

PROJECT TITLE : Integrated Rural Development
Project at Lower North Thailand

REQUESTING AGENCY : Office of Accelerated Rural
Development,
Ministry of Interior

PROPOSED SOURCE OF ASSISTANCE : Japan

1. BACKGROUND INFORMATION AND
JUSTIFICATION FOR THE PROJECT

- (1) The office of Accelerated Rural Development (ARD), Ministry of Interior is responsible for infrastructure development comprising engineering and socio-economic development within 72 provinces out of 73 provinces. Its main purpose is to link the economic and social gap between urban and rural community, to solve problems of unemployment and insurgency and to raise the standard of living of the villagers. Scope of works within 72 provinces are carried out and supported by 6 ARD Field Operation Centers located in Lampang, Khon Khaen, Nakornrachasima, Supanburi, Prachuabkirikhan, Songkhla.

ARD Field Operation Center in Lampang is in charge of providing the assistance and support for 13 Northern provinces covering an area of 140,877.2 square kilometers, by promoting and executing several kinds of infrastructure development projects such as rural road network, water resources and water supply, etc.

The Kamphaeng Phet Sub-center was established under Lampang ARD Field Operation Center in 1986. The construction team which was separated from ARD Field Operation Center in Lampang comprises of 6 civil engineers, 1 surveyor, 42 operators and 23 drivers. The Sub-center is assigned to be responsible for road and water resources construction in the areas of Tak, Sukhothai, Phitsanulok and Kamphaeng Phet.

The situated land for work center construction covering the area of 231 rai at Tambol Nongpling, Amphoe Muang, Kamphaeng Phet Province was approved by the Minister of Agriculture.

- (2) Lower North Thailand consisting of four (4) provinces of Kamphaeng Phet, Sukhothai, Tak and Phitsanulok locates at the area of transition to the vast central plain from Northern mountainous area of Thailand. The product of rice cultivation at small lots of paddy field scattered around this hilly area remains at lower level than the product at fertile paddy field at central plain, and therefore, the farmers living in this hilly area engage in supplementary occupation for more income such as cattle and poultry raising or seeking for labour hired.
- (3) There still exists a lot of virgin forest around this hilly area and many of these forests are designated to be the forest reserve. Trespassing the forest reserves is often recognized as social problem in the lower north Thailand, It is the governmental policy to reinforce the reservation of such forest against any kind of deforestation.

- (4) The development of oil-field at southern extent plain of Kamphaeng Phet helps promoting a rapid economical development in this vast fertile area and the gap of economical and social infrastructure developments between said hilly area and this central plain area is considerably expanding.
- (5) Under such circumstances, ARD has launched to formulate an integrated rural development project, in order to achieve a complete cycle of rural development, of which main objective is to improve living standard of villagers resulted on solving poverty, unemployment and insurgency in rural areas through provision of basic infra-structure, promotion of farmers' cooperatives and education of modern technic.

The particular backward rural areas in need of immediate development have been selected at the four provinces as the project areas of the integrated rural development formulated by ARD and major items of basic infra-structure to be provided are rural roads and bridges, small scale water resources development for agricultural and domestic uses including dams and ponds, irrigation facilities, on-farm facilities, deep and shallow wells, etc.

- (6) Furthermore, ARD has its own plan to strengthen the Kamphaeng Phet Sub-center as one of Technical Services and Operation Center through providing motor pool for construction machinery and work shop, to cope with villagers' request and to promote the said project in the lower North Thailand. This center will also provide engineering and socio-economic development assistance as well as to serve training and technical services for villagers, and local officers of ARD and line agencies concerned.

2. DETAILS OF THE PROJECT

2.1 Program Goal

To conduct the feasibility study on integrated rural development in the backward villages where the infra-structures are still urgently needed within the four provinces. The feasibility study will be proceeded based on :-

- to generate villagers' income by promoting more agricultural products.
- to get rid of drought and poverty in rural areas as well as to conserve the forests from trespassing.
- to create new employment opportunity.
- to improve the quality of life of farmers by providing more social infra-structures.
- to generate farmers' cooperatives and growth of youth groups through education.
- to create peace and equality in rural areas.
- to improve the water and farm management and on-farm irrigation technic through training farmers.

2.2 Objective of the Project

- (1) To decrease economical development gap between rural area and urban area.
- (2) To prepare readiness of or develop human resource in term of creating sense of belonging and of self-help in order to make the rural people be aware of maximum utilization in the ARD infra-structure programmes.

- (3) To develop social infra-structure in rural area.
- (4) To provide agriculture and irrigation facilities for increasing agricultural products and promoting crop diversification.
- (5) To reinforce the forest reservation.
- (6) To execute a well-balanced integrated rural development scheme as a model project and to promote successive development schemes in similar rural areas.

2.3 Conditions expected at completion of project

Either at completion of the project or during the course of the project study, several priority project(s) will be formulated in line with the concept of integrated rural development for their further implementation. And the implementation of the priority project(s) will directly confer benefits on the respective villagers as well as have demonstration effect to the other rural areas as a model.

2.4 Recommended source(s) of information and data related to the project

- Provincial Plans for the target provinces
- NESDB
- The Office of ARD
- Chulalongkorn University
- Department of Land Development

2.5 Duration of the project

The duration of the project is planned as follows :

Feasibility study - 8 months commencing at 1989

Detailed Design - 9 months commencing at 1990

Implementation - 2 years commencing at 1991

Taking into consideration the climatic condition in the area as well as beginning of Thai fiscal year, the feasibility study will be most preferably implemented from March 1989 to October 1989.

2.6 Project areas

The Project will be implemented within the four changwats (provinces) of Kamphaeng Phet, Sukhothai, Tak and Phitsanulok as study area in the lower North Thailand (see Fig. 1 and Appendix-1).

The backward villages in need of immediate development are selected in these four provinces as the project areas in which most of people are economically deprived and the areas are poor in basic infra-structures and lack of facilities of water resources utilization and irrigation (see Appendix-2/NESDB Data).

2.7 Project work plan and activities

The contents of integrated rural development project are :-

(1) Provision of basic infra-structure

- to secure water resources, through construction of storage dams, ponds, and weirs, etc.,

- to construct irrigation facilities,
 - to construct on-farm facilities.
- (2) Provision of facility for environmental arrangement
- to construct rural/access roads,
 - to construct rural water supply system, including digging wells,
 - to provide rural sewage treatment system,
 - to construct community center.
- (3) Establishment of rural development center
- to educate and to train the project engineers and technicians of ARD in engineering of water resources development, irrigation, on-farm development, road, bridges, underground water development, water supply and sewage, etc.
 - to educate and to train farmers in modern technic of management, operation and maintenance of facilities of water resources development, irrigation, on-farm development and farming practice.

2.7.1 Detailed work plan or project activities and scope of works.

A Feasibility Study on the project areas will be carried out :

- 1) To made survey and investigation, and to collect data and information in the project areas with respect to the following items :-

- Topography
- Meteorology and Hydrology
- Geology
- Water resources
- Soil and Vegetation
- Forest reserves and trespassing
- Land use
- Agronomy
- Irrigation and Drainage
- Agro-economy
- Socio-economy
- Rural institution and organization
- Rural intra-structure
- Construction materials
- Others

2) To make project formulation consisting of the following items :-

- (1) Land use plan
- (2) Water resources development plan
- (3) Irrigation and on-farm development plan
- (4) Rural infra-structure plan
- (5) Institutional set-up plan
- (6) Recommendation of training facilities and equipment
- (7) Preliminary design of necessary facilities

3) Project cost estimate

4) Technical, social, economic and financial analysis on the project.

5) Implementation program

2.7.2 Time schedule of project activities

Expert

Following experts may be required for study of the Project

	<u>man-month</u>
- Team Leader (Project Planning)	8
- Rural/Community Development Specialist	6
- Hydrologist	4
- Irrigation Engineer	4
- Dam Engineer	4
- Civil Engineer	4
- Hydrogeologist	2
- Agriculturist	2
- Agro-economist	4
- Cost Estimator	2
<u>Total</u>	<u>40</u>

Work Schedule

The project study will be carried out in accordance with the work schedule as shown in Fig. 2.

3. DETAILS OF THE IMPLEMENTING/OPERATING AGENCY

3.1 Agency for Implementation, Operation and Maintenance

The Office of Accelerated Rural Development (ARD), Ministry of Interior, will be the executing agency and coordinator of the project. ARD will work in cooperation with other line agencies concerned within 5 main ministries at the local level.

Details on background and organization of ARD are as shown in the Attachment-I.

3.2 Implementation Schedule

ARD intends to complete the study within 1 year as shown in Fig. 2.

4. ASSISTANCE REQUESTED

4.1 Expert

<u>Field of Operation</u>	<u>Total No. m/m</u>
1. Team Leader (Project Planning)	8
2. Rural/Community Development Specialist	6
3. Hydrologist	4
4. Irrigation Engineer	4
5. Dam Engineer	4
6. Civil Engineer	4
7. Hydrogeologist	2
8. Agriculturist	2
9. Agro-economist	4
10. Cost Estimator	2
<u>Total</u>	<u>40</u>

Justification for requesting experts

To avail the engineering services for the Feasibility Study, approximate 40 M/M of experts inputs is required as detailed above.

Technical knowledge in a field of agriculture, water management, on-farm development and other social development is also required. Assignment schedule is as indicated in Fig. 2.

4.2 Fellowship

To enhance the transfer of knowledges and overseas training through the execution of the proposed project, Thai counterpart will be given fellowship program in Japan at about six (6) man-months.

The officials trained in Japan will take charge training programs to project staffs and farmers.

<u>Field of study/training</u>	<u>Total (M/M)</u>
* Project planning	1
* Rural development	1
* Water resources development	1
* Irrigation	1
* Work shop	1
* Trainer	1
<u>Total</u>	<u>6</u>

4.3 Equipment

<u>Description of equipment item</u>	<u>Quantity requested for each item</u>
* Electro-exploration Equipment	1
* Drilling Equipment	1
* Personal Computer	1
* Copy Machine	2
* Transit	2
* Level	2
* Drafting Equipment	2

5. THAI GOVERNMENT COUNTERPART CONTRIBUTION

5.1 Personnel and offices

ARD will provide necessary office facilities both at Bangkok and project site. Counterpart personnel assigned for the project is to be provided, but not limited to, as the followings.

Staff/Personnel participating in project

	<u>Position</u>	<u>Qualitification (Level)</u>	<u>No.</u>	<u>Period/m.*</u>
(1)	Project Coordinator	6	1	8
(2)	Rural Planning Officer (Agriculturist)	5	1	4
(3)	Civil Engineer	3-5	1	4
(4)	Training Officer	3-5	1	4
(5)	Mechanical Engineer	3-5	1	4
(6)	Surveyor	1-3	3	6
	<u>Total</u>			<u>30</u>

5.2 Budget

Counterpart budget to be prepared by ARD is estimated as follows :-

<u>Description of Government Counterpart Contribution</u>	<u>Total Contribution</u>	
	<u>already available</u>	<u>to be requested</u>
(1) Office Supplies	-	25,000
(2) Vehicles Operation Cost and Maintenance	-	120,000
(3) Public Facilities	-	-
(4) Perdiem/Lodging/ Transportation	-	160,000
<u>Total</u>		<u>305,000</u>

5.3 Topo-survey and geological and soil investigation

The following survey and investigation works shall be undertaken by ARD.

- Geological Investigation

- * Boring at Dam Site
- * Well

- Laboratory Testing

- * Soil Mechanic

- Topographic Survey

- * Road ----- (1:500)
- * Dam Site
- * Canal alignment (Longitudinal)
- * Operation Center Site

Fig. 1 INTEGRATED RURAL DEVELOPMENT PROJECT
AT LOWER NORTH THAILAND

PROJECT LOCATION MAP

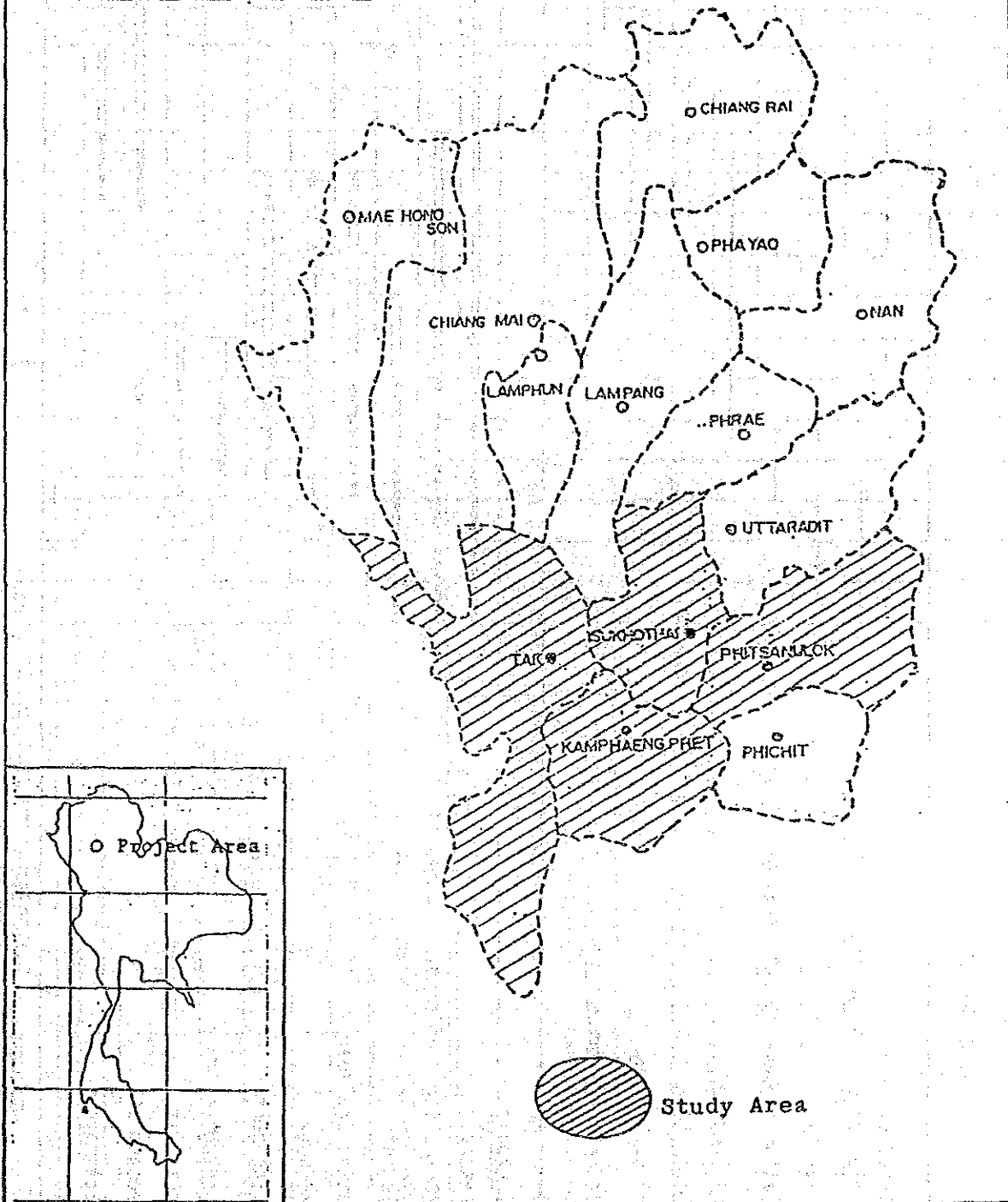


Fig. 2 WORK SCHEDULE

DESCRIPTION	Month											
	1	2	3	4	5	6	7	8	9	10		
Feasibility Study												
1. Collection of Data & Information												
2. Field Survey												
3. Formulation of Development Strategy												
4. Project Planning												
5. Cost Estimation												
6. Project Evaluation												
7. Implementation Program												
Manning Schedule												
1. Team Leader												
2. Rural/Community Development Specialist												
3. Hydrologist												
4. Irrigation Engineer												
5. Dam Engineer												
6. Civil Engineer												
7. Hydrogeologist												
8. Agriculturist												
9. Agro-economist												
10. Cost Estimator												

Thailand

Japan

Appendix 1. General Information on Study Area

Land Use ^{1/}	KP. Phet	Sukhothai	Tak	Mitsamulok	Total
1. Total Land (ha) %	860,750 (100)	659,610 (100)	1,640,660 (100)	1,081,590 (100)	4,242,610 (100)
2. Forest Land (ha) %	258,570 (30)	282,790 (43)	3,260,770 (77)	304,000 (28)	2,106,130 (50)
3. Farm Holding Area (ha) %	427,580 (50)	317,030 (48)	98,520 (6)	408,000 (38)	1,251,130 (29)
4. Unclassified land (ha) %	174,600 (20)	59,790 (9)	281,370 (17)	369,590 (34)	885,350 (21)
Demography (1985) ^{2/}					
1. Total Population	621,243	566,915	318,844	735,052	2,242,054
2. Population Density (per km ²)	72	86	19	68	53
3. Population Growth (1984-85)	-1.2%	1.2%	2.3%	1.7%	0.8%

Note : ^{1/} Agricultural Statistics of Thailand, Crop Year 1985/86 Center for Agricultural Statics, Office of Agricultural Economics, MOAC

^{2/} Statistical Summary of Thailand 1986 National Statistical Office

Appendix-2 Backward Villages/NESDB Data

The particular area of development can be identified in accordance with problems and needs as stated in the Sixth National Economic and Social Development Plan (1987 - 1991) as follows :

1. Backward areas in need of immediate development are defined as areas in which most of the people are economically deprived and which face 4 or 5 or the following problems: inconvenient communications, insecure land tenure, low production or incomes, poor health, shortage of water for domestic consumption and lack of knowledge concerning methods of self-improvement. There are 5,787 villages throughout the country of this type: 1,065 villages in the north, 2,684 in the northeast, 954 in the central region and 1,084 in the south.

2. Middle-level areas, the second priority in development, are areas in which most people are economically deprived and which are afflicted by 1 to 3 of the preceding problems. Such areas comprises 35,514 villages in total: 6,672 in the north, 17,990 in the northeast, 5,731 in the central region and 5,121 in the south.

3. Progressive areas are those in which most of the people have high production potential; such areas enjoy reasonably favourable economic conditions and suffer from few of the problems mentioned above. There are 11,621 such villages throughout the country: 3,079 in the north, 1,845 in the northeast, 6,221 in the central region and 476 in the south.

YAMPAEIGRE:

Amphur	Transportation Problem	
	First priority for dev't	Second priority for dev't
1. Muang	6	1
2. Khanu Koraleksaburi	14	2
3. Klong Khiung	17	1
4. Phran Kratai	20	2
5. Sai Ngan	16	1
6. Klong Lan	4	1
7. Lan Krabu	13	3
	$\Sigma = 90$ m.	$\Sigma = 12$ m.

Amphur	Water Resource Problem			
	First priority for dev't		Second priority for dev't	
	for domestic consumption	for agriculture	for domestic consumption	for agriculture
1. Muang	43	27	24	26
2. Khanu Koraleksaburi	54	41	30	26
3. Klong Khiung	48	23	23	18
4. Phran Kratai	29	18	30	23
5. Sai Ngan	21	22	11	7
6. Klong Lan	14	11	18	12
7. Lan Krabu	14	19	15	10
Σ	223 m.	156 m.	152 m.	122 m.

SUKHOTHAI

Amphur	Transportation Problem	
	First priority for dev't	Second priority for dev't
1. Muang Sukhothai	8	6
2. Kong Krailat	24	11
3. Khiri Met	12	3
4. Thung Salien	8	2
5. Ban Dan Lan Hoi	6	3
6. Si Satchanalai	2	2
7. Si Sa Rong	12	4
8. Sawankhalok	6	3
9. Si Nakhon	1	5
Σ	79 m.	39 m.

Amphur	Water Resource Problem			
	First priority for dev't		Second priority for dev't	
	for domestic consumption	for agriculture	for domestic consumption	for agriculture
1. Muang Sukhothai	24	11	16	4
2. Kong Krailat	20	15	20	16
3. Khiri Met	26	9	41	17
4. Thung Salien	8	3	9	4
5. Ban Dan Lan Hoi	8	4	20	7
6. Si Satchanalai	11	10	37	33
7. Si Sa Rong	17	12	17	9
8. Sawankhalok	10	8	27	24
9. Si Nakhon	1	-	16	3
Σ	125 m.	73 m.	205 m.	117 m.

Amphur	Transportation Problem	
	First priority for dev't	Second priority for dev't
1. Muang Tak	6	-
2. Tha Song Yang	9	-
3. Ben Tak	2	1
4. Mae Kamed	8	1
5. Mae Sod	8	-
6. San Ngao	7	8
7. Umphang	9	-
8. Phop Phra	2	-
<i>Σ</i>	51 m.	10 m.

Amphur	Water Resource Problem			
	First priority for dev't		Second priority for dev't	
	for domestic consumption	for agriculture	for domestic consumption	for agriculture
1. Muang Tak	26	20	22	13
2. Tha Song Yang	46	22	3	2
3. Ben Tak	8	3	6	11
4. Mae Kamed	10	16	2	11
5. Mae Sod	22	14	15	12
6. San Ngao	8	5	6	7
7. Umphang	30	4	2	-
8. Phop Phra	10	2	7	2
<i>Σ</i>	160 m.	62 m.	63 m.	48 m.

PHISANULOK

Amphur	Transportation Problem	
	First priority for dev't	Second priority for dev't
1. Muang Phisanulok	5	-
2. Chat Trakarn	1	-
3. Nakhon Thai	8	1
4. Bang Krathum	7	4
5. Bang Rakan	6	11
6. Phrom Phiram	16	9
7. Wang Thong	13	3
8. Wat Bot	9	1
9. Noen Maprang	15	6
<i>E</i>	80 m.	35 m.

Amphur	Water Resource Problem			
	First priority for dev't		Second priority for dev't	
	for domestic consumption	for agriculture	for domestic consumption	for agriculture
1. Muang Phisanulok	24	7	47	11
2. Chat Trakarn	16	3	29	2
3. Nakhon Thai	16	7	55	16
4. Bang Krathum	16	3	27	2
5. Bang Rakan	16	6	38	20
6. Phrom Phiram	23	12	23	13
7. Wang Thong	72	36	19	14
8. Wat Bot	29	15	13	6
9. Noen Maprang	25	13	16	12
<i>E</i>	239 m.	106 m.	267 m.	96 m.

List of Proposed Water Resources Development Projects
within the 4 Provinces (1989 - 1991)

Province (#)	Type of Projects	Location		
		District	Sub-district	Village Number
<u>Kamphaengpet</u>	<u>Reservoir</u>			
	1. Nong Gong (including distribution system)	Muang	Na Bus Kam	Moo 10
	2. Klong Wang Nam Dang	Phran Kratai	Wang Kuan	Na Nong Sai Moo 10
	<u>Over Flow Dam</u>			
	1. Klong Sapan Chang	Enanu Moralak-Saburi	Pang Ma Ka	Moo 3
	2. Nong Gong	Muang	Na Bus Kam	Nong Gong Moo 10
	<u>Rehabilitation</u>			
	1. Nong Sala Yen	Phran Kratai	Ta Mai	Wang Cha Own Moo 3
	2. Nong Nam	Phran Kratai	Kui Bang Ong	Bung Pi Khai Moo 1
	3. Nong Nam	Elong Ehlung	Tong Sai	Tong Tong Moo 3
	4. Bung - Chub	Muang	Lan Dot Mai	Lan Hin Moo 3
	5. Bung Nong Plong	Muang	Nong Ping	Pho Sa Wat Moo 10
	6. Nong Nam	Phran Kratai	Kao Ki Ris	Moo 10
	7. Klong	Muang	Na Bus Kam	Mae Na Re, Moo 12
				/8. Nong Bung Lan.....

Province (s)	Type of Projects	Location		
		District	Sub-district	Village Number
	8.Nong Bung Lan	Sai Ngam	Nong Mai Gong	Nong Mai Gong, Moo 1
	9.Nong Pong Taklong	Sai Ngam	Nong Era	Pong Ta Klong Moo 2
	10.Bugn San Ran Tai	Hlong Khlung	Ta Worn Wattana	Bung Sam Ran Yai Moo 7
	11.Sa Musk Ki Tum	Inanu Woralak - saburi	Phag - Ma Ka	Sa Musk Ki Tum, Moo 13
	<u>Ponds</u>			
	1.Pai Na	Phan Kratai	Nong Hua Wou	Pai Na, Moo 8
	2.Mai Sa Musk Ki	Muang	Kung Tee	Mai Sa Musk Ki, Moo 7
	3.Sub Ma Nao	Hlong Khlung	Wang Sai	Sub Ma Nao, Moo 10
	4.Sak Ngam	Hlong Lan	Pong Nam Long	Sak Ngam, Moo 10
	5.Rai Sukum	Phan Kratai	Nong Hua Von	Rai Sukum
	6.Pong Nam Long	Hlong Lan	Pong Nam Long	Pong Nam Long, Moo 1
	7.Lan Chang Tao	Phan Kratai	Nong Hua Voa	Lan Chang Tao
	8.Non Sam Ran	Sai Ngam	Sai Ngam	Non Sam Ran, Moo 2,
			/2. TAK	

Province (s)	Type of Projects	Location		
		District	Sub - district	Village Number
2. TAK	<u>Reservoir</u>			
	1. Hung Cha Lard	Ban Tak	Sa Rit	Yang Ong Nok, Moo 7.
	2. Huay Song Kwae Laung	Sam Ngao	Yok Kra But	Mae Ra Wan
	3. Huay Cha Lard	Ban Tak	Mae Sa Rit	Yang Ong Nok
	4. Song Kwae	Sam Ngao	Yok Kra But	Mae Ra Wan, Moo 5
	<u>Rehabilitation</u>			
	1. Nong Khun	Sam Ngao	Sam Ngao	Sam Ngao, Moo 2
	2. Nong Bou Sod	Sam Ngao	Yok Kra But	Mae Ra Wan
	3. Nong Bung Ta Kro	Sam Ngao	Yok Kra But	Ta Phi
	4. Nong Pu Guen	Sam Ngao	Yok Kra But	Mae Chieng Rai
	5. Klong Nong Kae	Dam Ngao	Yok Kra But	Song Kwae
	6. Nong Kra Dan	Ban Tak	Tak Tuk	Nong Ngew
	7. Nong Nam	Muang	Pong Dang	Cha Lard Ra Kung Moo 4
	<u>Ponds</u>			
	1. Tha Song Yang	Tha Song Yang	Tha Song Yang	Tha Song Moo 1
	2. Sa Ta Lung	Muang	Nam Rin	Sa Ta Lung
	3. Don Lan	Sam Ngao	Wang Mong	Don Lan
	4. Wang Lai	Sam Ngao	Wang Mong	Wang Lai
	5. Huay Kra Lok	Mae Sod	Mae Pra	Huay Kra Lok
	6. Kok Go	Mae Sod	Mae Pasa	Kok Go
	7. Mae Pasa	Mae Sod	Mae Pasa	Mae Pasa
			/3. Phitsanulok.....	

Province (s)	Type of Projects	Location		
		District	Sub - district	Village Number
3. Phitsanulok	<u>Over Flow Dam</u>			
	1. Huay Kok	Nakhon Thai	Ban Taa	Hua Kok Moo 1
	2. Klong Noi	Nakhon Thai	Ban Taa	Lard Koe Moo 8
	3. Hin Gong	Nakhon Thai	Ban Taa	Sum Rue Moo 10
	4. Concrete Nam Loon	Nakhon Thai	Yang Hlon	Gok Ma Mong Moo 3
	<u>Rehabilitation</u>			
	1. Na Noi Moo 14	Chat Trakan	Chat Trakan	Na Noi Moo 14
	2. Nong Ka Tao	Nakhon Thai	Nong Ka Tao	Nong Ka Tao Moo 5
	3. Nong Ya	Muang	Wang Nam Ku	Nong Yau Moo 12
	4. Pa Rung Mee	Noen Maprang	Sai Toi	Pa Rung Mee Moo 3
	5. Noen Sam Ran	Noen Maprang	Sai Toi	Noen Sam Ran Moo 10
	6. Na Tung Yai	Nakhon Thai	Nakhon Chump	Na Tung Yai Moo 1
	7. Nong Wat Don Noi Pattana	Noen Maprang	Noi Sam Ke Leg	Moo 5
			/8. Nong Nam Mai.....	

Province (s)	Type of Projects	Location		
		District	Sub - district	Village Number
	8. Nong Nam Mai Tong Prasert	Noen Maprang	Noen Maprang	Mai Tong Prasert Moo 1
	9. Nong Nam Kok Wang Sarn	Noen Maprang	Sai Toi	Kok Wang Sarn Moo 4
	10. Kok Wang Sarn	Noen Maprang	Sai Toi	Kok Wang Sarn
	<u>Ponds.</u>			
	1. Ta Hin Lat	Nakhon Thai	Noen Perm	Ta Hin Lat Moo 7
	2. Nong Hew	Nakhon Thai	Noen Perm	Nong Hew
	3. Sum Ke Leg	Noen Maprang	Ban Noi Sum Ke Leg	Sum Ke Leg Moo 4
	4. Kok Pad Van	Chat Trakan	Chat Trakan	Kok Pad Van Moo 9
	5. Mae Ra Ga	Wang Thong	Mae Ra Ga	Mae Ra Ga Moo 2
	6. Na Tron	Chat Trakan	Chat Trakan	Na Tron Moo 5
	7. Wang Kaen	Noen Maprang	Sai Noi	Wang Kaen Moo 9
	8. Noen Ma Ea	Noen Maprang	Sai Noi	Noen Ma Ka Moo 11
	9. Wang Prong	Noen Maprang	Wang Prong	Wang Prong Moo 4
	10. Sey Yai	Nakhon Thai	Ban Yae	Sey Yai Moo 2
	11. Wang Din Neaw	Noen Maprang	Wang Tang	Wang Din Neaw
			14. Suthonhai.....	

Province (s)	Type of Projects	Location		
		District	Sub - District	Village Number
4. Sukhothai	<u>Reservoir</u>			
	1. Huay Magud	Si Satchanalai	Don In	Hung Kai Moo 1
	2. Huay Krai	Sri Sam Rong	Na Hin Gai	Kok Peay
	3. Wang Nam Shu	Ban Dan Lan Hoi	Wang Tra Kra	Piu Hew
	4. Khao King Yae Han	Ban Dan Lan Hoi	Ta King Chum	Lan Kra Sue
	<u>Over Flow Dam</u>			
	1. Khong Tra Kro	Ban Dan Lan Hoi	Wang Tra Kro	Klong Tra Kro Moo 4
	2. Huay Hua Wan	Thung Salizn	Hiang Don	
	3. Huay Na Gud	Sri Sat Chanalai	Don In	Huat Krai
	<u>Rehabilitation</u>			
	1. Nong Nam Na Sun	Si Nakhon	Na Chum	Na Kum Moo 3
	2. Nong Ta Chod	Muang	Wang Tong Dang	Nong Ta Chod
	3. Nong Chang	Si Satchanalai	Si Satchanalai	Hua Nong Ben Rai Moo 5
	4. Nong Nam Fad	Ban Dan Lan Hoi	Wang Nam Kao	Nam Fad Moo 2
	5. Nong Pron	Sawankhalok	Nong Sab	Nong Gad
	6. Nong Moen	Si Satchanalai	Had Saew	Had Saew Moo 1
	7. Nong Satharana Nong Sua	Sawankhalok	Na Tung	Don Thai Moo 1
	8. Nam Tok Sai Rung	Chiri Mat	Na Hin	Nam Tok Sai Rung, Moo 4
	9. Lan Ung	Chiri Mat	Na Hin	Lan Ung Moo 6
			1. Lan Hoi.....	

Province (s)	Type of Projects	Location		
		District	Sub - district	Village Number
	<u>Ponds.</u>			
	1. Lan Hoi	Ban Dan Lan Hoi	Lan Hoi	Lan Hoi Moo 8
	2. Had Pad Loy	Khiri Mat	Chuen Khiri	Had Pad Loy
	3. Nong Thev	Ban Dan Lan Hoi	Lan Hoi	Nong Thev Moo 5
	4. Wang Cone Pluey	Ban Dan Lan Hoi	Lan Hoi	Wang Cone Pluey Moo 4
	5. Tung Sa	Khiri Mat	Chuang Khiri	Tung Sa Moo 2
	6. Mai Charoenpol	Khiri Mat	Si Khiri Mat	Mai Charoenpol Moo 8
	7. Sa Bon	Si SanRong	Wang Tai	Sa Bon Moo 7
	8. Lan Tong	Ban Dan Lan Hoi	Wang Nam Haew	Lan Tong Moo 6
	9. Klang Don	Thung Saliam	Klang Don	Klang Don Moo 3
	10. Huay Kai	Ban Dan Lan Hoi	Wang Nam Haew	Huay Kai Moo 5
	11. Pak Klong Ruam	Ban Dan Lan Hoi	Wang Tai Eo	Pak Klong Ruam, Moo 6
	12. Klong Sakad	Ban Dan Lan Hoi	Wang Nam Haew	Klong Sakad
	13. Nong Yai Plong	Ban Dan Lan Hoi	Wang Tai Eo	Nong Yai Plong

List of ARD Standard Road Network
Sukhothai Province

28 Projects

Total Length 507 + 313 Km.

Project Code	Road Name	Length (Km.)	Number of Villages on Road	Remark
ST 11001	B. Pang Ta Kien - A. Sri Satchanalai A. Sri Satchanalai	33 + 000	15	Completely constructed
ST 11002	B. Huay Tom - B. Mae Ta Pien Thong A. Sri Satchanalai	30 + 332	18	
ST 11003	B. Huay Yuak - B. Cook A. Sri Satchanalai	33 + 000	7	
ST 11004	B. Sri Satchanalai - B. Cook A. Sri Satchanalai	12 + 000	3	
ST 11005	B. Huay Ta Pae - B. Hua Phai A. Tung Sa-Liam, A. Sri Satchanalai	30 + 060	5	Being constructed
ST 11006	B. Bung Suai - B. Mong Eua A. Sri Satchanalai, KA. Sri Nakorn	7 + 000	3	
ST 11007	B. Pak - B. Klong Yang KA. Sri Nakorn, A. Sawan Kaloke	17 + 000	6	
ST 11008	B. Pa Ka Yang - B. Tha Ton Thong A. Sri Satchanalai, A. Tung Sa-Liam	20 + 000	4	
ST 11009	B. Cook - B. Muang Kao A. Sri Satchanalai	9 + 000	4	
ST 11010	B. Klong Tang - B. Tha Chai KA. Sri Nakorn, A. Sri Satchanalai	20 + 000	5	
ST 11011	B. Klong Yang - B. Bor Pad Noi A. Sawan Kaloke	6 + 000	2	
ST 11012	B. Hua Phai - B. Huay Krad A. Tung Sa-Liam, A. Sri Siam Hong, A. Ban Dan	30 + 000	6	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
ST 11013	B. Nai Nikom - B. Nong Khai A. Sawan Kaloke	5 + 000	2	
ST 11014	B. Huay Krai - B. Boon Ko A. Ban Dan Lan Hoy, A. Sri Sam Rong	20 + 000	4	
ST 11015	B. Huay Krai - B. Dan Lan Hoy A. Ban Dan Lan Hoy	19 + 000	5	
ST 11016	B. Wang Nam Khao - B. Cha Lard Ra-Kang A. Ban Dan Lan Hoy	22 + 000	8	
ST 11017	B. Sai Yas - B. Wang Nam Khao A. Muang, A. Ban Dan Lan Hoy	17 + 000	4	
ST 11018	B. Wang Thong Daeng - B. Tab Pung A. Muang, A. Sri Sam Rong	15 + 000	5	
ST 11019	B. Pak Kang - B. Pung Kae A. Sri Sam Rong, A. Muang, A. Kong Krailas	27 + 000	14	
ST 11020	B. Klong dan - B. Klong Ta-kien A. Muang	6 + 000	4	
ST 11021	B. Han Sa - B. Tha Cha-Nuan A. Muang, A. Kong Krailas	15 + 000	8	
ST 11022	B. Muang Kao - B. Nam Lad A. Muang, A. Kirimas	22 + 000	4	
ST 11023	B. Dan Lan Hoy - B. Wang Cone Pleuy A. Dan Lan Hoy	24 + 000	3	
ST 11024	B. Wong Bor - B. Na Phai Lou A. Kirimas	11 + 000	5	
ST 11025	B. Krang - B. Wang Sa-Due A. Kong Krailas	10 + 000	8	
ST 11026	B. Nam Lad - B. Nong Yang A. Kirimas	11 + 000	3	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
ST 11027	B.mai Charoen Pol - B.Nong Khon Pleuy A.Kirimas	36 + 431	5	
SM11028	B.Nong Yang - B.Bung Ya s.Kirimas	10 + 000	3	

List of ARD Standard Road Network
Kampangpet Province

Total length 560+803 km.

32 projects

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
KP 11001	B.Nong Luang - B.Nong Yang A.Pran Kra Tai, A.Kirimas(Sukhothal)	20 + 000	3	
KP 11002	B.Tha Mai - B.Nam Dib Ma-Pras A.Pran Kra Tai	13 + 700	44	
KP 11003	B.Wang Kuang - B.Tha Mai Daeng A.Pran Kra Tai	13 + 000	5	
KP 11004	B.Ong - B.Nong Plong A.Muang, A.Pran Kra Tai	22 + 000	6	
KP 11005	B.Tha Mai Daeng - B.Wang Chao A.Muang	18 + 000	5	
KP 11006	B.Nong Luang - B.Tung Maha Chai A.Muang, A.Pran Kra Tai	17 + 000	6	
KP 11007	B.Tung Maha Chai - B.Tung Sai A.Muang, A.Klong Khlung	25 + 000	7	
KP 11008	B.None Sa-moh - B.Cone A.Muang	12 + 000	5	
KP 11009	A.Sai Ngam - B.Nong Louk A.Sai Ngam, A.Klong Khlung	19 + 000	5	
KP 11010	B.Sai Ngam - B.Nong Mae Klong A.Sai Ngam	10 + 000	3	
KP 11011	B.Done - A.Sai Ngam A.Muang, A.Sai Ngam	29 + 000	9	
KP 11012	B.Mae Naree - B.Pong Nam Ron A.Muang, KA.Klong Larn	19 + 225	3	
KP 11013	B.Pak Dong - B.Tha Keun A.Muang, A.Klong Khlung	29 + 850	10	

Project Code	Road Name	Length (Kms)	Number of Villages on Road	Remark
KP 11014	B.Pong Nam Ron - B.Tung Eye Now A.Muang	10 + 000	5	
KP 11015	B.Tha Ma Fhoe - B.Nong Louk A.Klong Khlong	30 + 000	15	
KP 11016	B.Nong Louk - B.Chai Keung A.Klong Khlong, A. Khanu Worarakburi	15 + 000	9	
KP 11017	B.Tung Sai - B.Tung Sa-doon A.Klong Khlong, A.Khanu Worarakburi	21 + 000	10	
KP 11018	BanNon Ton - B.Teen Dong A.Klong Khlong	8 + 244	3	
KP 11019	B.Poh En - B.Mai Samak Kee A.Klong Khlong	11 + 000	5	
KP 11020	B.Don Nong Sa-dao - B.Wang Sai A.Khanu Worarakburi	8 + 599	6	
KP 11021	A.Klong Khlong - A.Khanu Worarakburi	26 + 000	13	
KP 11022	B.Klong Nam Lai - B.Pak Klong Larn XA.Klong Larn	14 + 000	6	
KP 11023	A.Khanu Worarakburi - B.Bang Kwae A.Khanu Worarakburi	8 + 000	7	
KP 11024	B.Rai - B.Por Itum A.Khanu Worarakburi	12 + 000	5	
KP 11025	B.Roh Sa-dao - B.Koh Yai A.Khanu Worarakburi	18 + 000	4	
KP 11026	B.Tung Eye Jek - B.Nong Sone A.Klong Khlong	16 + 000	4	
KP 11027	B.Tab Wang - B.Bung Ban A.Klong Khlong, A.Khanu Worarakburi	12 + 000	5	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
KP 11028	B. Mai Samk Kee - B. Chai Keung A. Khanu-Worarakburi	11 + 000	3	
KP 11029	B. Chai Keung - B. Nong Kra-toon A. Khanu-Worarakburi	14 + 000	5	
KP 11030	B. Wang Sai - B. Klong Nam Lai A. Klong Khlung, A. Klong Isan	29 + 540	9	
KP 11031	B. Bor Sam Suan - B. Khao Kwae A. Muang, A. Pran Kra Tai	22 + 000	5	
KP 11032	B. Pran Kra Tai - B. Lam Phai (Tung Kora Krue) A. Pran Kra Tai	26 + 744	10	

List of AED Standard Road Network

Tak Province

Total length 611 + 481 km.

38 projects

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
TK. 11001	B.Mae Pa - B.Wang Kaew A.Mae Sod	10 + 893	4	Asphalted
TK. 11002	B.Chong Kab - B.SorOoH King A.Pob Pra	7 + 6000	2	Completely Constructed
TK. 11003	B.Ton Pung - B.Teen Tad A.Mae Khamad	15 + 000	8	Completely Constructed
TK. 11004	B.Tha Moei - B.Pae A.Maw Ramad	10 + 000	6	Completely Constructed
TK. 11005	B.Mae La Mso - B.Peng San A.Mae Sod	10 + 325	5	Completely Constructed
TK. 11006	B.Saman Bin Koen - B.Mae Ma Wan A.Sam Ngao	20 + 600	5	Completely Constructed
TK. 11007	B.Peng Daeng - B.Den Mai Sung A.Muang, A.Ban Tak	22 + 213	5	Being Constructed
TK. 11008	B.Ta Pui - B.Pa Yany Tai A.Sam Ngao	12 + 750	3	Completely Constructed
TK. 11009	B.Nong Sue - B.Cha Lad Ra-Kang A.Muang	15 + 200	5	Completely Constructed
TK. 11010	B.Wang Krai - B.Mae Chiang Rai Bon A.Sam Ngao	25 + 000	7	Completely Constructed
TK. 11011	B.Sam Ngao - B.Tai A.Sam Ngao, A.Ban Tak	25 + 000	9	Completely Constructed by DOR
TK. 11012	B.Mae Ya - B.Tong Ma A.Ban Tak	10 + 000	3	Completely Constructed by DOR

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
TK. 11013	B. Nam Bib & B. Pong Daeng A. Ban Tak, A. Muang	18 + 500	3	Already Survey and Design
TK. 11014	B. Khong Ka Yang Plong - B. Nong Lon A. Muang	22 + 000	8	
TK. 11015	B. Yang Lah - B. Mae Oak Pha Roo A. Mae Ramad	7 + 000	3	
TK. 11016	B. Mae Gud Sam Ta - B. Pa Rai A. Mae Sod, A. Mae Pamad	18 + 375	6	Completely Constructed
TK. 11017	B. Mae Pa Sa - B. Huay Hong A. Mae Sod	4 + 500	2	Completely Constructed
TK. 11018	B. Mae Tao - B. Mae Kh Mai A. Mae Sod	15 + 375	7	Completely Constructed
TK. 11019	B. Mae Kone Kane - B. Chong Bab A. Mae Sod, King, A. Pob Pra	25 + 650	5	Completely Constructed
TK. 11020	B. Mae Kfong Mai - B. Klong Tor A. Umphang	36 + 000	4	Completely Constructed
TK. 11021	B. Umphang - B. Pa La Ta A. Umphang	25 + 000	5	
TK. 11022	B. Mae - U-Su - B. Kane Je Kee A. Tha Song Yang	20 + 000	8	
TK. 11023	B. Dong Sam Sib - B. Den Mai Sung A. Sam Ngao, A. Ban Tak	17 + 000	3	Completely Constructed
TK. 11024	B. Yang - B. Na-E-Peuy A. Ban Tak	10 + 000	4	

Project Code	Road Name	Length (km.)	Numbers of Villages on Road	Remark
TK. 11025	B. Tung Ma Kam Pua - B. Pae A. Mae Eamad	11 + 000	4	
TK. 11027	B. Sen Pa Lan Nok - B. Mae Salid Noi A. Ban Tak	14 + 000	3	
TK. 11028	B. Mae Tao - B. Huay Ka Lok A. Mae Sod	14 + 500	5	
TK. 11029	B. Huay Pak Lah - B. Nong Khlew A. Mae Sod	11 + 000	4	
TK. 11030	B. Rim Moei - B. Mae Ku Mai A. Mae Sod	12 + 000	5	
TK. 11031	B. Lao Yang - B. Tong Chai A. Mae Sod	35 + 000	7	
TK. 11032	B. Yang - B. Ka Low Dry A. Tha Song Yang	15 000	9	
TK. 11033	B. Yang B. Nong Buo A. Tha Song Yang	10 + 000	4	
TK. 11034	B. Tha Song Yang - B. Sod Woei A. Tha Song Yang	25 + 000	6	
TK. 11035	B. Dahn Ka - B. Mai Seri Thum A. Muang	14 + 000	4	
TK. 11036	B. Dong Poo - B. Hin Kong A. Muang	12 + 000	6	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
TK. 11037	B. Tha Mai Daeng - B. Mab Pa Fak A. Muang	10 + 000	4	
TK. 11038	B. Koh Ai Duan - B. Mab Pa Fak A. Muang	15 + 000	4	

List of ARD Standard Road Network,
Pitsamulok Province

50 Projects

Total length 1,163 + 135 km.

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
PS 11001	A.Nakorn Thai - B.Nakorn Chum A.Nakorn Thai	19 + 532	12	Constructed by DOH
PS 11002 (additional)	B.Prao - B.Nakorn Chum A.Nakorn Thai	26 + 500	8	
PS 11002	B.Some Rue - B.Kang Lad A.Nakorn Thai	10 + 000	4	Completely constructed
PS 11003	B.Don Piong - B.Chom Poo A.Wang Thong, A.None Ma Prang	32 + 000	9	do
PS 11004	B.Sam Rung - B.None Ma Prang A.None Ma Prang	13 + 000	3	do
PS 11005	B.Sub Prai Non - B.pak Paan A.Wang Thong	73 + 000	18	
PS 11006 B.Euay	TRANG THAI - NONG - B.Dong A. Chat Trakarn	15 + 000	3	Constructed by DOH
PS 11007	B.Tha Ngam - B.Pong Kae A.Wat Bot	40 + 978	13	Completely constructed
PS 11008	B.Sapan Hin - B.Talug Tiam A.Prom Piram	28 + 000	11	Constructed by DOH
PS11009	B.Laen - B.Hiang Kra Dok A.Bang Rakam	26 + 000	9	
PS 11010	Wat Chula Manee - B.Nong Taw A.Muang, A.Bang Kra Thum	32 + 000	13	Constructed by DOH
PS 11011	B.Pa Daeng - B.Na Tron A.Chat Trakarn	18 + 000	7	Constructed by DOH
PS 11012	B. Phai Lad - B. Pun Yang A.Bang Rakam	14 + 000	6	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
PS 11013	B.Nong Tom - B. Wat Cheng Wai A.Prom Piram	16 * 000	8	
PS 11014	B.Nong Tom - B. Pa Daeng A.Prom Piram	15 + 100	5	Completely constructed
PS 11015	B.Chan - B.Thong Plong A.Wat Bot, A.Prom Piram	26 + 600	8	
PS 11016	B.Yang - B. Wat Hong A.Muang, A.Bang Krathum	37 + 000	15	Constructed by other agencies
PS 11017	B.Bua Thanon - B.Sa Borapet(2) A.Bang Rakam	20 + 000	11	
PS 11018	B.Teng Nam - B.Kra Bung A.Muang, A.Prom Piram	15 +9808	6	Completely constructed
PS 11019	B.Wat Tarn - B.Pai Ko Nam A.Muang, A.Prom Piram	13 + 350	7	Completely constructed
PS 11020	B.Tha Ngam - B.Pak Pan A.Wat Bot	35 + 000	10	Constructed by DOH from Tha Ngam-Na Kam
PS 11021	B.Sai Yoi - B.Mung A.Muam Maprang	30 + 075	9	Completely constructed
PS 11022	B.Yang - B.Khon Song Saloeng A.Nakorn Thai, A.Chet Trakarn	62 + 000	6	
PS 11023	B.Na Tron - B.Bor Pak A.Chet Trakarn	21 + 000	4	Constructed by DOH
PS 11024	B.Tha Ngam - B.Sa Kro A.Wat Bot, A.Muang	14 + 000	8	
PS 11025	B.Yan Kad - B.Klong Mek A.Prom Piram	13 + 000	3	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
PS 11026	B. Talum Tiam - B. Bung Wang A. Prom Piram	13 + 000	3	
PS 11027	B. Tha Ngam - B. Mai Sukasen A. Prom Piram	23 + 000	8	
PS 11028	B. Nong Huang (t) - B. Nong Pal A. Prom Piram	14 + 000	4	
PS 11029	B. Klong Mek - B. Bang Kwae A. Prom Piram, A. Muang	24 + 000	5	
PS 11030	B. Krang - B. Rieng Kra Dok A. Muang, A. Bang Rakam	32 + 000	9	
PS 11031	B. Prue Krathum - B. Chum Saeng A. Bang Rakam	25 + 000	7	
PS 11032	B. Chum Saeng - B. Sam Roen A. Muang, A. Bang Krathum	31 + 000	8	
PS 11033	B. Bung Pra - B. Dong Piang A. Muang, A. Wang Thsong	23 + 000	7	
PS 11034	B. Tha Muen Ham - B. Teng Prada A. Wang Thsong	15 + 000	3	
PS 11035	B. Piai Na - B. Nong Pra-Doo A. Bang Rakam	16 + 000	5	
PS 11036	B. Yan Iso - B. Nong Bus A. Bang Rakam	14 + 000	5	
PS 11037B. Wat Hong, Wat Hong - B. Bang Krathum(1) A. Bang Krathum		8 + 000	4	
PS 11038	B. Khao Sa-Moh Klang - B. Nam Dam A. Wang Thsong	14 + 000	7	

Project Code	Road Name	Length (km.)	Number of Villages on Road	Remark
PS 11039	B. Phai Ta Yoo - B. Wang E Tok A. Bang Rakam	24 + 000	8	Constructed by other agencies
PS 11040	B. Hua Thanon - B. Nong Theang A. Bang Rakam	17 + 000	4	
PS 11041	B. Wang Kra Pak - B. Neun Sawang A. Wang Theang	18 + 000	8	
PS 11042	B. Mung - B. Chom Foo A. Neun Maprang	18 + 200	3	
PS 11043	B. Nong Kra Tao - B. Nam Lad A. Nakhon Thai	20 + 000	4	
PS 11044	B. Na Mung - B. Pong Sao A. Nakhon Thai	15 + 000	10	
PS 11045	B. Na Bou - B. Na Ta Dee A. Nakhon Thai	16 + 200	10	
PS 11046	B. Noi Theay Hin - B. Nong Pru A. Chat Trakan	34 + 000	8	
PS 11047	B. Sum Tonk - B. Nam Pad A. Nong Maprang	7 + 000	2	
PS 11048	B. Mai - B. Ruen Kao (B. y Thai 3) A. Wang Thong, A. Noen Maprang	34 + 000	10	

Background of ARD

The Office of Accelerated Rural Development (ARD) is one of the departments under the Ministry of Interior. All ARD's operations aim to solve the poverty and in rural by using socio-economic approach. Community and Manpower Development for socio-economic and national stability is the ideology of the Office of ARD.

The ARD Office has started its operations since 1964, and was officially organized on January 1966 under the Office of the Prime Minister. The Office was later transferred to the Ministry of Interior on October 1972. It was the purpose of the Royal Thai Government to Organize the ARD as a single multi-function agency. The idea was to have a rural development agency capable for carry out all usual development activities on its own, from stage of planning to implementation. This model of agency is able to integrate all rural development activities. Thus, maximum returns can be expected from the agency's operations.

In the first few years, the ARD office concentrated mainly on rural infra-structure construction such as road construction and maintenance, water resources development, and the like. The ARD office has started its operation in 6 changwats (provinces) in Northeast Thailand and gradually expanded to north, south, east, and central of Thailand. Currently, ARD's operation area covers 72 changwats (provinces).

Through long years of field testings and experiences, the ARD office has gradually shifted its concentration from only engineering to engineering and non-engineering (socio-economic). This change derived from the experiences that problems of rural poverty and insurgency cannot be sloved by mean of rural infra-structure only.

ARD Development Policy

The philosophy of ARD is to achieve a balanced condition by addressing basic needs which are critical in establishing a healthy social and economic environment. Once having achieved this balance,

ARD encourages other governmental agencies to work with the villages over a longer period of time to bring the villages up to a higher standard of development.

The Office has a development policy directed toward the simultaneous improvement of human living conditions and the physical environment in rural Thailand. In meeting this policy, ARD approaches development in a very integrated and comprehensive manner by bringing together a wide range of technical resources in response to locally identified problems and needs in a well balanced manner. The Office concentrates its activities in those areas identified as being "Poverty Areas" and "Sensitive Areas" with primary emphasis on infra-structure development (e.g. rural roads, water resources, etc.) and helping people to organize themselves at the local level.

Objectives

Consistent with the above development policy, ARD has established the following agency objectives :

- 1) To improve the living conditions of people living in rural areas through a balanced approach involving both physical infra-structure development and socio-economic development.
- 2) To promote rural security by using development activities as a strategy for increasing political stability.

Major Program Focuses.

In meeting the above agency objectives, ARD brings together a wide range of resources in the form of both technical assistance and financial aids. These resources can be categorized as follows :

1) Infra-structure Construction

- Rural Road Over the years, the Office has been responsible for constructing of rural road linking together remote villages in rural Thailand. The rural road provides ready access to service and marketing centers.
- Water Resources Development ARD has been actively involved in water resources development projects designed for both human consumption and supplementary irrigation. The projects involve in construction of reservoirs, dams, deep wells, shallow well, village ponds, irrigation system and others.

2) Rural Youth Training

Working in cooperation with other agencies, ARD has sponsored youth training programs involving hundreds of youth groups in rural Thailand. This training has resulted in young people in rural areas the skill they need to know in order to secure meaningful employment and lead more productive lives.

3) Occupation and income Promotion

Encouraging-agricultural production and increasing of farm family income, ARD, in cooperation with other agencies, assists farmers in obtaining technical information and farm inputs; and promotion of handicraft.

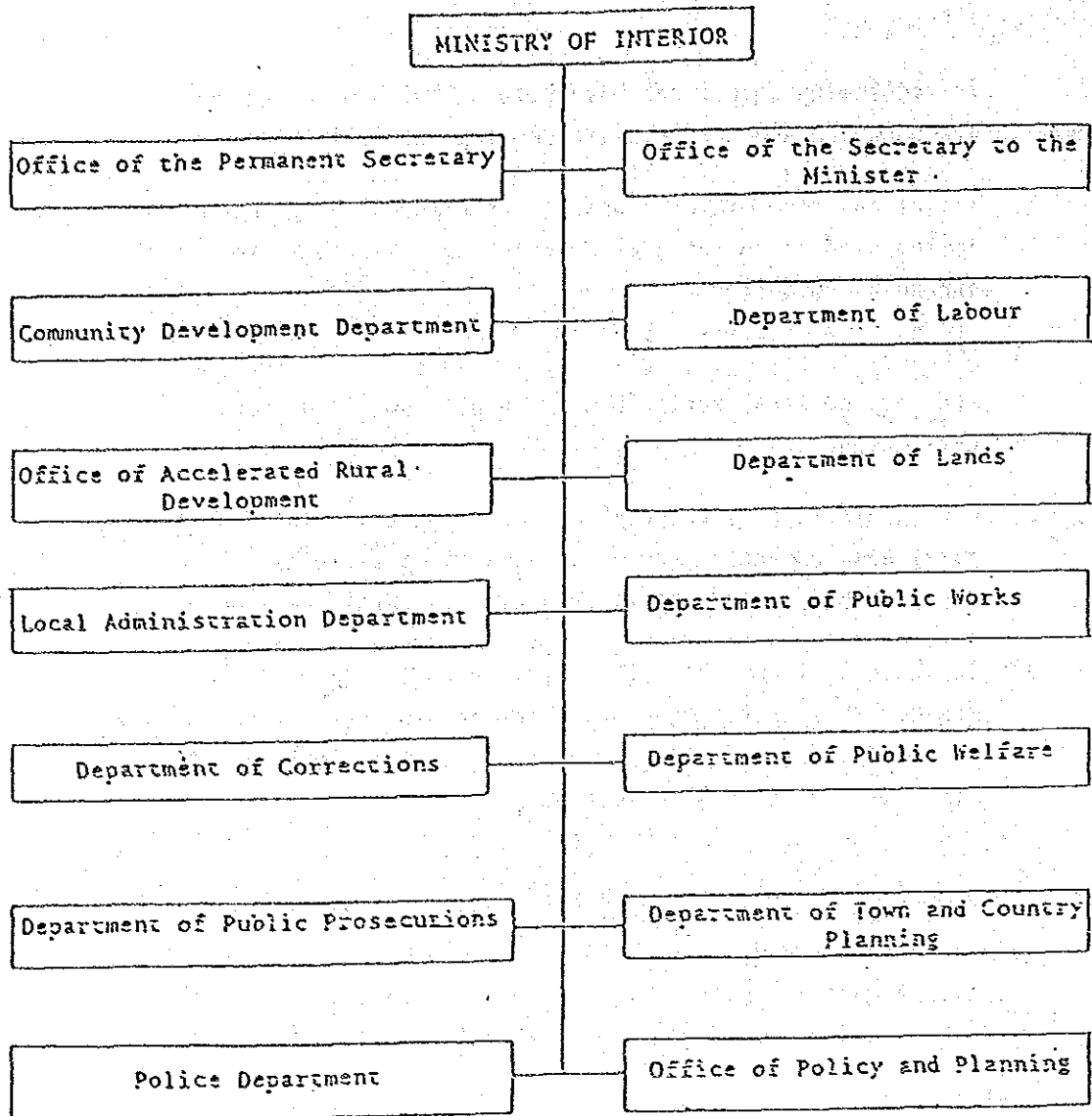
4) Agri-Business

An important role of Agri-Business is to promote and encourage or organize farmer groups and strengthen them to be efficient farmer institutions. Concept of full business circuit is applied as a strategy to operate those farmer institutions in increasing their family income and bargaining power in purchasing production materials and selling their agricultural products.

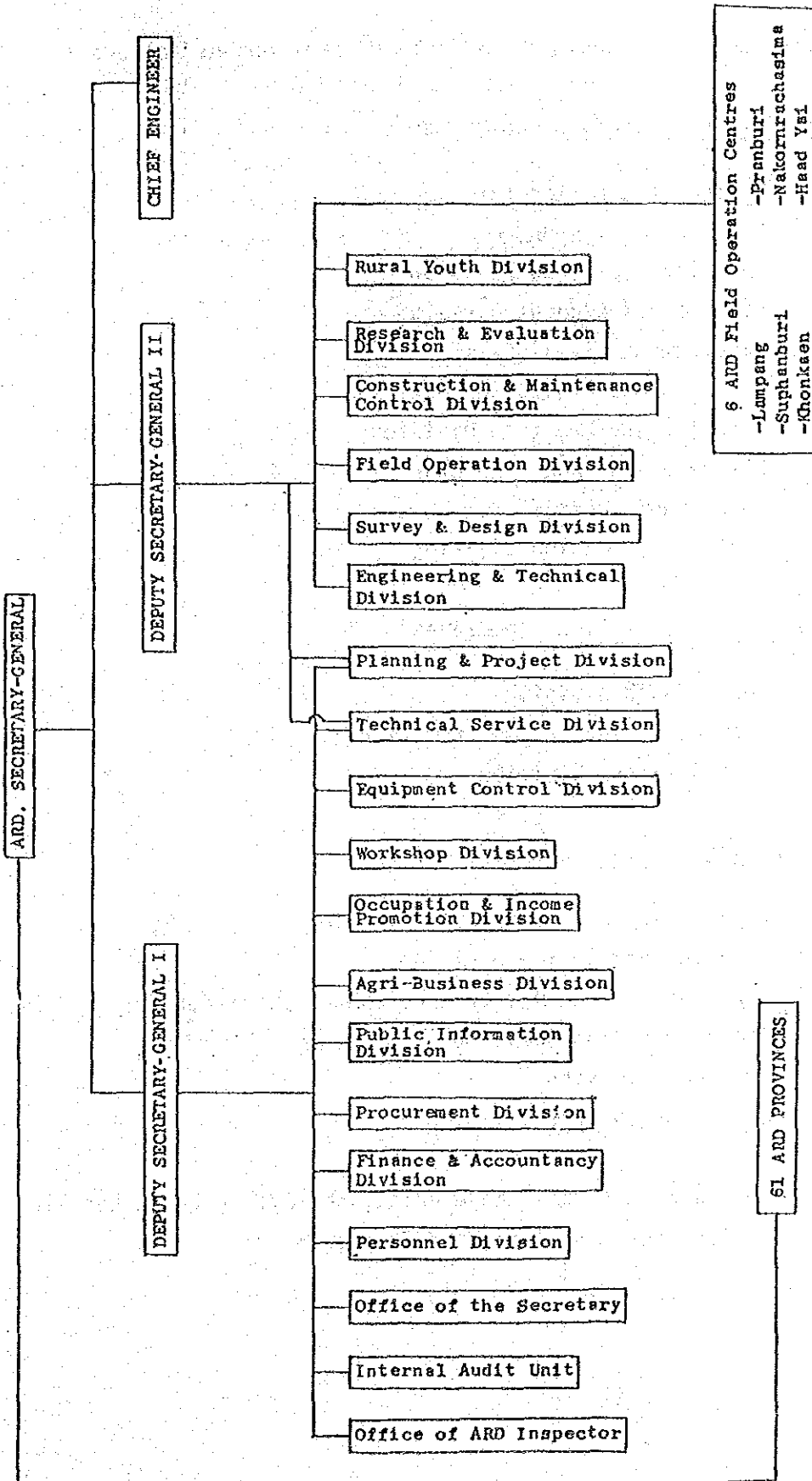
Operational Framework

The following guidelines have been established as an operational framework around which ARD conducts its development activities.

- 1) Social and economic development efforts must be planned and implemented in an integrated manner involving both technical and human resources.
- 2) ARD activities must involve "Bottom-Up Approach" to planning and maximum local participation in all aspects of rural development.
- 3) Close inter-agency cooperation and support is essential for rural development. ARD coordinates its activities with other development department working in rural Thailand.
- 4) To the extent possible, local resources are used to the maximum thus providing a true partnership between ARD and the people it serves. This partnership is directed toward the efficient use of public resources.



MINISTRY OF INTERIOR



ARD'S ORDER NO. 594/2530 DATED OCTOBER 22, 1987

ARD ORGANIZATION

The Office of ARD is organized into three sections as follows :

A) Administrative Section comprises of :

- Office of the Secretary
- Personnel Division
- Technical Services Division
- Finance and Account Division
- Procurement Division
- Research and Evaluation Division
- Planning and Projects Division
- Office of the ARD Inspector
- Inter Audit Unit
- Public Information Division

B) Socio-Economic Section comprises of :

- Rural Youth Division
- Occupation and Income Promotion Division
- Agri-Business Division

C) Engineering Section comprises of :

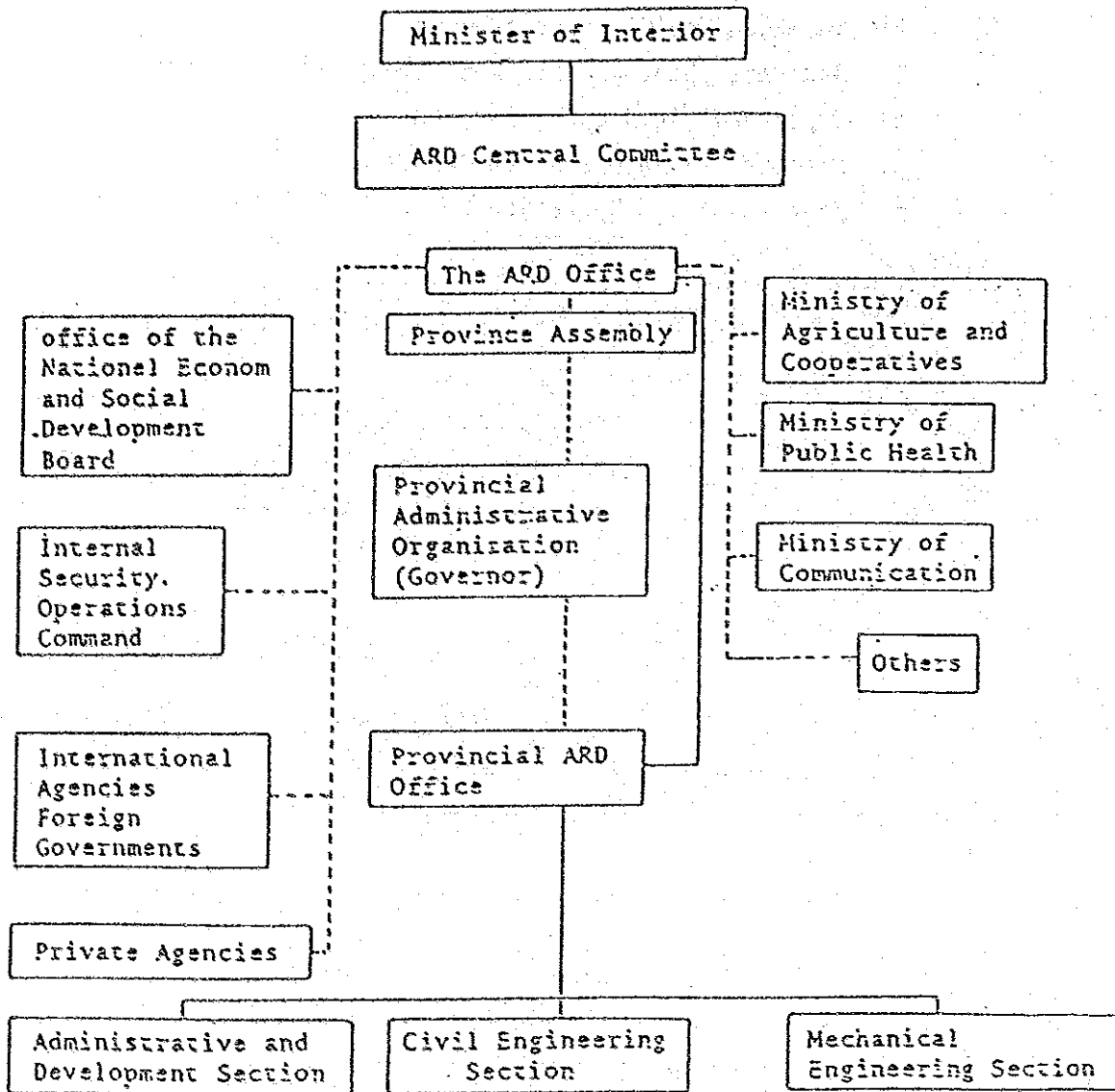
- Engineering and Technical Division
- Location and Design Division
- Construction and Maintenance Control Division
- Field Operation Division
- Workshop Division
- Equipment Control Division

In addition to the above units, the Office has other line units operating in its operational area of 72 provinces.

ARD Field Operation Centers

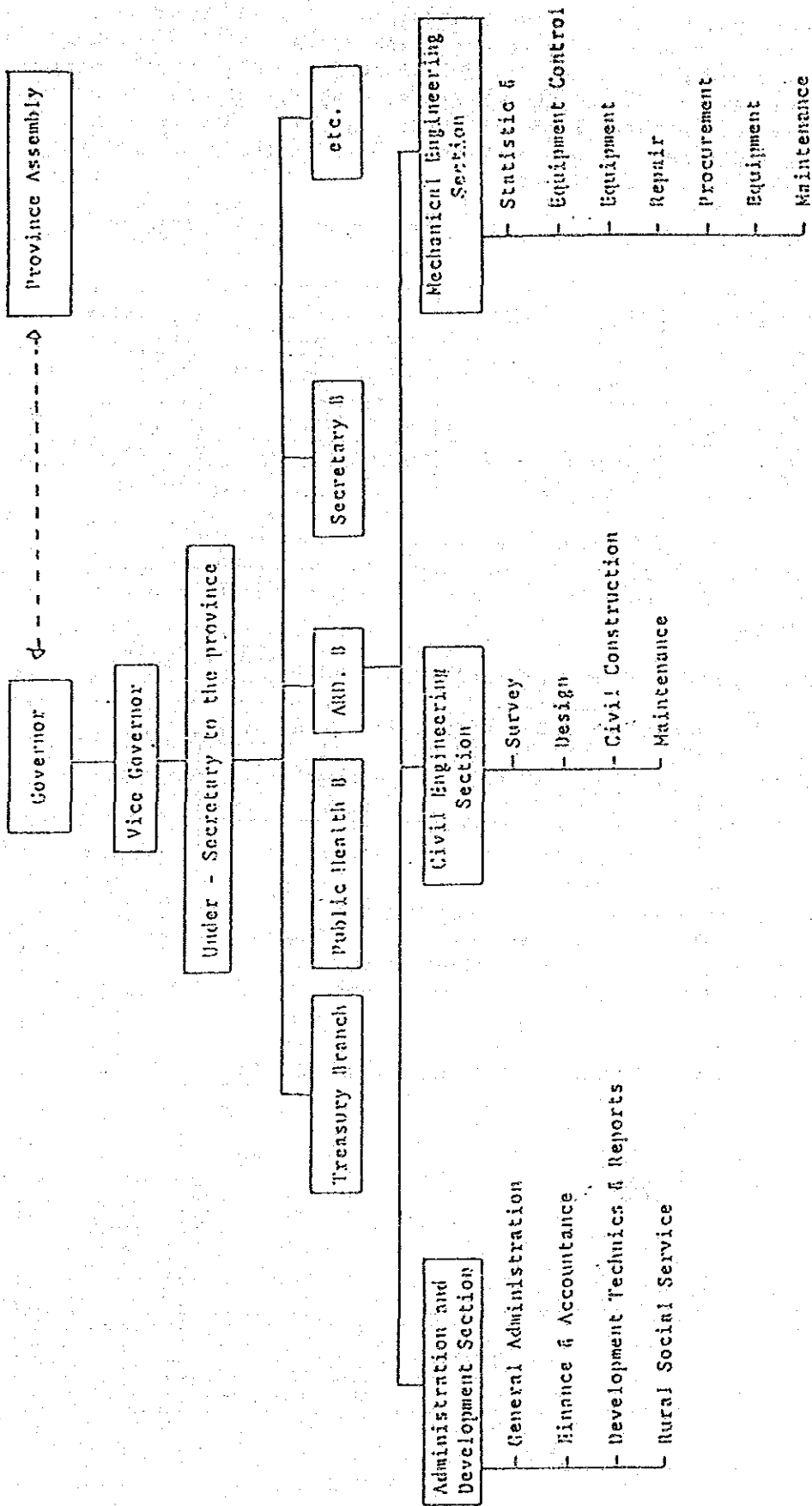
- 1) Lampang Field Operation Center
- 2) Khonkaen Field Operation Center
- 3) Nakornrajchasma Field Operation Center
- 4) Supanburi Field Operation Center
- 5) Pranburi Field Operation Center
- 6) Haad Yai Field Operation Center

ARD's Administration Chart



————— Supervision Line
 - - - - - Coordination Line

ARD's Provincial Organization Chart



ARD's Manpower

As a government agency, ARD employs four different classifications of manpower, from civil servants to daily labourers. As the numbers of temporary state employees and daily labourers are highly volatile, no manpower figures are quoted for these two classifications. However, manpower levels for ARD officials (The upper two classifications i.e. civil servants and permanent state employees) are tightly controlled and are presented in Table belowed :

ARD'S MANPOWER - 1988 (EXCLUDING TEMPORARY EMPLOYEES AND DAILY HIRED LABOURERS)

Manpower Status	Bangkok Office	Centres and Changwats	Total
Civil Servants	841 (829)	4,739 (4,416)	5,580 (5,245)
Permanent State Employ.	234 (234)	5,769 (5,769)	6,003 (6,003)
Total	1,075 (1,063)	10,508 (10,185)	11,583 (11,248)

As can be seen from the following Table about 10 % of the overall 11,600 ARD officials are working in the Bangkok Office, about 30 % in the six Field Operation Centres and the remainder in the 57 Changwat Offices.

DISTRIBUTION OF ARD'S MANPOWER BY LOCATION - 1988

Number of ARD's Officials - 1988			
Bangkok Office	Field Operation Centers	Changwats Offices	Total
1,234	3,436	6,968	11,638
NOTES : Small inconsistencies between the two Tables are accepted in the light of the complexity of keeping up-to-date staff records.			

Reference : Personnel Division/Data up to August 1988.

Part and Present Outputs/Activities

In the following table 1 - 4, the outputs of ARD over the past 22 years up to 1987 is summarized for the main categories.

Table 1 : ARD'S WORK OUTPUT UP TO 1987 - CONSTRUCTION WORKS

Type of Work	Quantities	
1. ROADS AND INFRASTRUCTURES		
1.1 ARD Standard Road	20,231.418	km
- ARD Planning	18,045.134	km
- National Security Programme	1,884.033	km
- Royal Programme	287.801	km
- Economic Development Programmes	14.450	km
1.2 Village Access Road Type-I	4,563.276	km
- ARD Planning	4,557.921	km
- Economic Development Programme	5.355	km
1.3 Village Access Road Type-II	1,771.345	km
Total length of Constructed Road (1)	26,566.239	km
1.4 R.C. Bridges		
- Two-way Bridge	2,340 Nos.	71,066.58 m
- One-way Bridge	428 Nos.	9,732.80 m
1.5 R.C. Box Culverts	150 Nos.	1,496.78 m
2. WATER RESOURCES		
2.1 Surface Water Projects		
- Reservoir	170	Nos.
- Weir	393	Nos.
- Water Distribution System	80	Nos.
- Natural Resources Improvement	732	Nos.
- Pond Construction	1,306	Nos.
2.2 Ground Water Projects		
- Deep Well	10,745	Nos.
- Shallow Well	4,727	Nos.
- Water Storage Tank (2)	12	Nos.

NOTES: (1) No construction at present
(2) Constructed between 1964 - 1965

Table 2 : ARD'S WORK OUTPUT UP TO 1987 - YOUTH/TRAINING

Project Description	Quantities	
1. FORMING OF 540 YOUTH GROUPS	198,110	People
2. YOUTH TRAINING PROGRAMME	14,247	People
- Youth Leadership Training along the Southern Border	4,675	People
- Youth Advisor	995	People
- Best All-Round Youth (1)	2,199	People
- Mechanical Training (2)	5,035	People
- 5 Days Basic Training	790	People
- 50 Days Improvement Training	53	People
- 90 Days Occupational Training		
3. OCCUPATION PROMOTION	376	Groups
	164	Projects
4. DEMONSTRATION AND PROMOTION		
- Soil/Cement Brick	1,558,025	Pcs.
- Concrete Water Jar	1,251,815	Pcs.
- Bamboo Reinforced Concrete Water Storage Tank	3,991	Nos.
- Steel Reinforced Concrete Water Storage Tank	17,634	Nos.
- Ferro-Cement Tank	8	Nos.
Total Capacity	1.483	Million m ³
5. USED TIRE RUBBER SHOES PRODUCT	195,000	Pairs

NOTES: (1) Training Programme up to 1981 then changed to Mechanical Training Programme
(2) Started since 1984

ARD'S Budget

Fiscal Year	Budget (Baht)	Increase/decrease (Baht)	Percentage (%)
1965	61,525,500	-	-
1966	78,081,471	+ 16,561,971	+ 27
1967	157,654,700	+ 79,773,229	+ 102
1968	224,640,500	+ 66,775,800	+ 42
1969	278,229,900	+ 53,589,400	+ 24
1970	286,949,900	+ 8,720,000	+ 3
1971	279,137,730	- 7,818,170	- 2
1972	327,293,940	+ 48,262,210	+ 17
1973	384,250,000	+ 56,856,060	+ 17
1974	471,090,400	+ 86,840,400	+ 23
1975	715,221,755	+ 244,232,355	+ 52
1976	911,039,400	+ 195,716,645	+ 27
1977	837,949,300	- 73,090,100	- 8
1978	1,008,014,900	+ 170,065,600	+ 20
1979	1,235,012,800	+ 226,997,900	+ 23
1980	1,324,512,100	+ 89,499,300	+ 7
1981	1,780,553,000	+ 456,082,900	+ 34
1982	1,909,180,000	+ 128,585,000	+ 7
1983	1,959,121,000	+ 49,943,000	+ 3
1984	2,023,572,560	+ 64,453,560	+ 3
1985	2,110,348,533	+ 87,772,093	+ 4
1986	2,018,352,000	- 91,992,653	- 2.6
1987	1,834,921,000	- 183,401,000	- 9.1
1988	2,135,403,000	+ 300,558,000	+ 16.4

Source Summing from AED annual expense
budget year 1965 - 1988

収 集 資 料

1. 1 : 50,000 Map (参考用に2枚、TOTAL50枚程度あるため、残りはARDにて保管)
2. Geological Map (1 / 1,000,000)
3. Hydrogeological Map (1 / 500,000)
4. Soil Map (1 / 10,000)
5. Land Utilization Map and Book (スコタイ ピサノロック分カンペンベツト分は、調査団来タイ時には、完成予定タク分は、まだまだ先とのこと)
6. Forestry Statistics of Thailand 1987
7. The Sixth National Economic and Social Development Plan.
8. ファームボンド事業実施図面 (1 / 500, ピサノロック)
9. 事業実施地区概要 (カンペンベツト)
10. カンペンベツトフィールドオペレーションセンターの強化計画 (タイ語、英訳を調査団来タイ時までに行う。)
11. Nongchiengkha Village Development Project (タク)
12. Summary of Activities (タク)
13. 事業実施地区実施概要 (スコタイ)
14. スコタイ県で行われている農業プロモート活動
15. 事業実施予定地区 (スコタイ、タイ語)
16. カンペンベツトの概要 (タイ語)
17. ARDのパンフレット

Integrated Rural Development Plan of ARD

The operation of the Office of Accelerated Rural Development (ARD) from the past upto the present (1966-1990) has been carried out in various aspects in the rural areas in accordance with the policies entrusted by the Government of each period of time. In the past it aimed to develop the national security as the main principal through the process of economic and social development on the basis of the integrated rural development idea by developing both the basic rural economic structure and human resource, which is the rural population, in the form of economic and social development through various supporting activities in order to achieve the objective in upgrading the rural population's quality of life, so that they would have sufficient basic means for their subsistence appropriate to the geographical conditions and localities. Although 23 years have passed, and there have been some changes in the operational procedures so as to keep in line with the Government policies and the conditions of the time as appropriate to the facts, ARD still stick to the idea of integrated development all along.

Regarding the readjustment of the national rural development strategy called the "New trend in Rural Development" which has been in operation since the end of 1981 fiscal year and all through the 5th National Economic and Social Development Plan (1982-1986) until the period of the 6th National Development Plan, there have been readjustments of the trend of national rural development by fixing the procedures for all work units to operate under the administration of the National Rural Development Commission (NRDC) by giving importance in solving the rural problems that each locality is actually facing so that the Government Sector can send its personnel in to solve the problems correctly according to the felt needs of the rural communities, including the Government's attempts to provide various resources for all rural communities more justly. The tasks entrusted to ARD by the Government have greatly increased, because the rural development requires time and determination in solving the problems that have been accumulated over a long period of time resulting in making ARD to modify its procedures and organization, including to develop its capability and

efficiency in various aspects to be able to support more of the tasks assigned by the Government including to be able to carry out aggressive operations efficiently.

The principal idea

Ever since the beginning of the ARD operation, the principal idea of rural development has been the integrated rural development through the use of "Buddha Chedi Plan" which is the joint activities of Por Tor and Cor Sor Sor by using "Reaching, Assisting, and Joint Grouping", and has been developing its lines of operations in line with the situations all along until the present. The Government and the Ministry of Interior have assigned ARD to expedite the rural development according to the 4 following principles:

1. "Making long distance short" by expediting the construction of rural highways sufficiently throughout the country.

2. "Dustless villages" by expediting the improvement of high traffic rural highways, and cutting them through villages and large communities by constructing ARD concrete traffic surface or tarmac surface to prevent dust by the villagers taking part in doing so which is the direct way to distribute income among the villagers.

3. "Fighting against droughts" by expediting the construction of water resources, water distribution system and water reservoirs for utility and agricultural purposes in sufficient numbers all over the country.

4. "Upgrading the quality of life" to improve the standard of living of all the population living in the ARD construction areas by expediting the villagers to learn their occupations by using the basic structural resources to the maximum in order to reduce the cost of production and to increase the yield and income.

Line of operation

ARD operation has the aim to improve the villagers quality of living and welfare so that they are able to adapt themselves to the rapidly changing economic and Social Conditions. Therefore, the lines of its operation are laid down as follows:

(1) Formulation of ARD operational plans and projects by fixing the human and environmental development plans in conjunction with making the basic economic and social developmental activities support the economic and social development work by putting the stress on the villagers using the basic economic Structural resources constructed by ARD to the maximum benefit, especially the water resources development projects for agricultural promotion. These activities must be in line with each other and have clear-cut developmental objectives to upgrade the villagers' standard of living.

(2) Stressing on the development of the rural population to participate in development and solving local problems as much as possible in every stage so that they can administrate the development operations and can be self sufficient in the future.

(3) Formulation of operational plans for utilisation of personnel resource, machinery, equipment, and the existing ARD budget to the maximum efficiency.

(4) The economic and social development must coordinate with responsible principal organizations, and ARD. will give budgetary support for not over 3 years.

(5) Putting the stress on appropriate technology and utilising the local natural resources to the maximum benefit, including searching for cooperation and assistance from the Private Sector and other organizations.

The said procedures are the guidelines for operation in order to keep up with the changing national economic and social conditions which require accelerated development in order to efficiently keep up with the changing events.

Operational target

The operation in the manner of joint or integrated activities has been carried out in many forms in the past, such as the development of outstanding areas, development of primary integrated activity areas, development of total integrated activities areas (San Kampaeng Cooperative Village

and Huai Sat Yai Village), development on both sides of ARD highways, development of ARD water resources areas in the form of stressed areas, etc. Regarding the assignment of the target at present time and during the period of the 7th Development Plan, the Government aims to put the stress on distributing the income generally and fairly. Due to the rapid economic expansion, the assignment of the target must be able to support the expansion in various aspects in order to prevent the economic problems occurring to the total big picture of the nation as follows:

1. The construction and improvement of rural roads to meet the ARD standards at least 4,000 kms. per year should be the target for road construction. The primary data at present shows that there are over 80,000 kms. of roads that are not taken care of by any work units, thus making them delapidated. So they require improvement and reconstruction to bring them up to the standard. If this work is to be carried out on 4,000 kms. per year, it would take at least 20 years to do.

2. Regarding highway maintenance, ARD should fix the target for maintenance of all roads built by ARD in order to keep them in good condition and serviceable all year round by providing the maintenance machinery, including making small repairing machinery themselves, and using them to the maximum efficiency (or they might give the copy right to the Private Sector to produce them. This might be able to reduce the expenditure on purchasing machinery from abroad and might develop export production to the developing countries) in order to be able to carry out adequate repair and maintenance.

3. The dust prevention will be done by constructing ARD tarmac or concrete road surface which will be done on about 2,000 kms. per year. After this has been done on all the parts of the roads passing through all the villages, we must consider connecting the entire routes by hastening to consider connecting them to the high priority economic roads first until all villages are connected, and form a complete network throughout the country, by doing at least 2,000 kms. a year.

4. The target for provision of utility water should be set at drilling at least 3,000 artesian wells per year and at least 1,400 shallow wells per year and a target should be set at using electric pumps to pump water up from the artesian wells for distribution to the families or preparing to lay down village water distribution systems in the future.

5. The target for surface water development should be set at constructing at least 140 reservoirs and dams a year and deepening at least 400 ponds a year by constructing irrigation systems as water resources to support agriculture so as to be in line with the Government's policy in increase crop yields.

6. The fixation of economic and social targets has allocated the developing areas according various construction activities of basic economic structures as follows:

6.1 Development of villages located on both sides of ARD highways that have construction projects in each year, or that ARD has already constructed in the previous years, and have not had economic and social development work done as yet, is fixed that there should be development in at least 2 villages for 1 ARD highway. This form of development will enable to prompt the occupation, business, and rural youth development work. In the 1990 fiscal year, about 220 highways will be constructed. Therefore, at least 220 villages should be fixed as the development target. And in 1991 fiscal year, at least 500 villages should be fixed as the target depending on the number of the highways to be constructed.

6.2 Development of villages located around agricultural water resources of the reservoir and overflow-dam types that already have the construction projects together with the irrigation systems in that particular year or water resources of the said types that had already been constructed in the previous years by fixing at least 1 village in the area of the water resource per 1 water resource. This form of development will enable the promotion of occupation, business, and rural youth work, especially the agricultural occupation development by using the Agricultural Area Plan which fixes the areas receiving the benefits from water resources, canals, or the main and subsidiary irrigation system, and the Agricultural Area Plan, in

which the ARD officers have to play the role in supporting and assisting the farmers who receive the benefit in choosing the technology and seeds suitable for the land, climate, and marketing conditions, or other appropriate conditions. In 1990 fiscal year, ARD will construct 93 reservoir-dams and 68 irrigation systems. Therefore, it fixes at least 162 villages as the development target areas according to the Water Resources Construction Plan. Apart from this a part of the marsh pond excavation projects in 274 localities in 1990 will be carried out on large size marshes which can be used for crop growing. Therefore, they are fixed as another target for economic and social development in the 1991 fiscal year, because the constructed water resources can be used in the following years. Furthermore, in 1991 fiscal year, the budget allocation for water resources construction will be increased by about 100 million baht. Therefore, the total economic and social development target in this part is fixed at not less than 250 villages for operation as from 1991 fiscal year onwards.

6.3 The development according to the Dust Prevention Project on ARD highways, especially the part that prevents dust by constructing road surface with ARD concrete in that particular year, fixes that the youths in the villages that have the dust prevention projects are to participate in constructing the ARD concrete road surface. This form of development will be able to carry out the rural youth development operation in the 1991 fiscal year by fixing the Dust Prevention Program to be at least 2,000 villages, and the ARD Concrete Highway Construction Project to be about 1,000 villages. Therefore, the target for economic and social development is also fixed at about 1,000 villages.

The aforesaid targets and guidelines are for the purpose that various ARD operations would be integrated and that various activities should be in line and support each other, so that the rural inhabitants could benefit from the basic structural resources created by ARD for the highest benefit both in the production and the marketing systems, which would result in directly raising the income, which would finally lead to better living and higher quality of life according to the objective of the Government.

Project and Planning Division,
Office of Accelerated Rural
Development

March 1, 1990.

Supplementary Document For Use At Briefing
of
The Office of Accelerated Rural Development
Ministry of Interior

Planning and Project Division

February 1990

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Accelerated Rural Development

The Office of Accelerated Rural Development is in charge of functions assigned by the Government and other functions in accordance with the Royal Decree on the Organization of the Office of Accelerated Rural Development of the Ministry of Interior of 1976. The Office's duties and responsibility are to resolving problems in rural areas, assist the people to enable them to achieve a good standard of living. The objectives of the Office are to develop environment in pararell to the development of human resources. In other words, the Office engages in the development of economic infrastructure, together with economic and social development, through various activities which support each other to upgrade the quality of life of rural population. Besides, H.E. the Deputy Minister of Interior (Dr. Trairong Suwankhiri), who is responsible for work of ARD, has laid down a policy on ARD's operations to accelerate activities in 4 respects as follows:

1. "To make the remote near" by stepping up work on the construction of a sufficient number of roads to all rural districts throughout the country.

2. "Dust-free Villages." This involves the improvement of rural roads which carry a large volume of traffic and run through villages or large communities. This improvement will be by means of paving the road surface with ARD concrete or asphalt to do away with dust. Rural people are to be allowed to take part in the improvement work as this will amount to direct distribution of income to the rural people.

3. "Fight Against Aridity." In this case, work is to be accelerated to construct water source facilities, water supply systems and containers for storage of water for consumption, and to extend adequate and comprehensive promotion to agriculture.

4. "To upgrade the quality of life" by enabling the people in general to attain a better standard of living. Toward this end, the rural people will be encouraged to learn how to pursue their occupations by making use of resources created by the improved infrastructure to maximum benefit in terms of reduction of production cost and increase of production and income.

This document has been prepared for the purpose of providing supplementary information at a briefing on accelerated rural development activities. The document presents a description of tasks, responsibilities, manpower, and resources of ARD, policies, guidelines of operation, operation plans and the 1990-1994 annual budgets, in addition achievements and guidelines on development in the next period.

Planning and Project Division
Office of Accelerated Rural Development
Ministry of Interior

BACKGROUND OF
THE OFFICE OF ACCELERATED RURAL DEVELOPMENT

Establishment of the Office of Accelerated Rural Development

The Cabinet on September 10, 1963 appointed a Rural Development Planning Subcommittee to formulate a development plan that would generate real and speedy effects upon the rural people at sub-district and village levels. During that time, the Government began to be alive to the threat posed by the infiltration of communist terrorists in rural areas. The Government's policy then called for the preparation on accelerated rural development plans and required provincial administrative organizations to assume responsibility for the execution of work under the plans, which were then regarded as the tasks of local organizations.

The area of accelerated rural development operations in 1964 covered 6 provinces, namely, Ubon Ratchathani, Nongkhai, Sakon Nakhon, Loei, Udonthani and Nakhon Phanom. In 1965, the area was extended, bringing the number of provinces in the area up to 11.

Further, the Government enacted an Act on the Organization of the Office of the Prime Minister No. 4 of 1965, for the creation of an Office of Accelerated Rural Development, which has the status of a department attached to the Office of the Prime Minister. The Office, which was set up on January 26, 1966, was transferred in 1972 to the Ministry of Interior. In response to a Cabinet resolution on July 19, 1988, the Office's area of operations was expanded and covered 72 provinces.

RESPONSIBILITIES OF THE OFFICE OF ARD

Duties of the Office of ARD

The Office of Accelerated Rural Development is charged with the duties to overcome problems in rural districts by means of accelerating the development of economic infrastructure and economic and social development and to embark upon such combined development activities in an attempt to hasten the achievement of a better standard of living for the rural population.

Policy of ARD

The Office of Accelerated Rural Development has a policy to accelerate the development of environmental conditions in parallel to the development of people by means of engaging in construction and maintenance of roads, development of water sources, and support and promotion of occupations, business and development of rural youths. The tasks are designed to bring about a balance in basic requisites essential to the living of the rural people. Emphasis is placed on activities in underdeveloped rural areas, medium-developed areas for developed areas for the sake of security. For advanced areas, work will be confined to certain categories of activities as may be necessary. The above are in response to both the national policy and the policy of the Ministry of Interior.

Objectives of Accelerated Rural Development

The objectives of accelerated rural development are to intensify efforts to enable the rural people to have better lives and enjoy a better standard of living through their being provided with basic necessities for living commensurate with their stations of life and local conditions, and to support work in the field of internal security.

Guidelines for ARD Work

The prosecution of the task to reach the objectives in line with the policy, which stresses simultaneous development of environment and human resources, represents the conversion of basic concepts and philosophy in rural development into practical guidelines consonant with the responsibilities of the Office of Accelerated Rural Development to bring real benefits to the rural people. The guidelines for the operation are as follows:

1. In devising accelerated rural development plans and projects, it is required that plans be made for simultaneous development of human resources and environment. Further, work to develop economic infrastructure should help faster economic and social development projects. Emphasis should be on efforts to encourage rural people to make use to the utmost of resources brought about by the Office of Accelerated Rural Development in its development of infrastructure, especially facilities already constructed or to be constructed under a water sources and construction project for assisting agriculture. The above plans and projects amount to the consolidation of activities in the economic, social and security fields. These activities must support each other continuously and there must be clear objectives to develop and raise the quality of life of the rural population.

2. In development work, emphasis is to be placed on efforts to get the rural people to take part as much as possible in every step of development process and in resolving problems in localities. The purpose is to enable people groups to later manage development work by themselves after the conclusion of projects and eventually to be in a position to help themselves.

3. Plans of operations in all fields must be prepared at the same time. Under such plans available human resources, machinery, and equipment must be utilized in the most efficient manner possible. In this respect, all sectors' efforts must be combined systematically on a complete circuit basis in order that results of the development work may quickly become obvious.

4. In the execution of economic and social development work, coordination of work with the principal agencies responsible for such work is required. Conclusion of the projects must be definitely scheduled since the Office of Accelerated Rural Development will provide budgetary support for not more than 3 years.

5. Emphasis is to be placed on the employment of proper technology and utilization of local resources to obtain maximum benefits, as well as on the seeking of cooperation and assistance from private sectors and other government agencies.

6. The system of Kor Chor Chor, will be adhered to in the formulation of plans and projects.

The above-mentioned guidelines are in fact being followed in the performance of work. In the period of the 6th National Economic and Social Development Plan, the Office has stressed the development of men or human resources to enable them to adjust themselves and to make use to the maximum benefit of facilities already constructed or to be constructed by the Office of Accelerated Development in the development of economic infrastructure in order to really improve their standard of living and the quality of life. Further, work will be intensified on the organization of development activities in areas on both sides of ARD roads and attention will focussed on the development areas around water source facilities already constructed. Regard must be paid to the development of rural people groups so they may be able to work with greater efficiency in production, in the increase of production and reduction of production cost as well as the application of appropriate technology. Such technology includes the use of labor-saving machines that require low investment and can be adapted to many other rural chores, the conversion of produce, packing of produce and marketing. In addition, it is necessary to find measures to keep those production activities going on in a complete circuit. Action is also being taken in other fields such as in the overcoming of unemployment and increase of income by employing local labor in the project to pave roads with ARD concrete, the solving of problems regarding shortage of water for use and drinking by building cement tanks for storing water, etc.

Working Areas of ARD

In 1964, there were areas of rural development in 6 provinces, namely Ubon Ratchathani, Nongkhai, Sakon Nakhon, Loei, Udonthani and Nakhon Phanom, but later rural development was extended to an additional number of 51 provinces. Since the 1989 fiscal year, the areas of operations have been expanded to cover 15 other provinces. At present, the areas of operations exist in all 72 provinces throughout the country except Bangkok.

RESPONSIBILITY OF THE OFFICE OF ARD

1. Development of Economic Infrastructure. It consists of 3 tasks as follows:

(1) Construction of Roads and Drainage Structures

- Construction of Roads. This is the construction of ARD standard roads, Development Roads Type 1, and roads paved with asphalt and ARD concrete.

- Construction of Drainage Structures. This involves the construction of reinforced concrete bridges with double and single traffic lanes and round reinforced concrete pipes.

- Road Maintenance. This concerns routine repair, repair of traffic surface, repair and rebuilding and repair of asphalt-paved roads.

(2) Development of Water Sources

- Development of water sources for use and drinking such as artesian wells, shallow wells and pools for storage of rainwater, and making of water cement tanks and cement jars.

- Development of water sources for promotion of agriculture such as water reservoirs, weirs, dredging of ponds and pools and construction of water supply systems.

- Maintenance of Water Sources. This concerns maintenance and repair of artesian wells, dams and large-scale weirs.

(3) Clearing of Forests and Grading of Ground For Farming.

This task concerns the clearing of forests and grading of ground, construction of dikes and drainage.

2. Economic and Social Development. This consists of the following 3 tasks:

(1) Promotion of Occupations and Business. The task concerns promotion extended to rural people in the fields of production and marketing.

(2) Development of Rural Youths. This is connected with the organization of youths groups, training, vocational demonstrations and rehabilitation of local resources.

(3) Joining of Rural Masses. The task concerns dissemination of information for the public, dissemination of mass media, holding of exhibitions on production of media, promotion to the people's knowledge and understanding, provision of rural people and operating officials with knowledge, and basic social services.

ORGANIZATION OF OFFICE OF ACCELERATED RURAL DEVELOPMENT

The Office of Accelerated Rural Development is a department level agency, of which organization is made up of central administrative units, i.e., divisions and ARD Operations Centers, and provincial administrative units, namely Accelerated Rural Development Offices in ARD areas in all provinces. Details are as follows:

1. Central Administration

- Central administration is composed of 18 divisions and division-level units.

- Central administrative units in provinces are the 10 ARD Operations Centers. In the initial period, there were 6 centers but later, in the 1990 fiscal year, 4 additional centers were set up in responses to a Cabinet resolution adopted on May 2, 1989.

2. Provincial Administrative Units. They are the Provincial Offices of Accelerated Rural Development in 72 provinces. All accelerated rural development sections formerly attached to local administrative organizations were transferred to the ARD Provincial Offices in accordance with a Cabinet resolution passed on June 20, 1989.

The Line of Command is illustrated in the organization chart.

MANPOWER: GOVERNMENT OFFICIALS AND REGULAR EMPLOYEES

1. Central Units. A total of 4,670 persons 2,105 government officials, 2,418 regular employees, and 147 temporary employees.
2. Provincial Units. 190 persons, all being government officials.
3. Local Units. A total of 6,778 persons; 3,192 government officials and 3,586 regular employees (who are in the course of being transferred to provincial units in compliance with the Cabinet resolution of June 20, 1989).

The manpower consisting of government of officials and employees of ARD will have to be adjusted and increased in line with the expansion of areas of operations and additional responsibilities.

MACHINERY

1. Vehicles and cars	1,424 cars
2. Construction machinery	3,448 units
3. Construction equipment	1,712 pieces
Total	6,584 units

Machinery for performing various activities have been organized into 387 sets. They are, for instance, for construction of standard ARD roads, maintenance of roads and digging of water sources and construction of water source facilities. Those sets of machinery are available at 28 ARD Offices in 38 provinces and 6 ARD Operations Centers. In the 1990-1991 period, additional sets will be provided for the 4 new centers and the provinces where machinery sets are not yet available.

OPERATING BUDGET AND PLANS/PROJECTS OF OFFICE OF ARD

ARD activities from the past up to the present have gained the confidence of the Government. The Government has allocated a budget to ARD to enable it to undertake work in various areas to resolve problems connected with the rural people in the fields of development of environment and human resources. In 1965, ARD received an allocation of 61 million. At present, ARD has been entrusted by the Government and the Ministry of Interior with a variety of assignments and required to step up the development of economic infrastructures and economic and social development in rural areas. The allocation of the Office was thus increased to 3,281 million baht in the 1989 fiscal year. In the 1990 fiscal year, the allocation granted to ARD was in the amount of 7,749 million baht, being more than double the 1989 allocation. The reason is that ARD has performed its work with speed and efficiency and that it is the only agency which is fully equipped with both machinery and manpower. For the 1991 fiscal year, the Ministry of Interior has already approved a tentative budget in the amount of 11,963 million baht for ARD.

1990 Budget

<u>Rural Development Plan</u>	7,690,352,300	Baht
- General Administration	888,998,400	Baht
- Planning and Project Control	4,764,700	Baht
- Training on Technical Supervision	9,953,000	Baht
- Data Survey, Monitoring and Evaluation	7,340,500	Baht
- Work on Joining of Rural Masses	5,173,000	Baht
- Construction of Rural Roads	1,996,886,000	Baht
- Rehabilitation and Maintenance of Roads	2,520,887,000	Baht
- Construction of Rural Water Source Facilities	1,922,531,400	Baht
- Maintenance of Rural Water Source Facilities	65,437,500	Baht
- Foreign Aid Contribution Projects in the Development of Water Sources at Thai-Cambodian Border	7,130,400	Baht
- Promotion and Development of Occupations	21,250,400	Baht
- Project on Establishment of ARD Operations Centers	240,000,000	Baht
<u>Children and Youths Development Plan</u>	8,920,500	Baht
- Development of Rural Youths	8,920,500	Baht

Internal Security Maintenance Plan 50,000,000 Baht

- Construction of Roads in area of the
First Army Area 0 Baht

- Construction of Roads in Areas of the
Second Army Area 11,000,000 Baht

- Construction of Roads in Areas of the
Third Army Area 39,000,000 Baht

- Construction of Road in Areas of the
Fourth Army Area 0 Baht

Tourism Promotion and Development Plan 540,000 Baht

- Project on Obtaining of OECF Loan for
Development and Promotion of Tourism 540,000 Baht

Total 7,749,812,800 Baht

Plans and Projects of 1990 Fiscal Year

1. Construction of Roads and Water Drainage Structures

(1)	Roads	
-	Standard Roads	2,032 Km.
-	Development Roads Type 1	100 Km.
(2)	Drainage Structures	
-	Reinforced Concrete Bridges	13,143 M.
-	Reinforced Concrete Pipes	197 locations
-	Drain Ways	178 M.
(3)	Construction of Asphalt-paved Roads	130 Km.
(4)	Rehabilitation and asphalt paving	1,369 Km.
(5)	ARD Concrete Roads	630 Km.

2. Development of Water Sources

(1)	Water Reservoirs/Weirs	91 locations
(2)	Water Supply Systems	69 locations
(3)	Dredging of Ponds/Digging of Water Pools	281 locations
(4)	Drilling of Artesian Wells	1,940 Wells
(5)	Digging of Shallow Wells	1,350 Wells
(6)	Construction of Cement Water Tanks	17,900 Tanks

3. <u>Promotion and Development of Occupations</u>	1,026	Groups
- Promotion and Development of Livestock Raising	6	Groups
- Promotion and Development of Aquatic Animal Raising	25	Groups
- Promotion and Development of Crop Cultivation	42	Groups
- Promotion and Development of Cottage Industry and Handicraft	25	Groups
- Follow-up on and Coordination of Operation of Rural Groceries	700	Groups
- Dissemination of Basic Technical Knowledge in Agricultural Business	27	Groups
- Training of Farmers in Development of Existing Groceries	20	Groups
- Project on Support of Microbial Growth Promoting Substances in coordination with a Project to Promote Use of Fermented Fertilizer by Rural People in Increase of Agricultural Production	180	Groups
- Training on Economic and Social Development	1	Group

4. Development of Rural Youths

- Organization of Youths Groups (Training to Lay a Foundation)	40 Groups
- Training Courses for Advisers to Youths	60 Persons
- Training of Youth Leaders	120 Persons
- Training of Youth Leaders of Southern Border Provinces	120 Persons
- Training of Outstanding Youths	120 Persons
- Rehabilitation and Training of Youths	1,995 Persons
- Training on the Use of ARD Water Source Facilities	200 Persons
- Training to Disseminate Basic Technology in conjunction with Ministry Science.	200 Persons
- Dissemination of Basic technology regarding vocations and rehabilitation of local resources	350 Groups
- Training/Demonstration of the Making of Cement Water Tanks	300 Villages
- Follow-up and support to projects	72 Provinces

5. Joining of Rural Masses

Work to provide publicity on ARD activities in 72 provinces.

ESTIMATES FOR PLANS AND 1991 ANNUAL BUDGET

<u>Rural Development Plan</u>	11,766,328,669	Baht
- General Administration	1,205,451,500	Baht
- Planning and Project Control	5,241,300	Baht
- Training on Technical Supervision	15,376,900	Baht
- Data Survey, Monitoring and Evaluation	8,080,000	Baht
- Work on Joining of Rural Masses	9,205,170	Baht
- Construction of Rural Roads	2,840,000,000	Baht
- Rehabilitation and Maintenance of Roads	3,747,766,830	Baht
- Construction of Rural Water Source Facilities	2,480,000,000	Baht
- Maintenance of Rural Water Source Facilities	83,000,000	Baht
- Foreign Aid Contribution Projects in the Development of Water Sources at Thai-Combodian Border	7,772,136	Baht
- Promotion and Development of Occupations	58,434,833	Baht
- Project on Establishment of ARD Operations Centers.	1,306,000,000	Baht
<u>Children and Youths Development Plan</u>	18,022,700	Baht
- Development of Rural Youths	18,022,700	Baht

<u>Internal Security Maintenance Plan</u>	179,440,000	Baht
- Construction of Roads in Areas of the First Army Area	124,940,000	Baht
- Construction of Roads in Areas of the Second Army Area	2,500,000	Baht
- Construction of Roads in Areas of the Third Army Area	47,000,000	Baht
- Construction of Roads in Areas of the Fourth Army Area	5,000,000	Baht
Total Budgetary Estimates of Office of ARD	11,963,791,369	Baht

AID FROM FOREIGN COUNTRIES

<u>Completed Projects</u>	Amount (million baht)
- United States (1964-1975)	1,236.39
- Australia (1972-1981)	322.02
- Japan (1967-1969)	4.23
- Asian Development Bank (1969-1971)	4.20
- World Bank (1974-1976)	253.80
<u>Projects in the Course of Operation</u>	
- Germany (Development at Thai-Cambodian border, 1982-1989)	269.2
- Germany (Study on the Setting Up of an Eastern Center, 1988)	7.5
- Australia (Thungkula Ronghai, 1984-1989)	22.2
- Japan (OECF, Improvement of Roads To support Thor Thor Thor. (1988-1992)	98.0
- Japan (JICA, Drilling of Artesian Wells in the Northeast, 1989-1992)	256.0
- Belgium (Study on Use of Lignite Ashes For Construction of Roads, 1986)	-
- Britain (Study on Maintenance of Roads, 1988)	-

In addition, there are 6 other projects which are being developed and for which aid will be requested.

PRIORITY TASKS ASSIGNED TO ARD BY GOVERNMENT AND
MINISTRY OF INTERIOR

The responsibilities of the Office of ARD are to tackle rural problems with the aim to raising the standard of living of the rural people so that they may enjoy good living and a better quality of life in accordance with the Ministry of Interior's policy on the "alleviation of hardships and promotion of happiness." This year, ARD has received the Government's instructions to accelerate its operations in various sectors to cope with the economic and social situation, which is developing swiftly; The tasks concern:

1. Construction of ARD Roads and Bridges

- To accelerate the construction of roads in a sufficient number to all rural districts throughout the country and to obtain results in the construction work within the 1989 fiscal year.

- To accelerate the construction of reinforced concrete bridges to replace wooden bridges which are damaged, and the construction reinforced concrete bridges in localities where no bridges are in existence, as well as to prepare Bailey (steel) bridges for use in case existing bridges are damaged in accidents or for use in emergency.

2. Prevention of Dust on ARD Roads to Protect the Health of the Rural People

- To carry out asphalt or concrete paving of ARD roads which carry a large volume of traffic and which pass through villages or large communities. In concrete paving of ARD roads, the rural people will not only love these roads and feel like being their

owners as a result of their participation in the construction of the roads but will also get income in an amount equal to 25 per cent of the construction cost.

- To take action to prevent dust on completed ARD roads on which dust prevention has not yet been effected. Dust prevention work will be done on a 1-kilometer stretch in each of some 4,000 villages and this work is to be completed within the term of office of the present Government. This is for the purpose of doing away with annoyance caused by dust, which is also harmful to the health of the rural people.

Further, ARD will consider extending asphalt paving on ARD roads in such a radius that road dust will not be blown into villages.

3. Construction of Water Source Facilities and Cement Water Tanks

- To intensify construction of water source facilities for consumption and for support of farming in an adequate number to satisfy demand of rural communities and to erect water supply systems from such sources to enable farmers to use water for farming for the purpose of increasing their production and income. In the Northeast in particular, such systems must be compatible with long-term irrigation projects of the Ministry of Interior.

- To expedite work to encourage the keeping of containers for storage of potable water for use during the dry season, especially cement water tanks which can be easily built at an economical cost and which the rural people can really make use of.

4. Development of the quality of life of the rural people

through the development of human resources (both the rural people and rural youths) and promotion of occupations. This task also falls within the scope of economic and social development in the rural areas. This development is undertaken by ARD for the following 3 reasons:

(1) It amounts to repayment to rural land owners who have made sacrifice by donating their land to authorities for sites of construction of ARD roads, bridges and water source facilities.

(2) It is the development of people as well as promotion of occupations to increase efficiency in production and their income. Besides, it allows participation by rural people in development projects which are executed in parallel to and in continuation of the development of economic infrastructure. ARD will grant budgetary support to economic and social development at each locality for a period of not more than 3 years.

(3) It represents the utilization of operating units in the areas and resources, i.e., personnel, materials and equipment, for the benefit of the rural people in the development of vocational knowledge and skills. The task concerns promotional work and training of rural people (both farmers and rural youths) in agriculture, handicraft, cottage industry, business economics and various technical vocations.

5. Development of Small Machinery Sets

At present (1989), the Office of ARD has to maintain about 18,600 kilometers of roads already built. In the maintenance work, it is necessary to use construction machinery of ARD which has seen service for 10 years or more. Items of machinery have been divided into only 126 sets,

each being capable to maintenance of 100 kilometers of roads a year. In the circumstances, overall maintenance cannot be performed with efficiency. In order to maintain roads with efficiency and at an economical cost, ARD has been instructed by the Government to take prompt action to develop small sets of maintenance machinery to increase road maintenance efficiency. The small maintenance sets each will be capable of maintaining 50 kilometers of roads a year.

In 1990, a budget of 1 million baht has been granted for producing 22 sets of small road maintenance sets. If production can be expanded, it will help reduce spending of funds on the purchase of machinery from abroad. Besides, it will contribute to the development of mechanical machine industry in Thailand.

6. Improvement of Rural Roads Not Under Responsibility of Other Agencies

The Ministry of Interior has given an assignment to ARD to conduct a survey and undertake maintenance of rural roads which are not under the responsibility of other agencies. These are rural roads built with budgetary funds under the Creation of Rural Job Opportunities Project, whereby villagers jointly constructed such roads. ARD will improve these roads and turn them into all weather roads in conformity to ARD standards. They are to be registered as ARD roads and will be kept in good condition. At present ARD Offices in all provinces are conducting surveys of the roads which will be transferred to their care.

7. Assistance to Rural People in Case of Public Disasters

The Ministry of Interior has assigned ARD, an agency which is fully equipped with machinery and officials, with the task of supporting measures for prevention and relief in the case of public disasters which cause damage and hardships to the rural people, especially in the case of immediate hardships. This is because ARD, working like a commando unit, is capable of taking quick and immediate action and has already demonstrated its efficiency in the accelerated rural development work. In this respect, ARD will negotiate with the Department of Local Administration on a request to use the latter's budget on civil defense for spending on machinery and operating officials. ARD has requested that an allocation be made in the 1991 fiscal year for acquiring sets of machinery and setting up of mobile teams for operation in an emergency, and ARD will assign its personnel in provinces and of the ARD Operations Centers to such teams. At the same time, improvement will be made of the communication system essential to disaster relief operations in rural areas.

PERFORMANCE OF ARD FROM PAST TO PRESENT

Performance from 1965 to the present time may be summarized as follows:

Construction of roads	25,371	Kilometers
Rehabilitation/asphalt paving	1,250	Kilometers
Reinforced Concrete bridges	103,762	Meters
Reservoirs/weirs	523	Localities
Digging and dredging of ponds and pools	1,863	Localities
Artesian wells, shallow wells	19,041	Wells
ARD concrete roads	223	Kilometers
ARD youth groups	603	Groups
Occupation development groups	2,424	Groups
Rural groceries	1,598	Localities

Royally-Initiated Projects

Roads	459	Kilometers
Water source facilities	79	Localities

GUIDELINES FOR FUTURE ARD WORK

The situation with respect to economic and social development in Thailand has changed rapidly. In the period of the 7th National Development Plan, expansion in various sectors will be on a substantial upward trend. Added to that will be a change in proportions of the structure of rural population and urban population. In the presence of the policy of national development, which aims at distributing income to the people in general, and economic growth, rural areas will continue to be an important base of economic expansion. For they are the sources of raw materials and markets for various items of produce. In this respect, ARD will have to continue to respond to the Government's policy with urgency. Therefore, it is appropriate to establish guidelines for operations as follows:

1. Increase of Ability and Capability. Work to develop economic infrastructure in rural areas is still in an inadequate volume. At present, there are at least 80,000 kilometers of roads, or about 75% of the total rural roads (other than ARD roads and roads built by Public and Municipal Works Department and the Highways Department), which do not measure up to standards. They have not been sufficiently maintained. As such, they cannot be counted as a complete network to provide the people with convenience in communication and transport. In order that ARD may possess ability and increase its efficiency to quickly overcome problems in the rural areas, it is expedient to lay down guidelines as follows:

1.1 To take prompt action to increase the capability of ARD Offices in all provinces to make it possible for them to handle road maintenance by themselves. Sets of proper machinery for road maintenance are to be procured for ARD Offices in provinces where such machinery is not yet available, and machinery will be provided in a sufficient quantity for the lengths of roads under the offices' responsibility. For ARD Offices in provinces where machinery is already available, their capability is to be boosted to such an extent that there will be adequate machinery for undertaking the maintenance of roads. In this case, an allocation will be provided for the purchase of new machinery to replace those items of machinery of which service life has expired, and more small sets of maintenance machinery will be produced each year (by ARD). Moreover, additional ARD Operations Centers will be set up as may be necessary.

1.2 Clear division of responsibilities between the ARD Operations Center and the ARD Office in each province will be effected as under:

(1) Development of Rural Water Sources

- The ARD Operations Center will be responsible for conducting surveys, design and construction of water reservoirs, weirs, and water supply systems and digging and dredging of ponds and pools.

- The Provincial ARD Office will conduct surveys and design and undertake construction work connected with digging of wells and dredging of ponds.

- Drilling of artesian wells, digging of shallow wells and development of artesian wells should be under the responsibility of the ARD Operations Center in the area concerned.

- The maintenance of artesian wells and shallow wells and repair of surface water source facilities are to be under the charge of the Provincial ARD Office,

(2) Construction of Rural Roads

- Each ARD Operations Center will perform a survey and design of 300 kilometers of roads a year and construct at least 150 kilometers of roads a year. The Center will handle construction by itself.

- Each Provincial ARD Office will conduct a survey and design of about 50 kilometers of roads a year.

- The Provincial ARD Offices which possess road construction machinery will each construct about 20 kilometers of roads a year.

- As for construction of roads which is beyond the capability of the Provincial ARD Offices and the ARD Operations Centers, the Office of ARD will award contracts for such construction.

(3) Maintenance of Roads

- Any Provincial ARD Office which possesses road maintenance machinery will be responsible for maintenance of roads in its province to the full capacity of the machinery.

- Maintenance of roads that is beyond the capability of any Provincial ARD Office will be undertaken by the ARD Operations Center, which is to make use of the available maintenance machinery.

- For maintenance of roads which is beyond the capability of the Provincial ARD Office and the ARD Operations Center, contracts will be awarded for such work.

(4) Work Related to Main Projects

- In regard to work which is related to a principal work or a principal project, such as construction of reinforced concrete bridges, asphalt paving of road surface, and paving of roads with ARD concrete, the unit responsible for the work or the project may award contracts or handle the construction work by itself as may be appropriate in each case and consistent with its ability to supervise the work.

1.3 The ARD Operations Centers will prepare sets of machinery and vehicles for their own disaster relief teams which can serve as fast mobile units of the Ministry of Interior to render speedy and timely assistance to people in the case of natural disasters.

2. Development of Economic Infrastructure

2.1 In the construction of roads and asphalt paving of ARD roads, areas for prevention of dust will have to be expanded by means of asphalt paving and ARD concrete paving of roads. Such paving is to be extended throughout the lengths of roads from the original road paving which was previously confined to road sections that pass through villages. Such expanded paving is to be done particularly on

roads which have economic return at a high rate since this will have effects on the people's health and on stimulation of production and economics of the country as a whole.

2.2 In the construction and improvement of roads, planning must be for a complete network which will provide equality.

2.3 In the development of surface water sources of every type, emphasis should be placed on the use of water for promotion of agriculture so that the people may really derive benefits from such water sources in increasing their production.

3. Economic and Social Development. In the period of the 7th National Development Plan, emphasis is placed on the distribution of income and on the use of "people" as the mechanism of development, which is aimed at creating able and good people who have a better quality of life. Part of ARD's responsibilities is to speed up the section of economic and social development work that is under the responsibility of ARD. This concerns areas where facilities have been constructed under the infrastructure development. They are areas on both sides of ARD roads and those which derive benefit from surface water source facilities constructed by ARD. The aim is to bring about maximum benefits in these areas in terms of reduction of production cost and increase of production and income through various activities of ARD in the development of occupations appropriate for each area and ARD work in the fields of business economics and youth development. This will be conducive to a better standard of living for the people in general.

4. Fixing of Future Targets. In the wake of fast economic expansion as mentioned earlier, targets in various sectors to be set by ARD must be such that they will be able to cope with expansions in different fields to prevent economic problems in the country's overall picture. Targets will be as under:

4.1 In the construction of rural roads, a target for the construction and improvement of roads to reach ARD standards should be at least 4,000 kilometers a year. Preliminary data indicate that at present there are more than 80,000 kilometers of roads which are not under the charge of any agency. This has accounted for deterioration of the roads, which must be improved or rebuilt to conform to standards. If work is performed only 4,000 kilometers of roads a year, it will take at least 20 years for improvement and rebuilding of all those roads.

4.2 In the maintenance of roads, ARD should fix a target to maintain all the ARD-constructed roads in good condition for use in all seasons. This can be done by the procurement of machinery for road maintenance as well as maximum production of small maintenance sets by ARD so that adequate maintenance can be performed. (Alternatively, a patent might be granted to the private sector to produce such sets on an industrial basis, since this can help reduce spendings on the purchase of machinery from abroad, while production of such sets can be developed for export to other developing countries.)

4.3 Prevention of dust by paving of roads with asphalt or ARD concrete is to be done on about 2,000 kilometers of roads each year. After completion of the work on the sections which pass through all villages, consideration must be paid to paving the entire lengths of roads. Priority should be given to roads which have economic return at a high rate and work can be continued till paving of the entire network

of roads is accomplished. At least 2,000 kilometers of roads will be paved each year.

4.4 For the provision of water for consumption, a target should be that at least 3,000 artesian wells are drilled and at least 1,400 shallow wells should be dug in each year. Further, it is desirable to set a target for the use of electric water pumps for drawing water from artesian wells for supply to households or for the preparation of tap water supply systems for villages in future.

4.5 In regard to surface water sources, an annual target to be set should be for the construction of at least 140 water reservoirs and weirs and digging and dredged of at least 400 ponds. Water supply systems are to be erected so that these water sources can be used for supply of water to farming, which is also consistent with the productivity policy.

4.6 In setting a target in the economic and social development field it is necessary to designate at least 2 villages on each ARD road and construction of at least one place of surface water source facilities for each village as a target in areas to be developed. This will enable the people to make use of the resources to maximum benefit. An allocation for this task is to be determined in a manner consistent with the development of economic infrastructure mentioned in Items 4.1 - 4.5 above.

Action to increase ability and capability at the same time as the adjustment of guidelines for development of economic infrastructure and economic and social development through establishing clear-cut targets in line with the country's future economic growth as described above represents part of an aggressive measure that will enable the Ministry of Interior to alleviate hardships and promote the happiness of the people, to respond to national development and to cut down disparity between the rural and the urban, apart from providing the people with a really good standard of living and a better quality of life.

CONCLUSION

The work of the Office of Accelerated Rural Development from past to present (1966-1989) was done in several aspects in rural areas according to the policy of each Government and period. In the past it emphasized on security of the country through the process of economic and social development so that rural people could have better life and way of living. The operation of ARD was based on concept of Integrated Rural Development by developing both economic infrastructure in rural areas and human resource (i.e. rural people) development in form of economic and social development and having them support each other to achieve the objectives of enhancing life quality of rural people so that they could have basic living factors sufficient and suitable for the situation in their rural region. Even though in the past 23 years operational guidelines have adjusted to be in consistent to the policy of the Government and situation in several periods, in fact ARD have still used the concept of Integrated Rural Development up till now.

The rural development of ARD cannot be achieved if there is no support from the people. Participation of rural people in developing their own local area is the important factor in development process. ARD have tried to urge rural people to participate in decision making, proposing necessary activity groups in the process to have rural people participate in each stage of activities and projects supported by ARD or as much as possible. The officials of ARD in sub-district level are their advisors and supporters as change agents so that the goal of self-reliance of rural people shall be achieved.

The operation of ARD having rural people participate in the work has been carried out successfully by officials of ARD in provincial and sub-district levels working close to the people. Furthermore, ARD official from head office must have knowledge, understanding and have a chance to gain experience in development concerned. The Office of ARD has undergone training of these officials in the fields of know-how, technology, innovation, concept, skill and psychology so that they are mindful to urge people to be enthusiastic in developing local areas.

Office of ARD has grown up and come to the 25th year having solid basis. Even if in some periods, ARD have had certain problems and obstructions, they have tried to develop their capability to effectively correspond to the Government's policy to make progress to rural development and to rapidly improve rural people's way of living and quality of life.

Planning and Project Division

Office of Accelerated Rural Development

