadership, agricultural cooperatives.



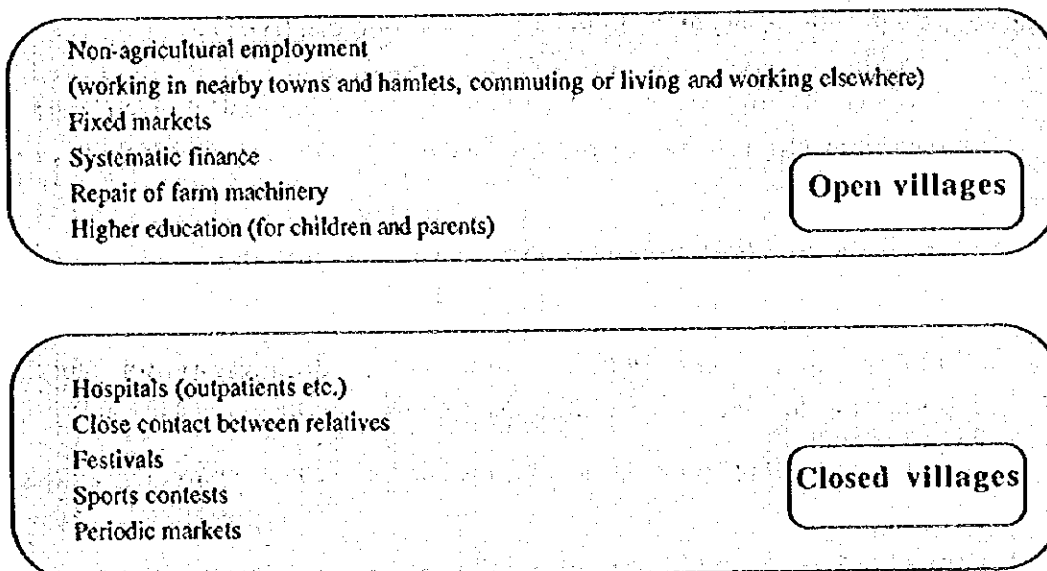
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- The state of rural development policies.
- The activities of local administration, specialist agencies, public companies and corporations, farming cooperatives and NGOs.
- Relations between local administrative and villagers.
- State of rural finance.
- Agricultural production and crop technology.

The above survey points were selected on the basis of the following premise: "Agricultural villages are space for agriculture, but that does not mean that everybody there lives on agriculture. Not everybody is engaged in agriculture, but everybody owns at least a plot of land with a house on it to live in". In fact, it is becoming quite difficult to find agricultural villages in Asia where more than half of the village's total income is derived from agriculture. These farm villages are groupings of people holding an extremely wide range of jobs.

Of the above survey points, "Interchange between towns and villages" is particularly interesting. Within the range of investigations in two villages in Bangladesh, the content of this "interchange" was as shown in the tables below. More open villages with close exchanges tend to fit in the upper table while the elements in the lower table were more in evidence in less open villages with weaker exchanges.

### Interchange between villages and the outside world



The linkage between villagers and local administration (or local politics) was not strong, but the points of contact were as listed below.

- Local administration (disaster relief, general administrative services, proof of collateral for finance, arbitration in land disputes).
- Primary education (through children, or in a child care capacity)
- Farming cooperatives.
- Policing and security.
- Party political activity (local elections).

Bangladesh is well known to have over 80% of its population in farm villages, but only 60% of households make their living from farming. Even though these 60% can be called farming families, some 30% of them own no land and live as farm laborers. In fact, if a landless farmer is classified as one owning less than half an acre (20 {ares}) of land, the proportion fitting this definition rises to nearly 60%. So how do small farmers and farm laborers make a living? According to the results of an investigation of the breakdown of employment among all the households of a farm village in {Tangile} district, 13% were weavers, 3% were processing {piri} tobacco, 9% were small traders, 26% were day laborers, including occasional farm laborers. Over half were occupied in these various odd jobs in the immediate area. A survey of a farm village in {Komira} district revealed that in nine out of ten households at least one member was a part-time farmer engaged in some kind of non-agricultural work to earn extra cash.

Under such complex conditions it is very difficult to find out what is the key question. Different means of arriving at the key question can probably lead to very different projects. For example, for a single village, any of the following approaches could be taken.

- 1) Project planning can place focus on rural development through infrastructure developments such as expansion of cultivated land, irrigation facilities and land development.
- 2) Alternatively, simple, clear-cut infrastructure improvements can be made, such as electrification and the opening of road links to towns.
- 3) Distribution problems, which obstruct the input necessary for modern farm management, can be taken as the prime concern.
- 4) The creation of opportunities to access public finance may answer the hopes of many people.
- 5) Projects focusing on improved administrative services could be the most desirable. These would include improved school facilities, preservation of the health of humans and livestock, physical improvement of periodic markets etc.
- 6) The maintenance of public order and the democratization of village politics could be

taken as the most important issues.

In the past, the key questions derived from the survey methods familiar to those working in agricultural civil engineering tended to lead towards public works projects and the improvement of agricultural productivity. The greatest common factor between key questions found for village development, lies in administrative services and a better way of life, rather than in better infrastructure and agricultural productivity. The key to finding what the real needs are lies in the survey method. A standard survey method for use in overseas village development is needed urgently.

(2) Main implementing bodies and the recipients of village development

How should the recipients of village development be viewed? In this it is quite natural for the approach of village development as ODA to differ from that taken by NGOs.

The NGO approach selects groups from within the village (usually the economically weaker strata) and organizes them into unions. The NGO consciously bypasses local government and administration as well as the traditional leadership of the village in directly assisting the formation of the union. This attitude is based on an awareness of the problems of farm village society, which is divided between the "haves" and the "have-nots" in a master and servant relationship, also called the patron-client relationship. The leaders of local government are on the patron side together with the traditional leaders, and both are perceived as the enemies of the oppressed. In countries such as Bangladesh, which have experience of socialist ideas, this kind of sentiment is particularly strong. Whether this analysis is correct or not, individual unions go into decline as soon as their direct support from the NGO ceases, unless they have already formed into some kind of larger federation. This method is the one best able to inspire the enthusiasm and goodwill of young people who will devote themselves to the work of the NGO, but in many ways this approach is unsuitable as a model for village development.

The success of South Korea's {Semaury} movement (new village movement) is attributed by some to the selection of the {Mauru} as the development unit (the opinion of Mr. Toshihiro Yogo, the UN Regional Development Center). The Mauru are hamlet units very close to natural villages. They have traditional leadership and the people of the Mauru know each other and have personal connections with the leaders. The Semaury movement began when one bag of cement, which was in a production glut at the time, was handed out to each household in these hamlet units. As one bag of cement was not enough for each household to do anything significant individually, the inhabitants met to discuss the situation. As a result, the cement was used to pave the area around the well where the women gather to do laundry. This gave people the idea of working together and they produced a succession of such ideas which spread to become a

nationwide movement for village development.

There are four things to be learned from the Semauni movement.

- 1) The development units should be comparatively small social units which can easily debate and reach a conclusion.
- 2) The leadership of that social unit should be respected.
- 3) Village development should begin from measures which will improve the lives of the greatest number of the people of the village. It should not be taken to mean simply greater agricultural production.
- 4) The line taken by the local government should be used and built upon.

In a similar approach, agricultural research, that is to say, the survey in search of the key question, equates a number of key questions. How can this idea be applied? If foreigners go directly into a village to implement the key question, there is no practical difference from the work of NGOs, even if the budget is provided from ODA. Looking at Bangladesh as an example, there are two forces which have been able to reach far deeper into farm villages than NGO action or local administrative services. One is a political group (a political party) and the other is the private sector in the form of peddlers, brokers and regular market traders.

In Bangladesh, officially-directed agricultural development in the past has been ineffective and, following reflection on that failure, excessive expectations are now placed on private sector. As an ODA agency we cannot take either the private sector or the political groups as our partners in village development.

Village development is clearly the job of the administration. Particularly, by the nature of the task, it should be handled as a continuous service of the local administration, without excessive influence from the political climate. Therefore, in implementing rural development projects overseas, we are bound to pick the local administrative system as our counterpart, regardless of how efficient or inefficient it is and regardless of its level of administrative ability.

A further issue is what level of social grouping should be considered to be the specific recipient of village development. We cannot allow ourselves to do as NGOs do and create new farmers' organizations at will. It is only proper to use existing organizations and leadership to the full, and nurture them and this is our minimum condition for operation.

(3) Linkage between the implementing bodies and the recipients in village development (The Current Situation in Bangladesh)

So what are the problems with the implementing bodies and the recipients in village development in the case of Bangladesh? If there are problems, how should they be solved? Let us examine the answers in the specific case of Bangladesh.

One of the key questions found in Bangladesh (the most important key question) is that the unions which are the grassroots structures of local administration and the autonomous organizations in the villages are cut off from each other, systematically, psychologically and often physically (in cases where there are no roads or other links between the two). Let us look in more detail at what that means.

a) Bangladesh's system of local administration

The foundations of the system of administration in Bangladesh were formed during the British colonial period when it was one state of India, but since then the system has been twisted around arbitrarily by the central government on various occasions. At present it is largely as shown in Table 1-1.

Table 1-1 Changes of Local Administration System in Bangladesh

Before 1982		After 1983 (average population)	
Local administration block		Local administration block	
Division	4	Division	4
District	19	District	21
Subdivision	55	Subdivision	64 Ca. 1,640,000
Thana	435		
Autonomous administration block		Autonomous administration block	
Union	4,401	Upazila	460 Ca. 228,000
		Union	4,401 Ca. 24,000

Note) Figure are number of blocks.

Until 1982 the district was the core of local administration, with district governors being dispatched from the center to these posts. There were also circuit officers within subdivisions, who were officials dispatched from the center. The circuit officers supervised farm village administration through the chairmen of unions. The unions are autonomous administrative organizations, which were set up relatively early, in 1985. They comprised one chairman and nine members who were chosen through normal elections. The Union Council, which was made up of union chairmen, may initially have been a gathering of the representatives of villages, but by now it has grown to approximately 24,000 members. Rather than a gathering of village based representatives it should now be regarded as a grouping of influential people and politicians from

the regions. The Union Council only has a single secretary because it has traditionally had no clerical structure.

Thana were the districts under the authority of police stations. The Chokidar are village self-security organizations at the union level which are separate from local administration lines and come under the jurisdiction of the Thana. There are also land tax offices at the subdivision level which assess and collect land tax in Mauza units.

From 1983 the Ershad government changed the name of the geographical areas which were called Thana, the local unit of grassroots democracy, to Upazila. The Upazila was made the most important division of local politics and administration and the chairmen were chosen by ordinary election. An Upazila Council was established with the former union chairmen as the members. At the same time, the administrative and legal functions of subdivisions and the police functions of Thana were subsumed in the Upazila council, placing them under the jurisdiction of the Upazila chairmen in a bold reform move.

At the end of 1990, at the beginning of the Khaled Zia administration, the structure of local administration was changed again. This time, the authority of the Upazila chairmen was reduced and the functions of Upazila Development Officers (UDOs, who are government officials) were used once again.

b) Village organizations in Bangladesh

The units of social organization in villages are, from the smallest, as follows:

Khana: Households.

Bari: An extended family group in which parents and their sons' households build a shared building around a courtyard.

Para: Pseudo-familial neighborhood groups, normally comprising tens of households.

Gram: Hamlets of 100-300 households with a standard population of 1,000.

Mauza: Hamlets which are the units for land taxation, commonly the same as a gram.

A Union is formed from 10-30 Grams. The representative of a Para is a traditional, unofficial leader called a Matabore and a number of Matabores together in a Gram can form into a legal organization called a Pichar. The Pichar is granted the authority to adjudicate on undesirable behavior on the part of villagers on the basis of moral example. Other than these bodies, there are

agricultural cooperative unions which are represented by union chairmen and managers, but these are a different category of leaders from the Matabores. The Imams in charge of the mosques are also leaders of a sort, but they lack real secular authority.

c) Service functions involved in rural development

As was mentioned above, the end functions of the line departments involved in agriculture and agricultural development are largely based in the Upazila, but public health nurses (including male nurses), family planning public health nurses, veterinarians and agricultural reform teachers have extended their services as far as the Unions. The Bangladesh Rural Development Board (BRDB) has two officers attached to each Upazila, but it has none in the Unions. The agricultural organization which is famous as the (Komira) model was born in Komira and is now developing throughout the country. The tens of thousands of Mauza across the country are organized into unit agricultural associations (XSS), but most are in fact only groups for financial mediation in name only. Other than these, there is the Bangladesh Agricultural Development Corporation (BADC) which used to cooperate with agricultural cooperative organizations to bore deep tube wells. It had branches at the level of the former Thanas and the Upazilas, but its functions have now largely ceased due to a policy of privatization.

d) Isolation between local administrations and autonomous village bodies

Bangladesh relies on foreign aid for 40% of the national budget and over 90% of the development-related budget. Only a tiny portion of the budget is allocated to rural development and, as was mentioned above, that money is directed through various channels to be spread so thinly throughout the country that its effects are practically indiscernible. In fact, one visible project for village development is the so-called "Road for Works" project, which gives widows and other poor people a tiny ration of flour in return for simple work on road mending. Another project is the distribution of meager supplies of condoms by family planning public health nurses. There is little prospect of such imperceptible efforts arousing the interest and enthusiasm of villagers. Between administrative inefficiency and the lack of interest and the discouragement of the villagers, it is fair to describe that the state of village development is weak like turning of a creaking wheel which seems to be in danger of stopping altogether. As a result, the only visible projects are the isolated construction works of line departments. These include the construction of irrigation canals, boring of tube wells, flood prevention, building farm roads and electrification of farming villages, and they can be seen as the only contribution anyone makes to village development.

Most of the agencies involved in rural development, that is to say, the local administrations, the line departments, public companies and corporations and agricultural cooperative organizations, are placed in Upazila, which are really the terminal organization for all

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of them. Although the command system extends as far as the Unions, they have little administrative processing ability and in most cases there are no functions at the Union level. Furthermore, the various agencies mentioned above have mechanisms to allow their mutual consultation at Upazila level, but at the Union level they must work in isolation.

While the autonomous village organizations are active, the Matabores who have the greatest power and authority do not necessarily concern themselves with real-world development problems. Instead, the new leaders who want to make shrewd use of the rights to new development are viewed as little more than con-men. The village leaders may not be able to get involved in Union administration as delegates, which is a flaw of the system. As was mentioned above, there are systematic, psychological and physical discontinuities between the Unions and the villages.

- (4) Prospects for links between the implementing bodies and the recipients in village development

The following are three key issues suggested by a small joint research project (JICA cooperative research project) entitled "Experiments in Rural Development in Bangladesh".

- 1) To bring out latent skills and build them into a system.
- 2) To boost the interaction between towns and villages and build it into a pillar of village development.
- 3) To build models of linkage between local administrative service systems and autonomous village organizations.

The kind of organization-building described below is now beginning in an effort to test these three ideas.

- a) At the Upazila level

Advisory committees will be built around Upazila Development Officers (UDOs) and Rural Development Officers (RDOs) of the BRDB. These committees will give comprehensive guidance and endorsement for our village development work. Some level of authority will also be requested for them.

- b) At the Union level

Staff dispatched from the BRDB will be made "project masterminds" and given authority as such. They will be given the post of secretary of the Union committee to support the work of the committee comprising all those involved in projects (Union Council members for development,



Union-level officials of line departments, representatives of related public bodies, representatives of NGOs working in the Union and the representatives of experimental villages. This committee will be a forum for discussion of all key questions to reach a consensus and endorse the implementation of the works originating in each key question.

c) At the Gram level

Village Development Committees will be established with the Matabores as the representatives of the villages. This committee will engage in practical discussion of all key questions and approve the groups which are to become the recipients of the experimental projects we implement. Of course, it will be very important for the recipient groups to be in regular contact with us in advance so that we can reach a common understanding with them.

Once these preparations have been made, all projects which are to be implemented will be submitted upwards from the Village Development Committees to be endorsed by the Union Development Committees and Upazila Advisory Committees. The Union Development Committees will then become the implementing bodies to carry out the projects. However small these projects may be, their proper passage through this process is an essential condition for their implementation. This process is the model that will build the organization required for rural development projects, so that after we leave the experiment at some stage in the future, the various bodies involved will be able to carry on.

This chapter has gone no further than taking some small projects studied in the field in Bangladesh as illustrative examples. We have gone no further because in each country the character of the local administrative and the social organizations in the villages will be different, so it is beyond our power to put forward a universal theory for "The Organization of Rural Development in Asia". Compared to the ASEAN countries, Bangladesh is at a far lower level of development, and the country's political situation is rather volatile, so its example cannot be extrapolated far with any reliability. Nevertheless, one general point which can be argued is that villages will always have some form of solid autonomous organization, and in any country there will be people who want to contribute to village development and groups and administrative structures composed of such people. Those who say no such groups and people exist have simply not looked closely enough. The best role foreigners can play when participating in rural development projects is to do their best to find the organizations which are typical of villages and discover the enthusiastic and committed individuals, groups and officials. The foreigners should then clear away any obstacles hindering the work of these people and groups, and provide a convenient environment in which they can work effectively.

We can do the following to achieve this goal:

- a) Carry out an appropriate level of survey of farm villages.
- b) Define the key questions on the basis of the surveys.
- c) Find the farm village organizations which will be the recipients of development based on the above key questions (these may be traditional organizations or new, modern organizations geared to economic development).
- d) Link the organizations we find to the local administrative system.
- e) Provide peripheral support for other rural development projects unique to the area.

In village development, it is the villagers themselves who are the experts, while the officials concerned in local administration are semi-experts or semi-laymen. The foreigners involved in aid are the real laymen. This reversal of perceptions is very important. My point is that what the laymen can do best is to create the conditions in which the experts can best do their work.

#### *2.8. Review of traditional farming practices and the creation of new technical systems from that review*

Multiple cropping and comprehensive pest management have recently been attracting considerable attention as new farming techniques which aim for harmony with the environment. These are technique systems which make use of the ecology of cultivated land. They are the antithesis of modern farming, which relies on large-scale operations with single crops and large amounts of chemicals. These are not new ideas. They are technique systems which have been assembled on the foundation of the experience and attitudes of traditional farming. They can now be looked at again in the light of the systems of modern science in an endeavor to achieve harmony with the environment under a comprehensive technique system.

Israel's research into desert development is also being widely studied. Research of ancient Nabatean farming methods, which tried to find out how the ancient Nabateans achieved the productive strength to sustain their culture in the center of the Sinai desert without irrigation, discovered the method of water and land usage known as "Rain Harvesting". Given a very low amount of rainfall, this method operated within that restriction, trapping moisture in the soil through exhaustive vegetation management and soil correction. This approach is now being used on an experimental basis to refine it into a practical greening method around the edges of deserts in Israel and also in North Africa.

The approach here is to look at the traditional farming methods of a region and find those agricultural production methods which harmonize best with the region's unique environment. This

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approach merits close study and reflection on the aid given to developing countries so far, which has tended to do no more than force uniform agricultural methods on them.

### *3. Tasks for implementation of agricultural and rural development project*

The agricultural and rural development project has two main objectives. One is to provide for the basic needs of rural people (particularly the poorest), and improve the quality of life by helping people to escape from poverty, creating employment opportunities, increasing agricultural production, and making improvements in areas such as medicine, public health, education and housing. Another one is to encourage rural people to participate spontaneously and independently in the development process, to achieve development at the village and hamlet level which is evenly distributed on the national and regional scale. This approach creates an organized framework which can effectively bring together government efforts and the energy of the people. The tasks on the implementation of agricultural and rural development project, already mentioned before, can be arranged as follows.

Regard to the political task on the agricultural and rural development, the development requires a wide range of projects to build the agricultural base, supply production, material and services and other social and consumer services. Such projects involve a large number of government agencies. The task of rural development administration is to coordinate the efforts of these agencies so that they work together synergistically while retaining their own functions. Looking at the approaches taken to this task in various countries, one approach is to establish an independent agency to adopt and implement the special rural area development method which combines many diverse functions. Another is to set up a mechanism for inter-agency coordination.

In general, the traditional role of regional administration is to preserve the peace and stability of the region while obediently implementing the policies of the central government. With the introduction of rural development policies, however, the role of regional government expands considerably. For example, one aspect of regional government's role is to accurately reflect the village-level needs and demands in the implementation of rural development projects at the regional and village level. In particular, if the planning of rural development projects in the field is to be effective, it requires detailed and responsive work at the grassroots administrative level.

Many lessons and tasks have been brought out from the process of precedent agricultural and rural development project.

The first point is that rural infrastructure development project, which have become largely systematized, focus on the creation of hard production infrastructure and the creation of infrastructure and amenities in the living environment. As administration-led village development based on public finance, they are rural development based on reliance on others. Reflection on

this situation has led to the emergence of the village development movement as a self-help movement by the local people themselves. Real stimulation and revitalization of farming villages can be achieved by a combination of these two approaches. The second point is that production centered environment. This is because environmental impact assessment is not always conducted properly and also because of the confusion over the ownership of resources which are evaluated indiscriminately. In particular, the distribution of the benefits of development is inequitable, with the profits derived from exploitation of the environment in the name of progress often being concentrated in the hands of a small proportion of the population. This situation creates complex conflicts between beneficiaries over the ownership of the profits.

Development within the range which is compatible with the renewal of the environment is a precondition for the sustainable development of agricultural production. In the short term view, the form of development always forces burdens onto the environment, but while agricultural production is founded on pillage of the environment it will always generate major problems in the long term. Therefore, the methods and procedures of environmental assessment must be established first of all.

Regard to the study tasks on the agricultural and rural development, there are many issues as follows. There are many tasks about how to create employment opportunity in agricultural and non-agricultural sectors, situation of the balance of agricultural labor in and around rural villages, group activities through agricultural cooperative, situation of financing, problems on the system and effect of agricultural extension service, education and training opportunity, farmer's participation to commercial activity and etc. In addition to the technical matters of agriculture, agro-economy and management, the social matters of human relations, leadership, social structure and social uneasiness are indispensable to be studied.