INTEGRATED RURAL AREA DEVELOPMENT

IN WEST PASAMAN / WEST SUMATRA

Results of an
Indonesian-German
Project Finding Mission

Abridged Version

May 1979

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1 INTRODUCTION

Within the framework of the German-Indonesian agreement on bilateral co-operation one of the points of emphasis of the development-policy engagement of the Federal Republic of Germany has been in the province of West Sumatra. Since the end of the sixties a multiplicity of technical and financial co-operation measures have been put into effect there. The principal executant of these measures has for some time been the Agricultural Development Project (ADP). The German-Indonesian agreement on this ADP operation expires at the end of 1979. In accordance with an application by the Indonesian central government it is intended to continue ADP operation in West Sumatra beyond that date. In this connection the new activities are to be concentrated, within the framework of an integrated rural development programme, on West Pasaman, a peripheral sub-region in the northwest of the Province of West Sumatra, occupying an area of approximately 4,2oo km^2 or some 1o% of the area of the Province, and inhabited by nearly 18o,ooo persons (1978) or 6% of the population of the Province.

The objective of the short mission was

- to examine the practicability of a further engagement by the German side in this area against the background of the development-policy objectives of both sides;
- to work out proposals for the concrete shaping of the new project, as well as
- to determine the administrative, financial and personnel requirements for the implementation of the project.

To perform this task an Indonesian-German group of experts was set up, consisting of the following persons:

- Dr. Thamrin NURDIN (BAPPEDA of West Sumatra Province)
- Drs. ASFARUDDIN (Andalas University Padang)
- Drs. FACHMY (BAPPEDA)
- Musyair ZAINUDDIN (BAPPEDA)
- NUSWIR (BAPPEDA)
- Dr. Heiner DÜRR (Team leader; Geographical Institute, TU Munich)
- Karl FASBENDER (HWWA-Institut für Wirtschaftsforschung-Hamburg)
- Heinke HEESCH (HWWA-Institut für Wirtschaftsforschung-Hamburg)
- Dr. Max SAURE (Landwirtschaftskammer Hannover)
- Dr. Hansgünter SCHÖNWÄLDER (German Agency for Technical Cooperation (GTZ), Eschborn)

This team was temporarily supplemented by:

- Karl G. BASTEN (TAD Samarinda),

who was concerned principally with the question of computer employment with the provincial authorities.

The group was in Indonesia from 4.3. until 31.3. and during that time accomplished a work programme with the following points of emphasis:

- Jakarta: Preliminary conversation (German Embassy, Ministry of Agriculture; only German team members)
- Padang: Introductory conversations; collecting of project ideas from bodies at provincial level; discussions with scientists of Andalas University;
- West Pasaman: Journeys to selected sub-areas and project locations; contact with the Kabupaten Pasaman administration;

- Padang/Bukittinggi: Conversations and collection of information from ADP and provincial authorities; summarization of provisional results in an English preliminary paper;
- Padang: Submission and discussion of the preliminary paper with appropriate representatives of the provincial government; courtesy call on the Governor of the Province;
- Jakarta: Incorporation of the Indonesian contributions to the discussions into the short paper; discussion of the paper with the central government departments concerned (Department of Agriculture, Department of Home Affairs, BAPPENAS, etc.)

The prerequisites, both in content and institutionally, of the implementation of this work programme were favourable. Very up-to-date extensive analyses and starting points for planning are available for the project area envisaged. Some of these were well known to the German and Indonesian authorities concerned and therefore provided a suitable basis for the work of the mission.

The many-sided co-operation of the group of experts with German and Indonesian bodies was smooth. This is true both of the ADP staff and of the Indonesian authorities at central, provincial and Kabupaten level, who gave the mission every possible support even though its stay in Indonesia came right in the final phase of preparations for the third Five-Year Plan.

The team was able to base its work on the following studies:

(1) The two-volume study "Development Plan for West Pasaman/Sumatra" (1975), prepared by a German consulting team;

(2) The Draft Final Report of an integrated plan of measures (o3/1977) submitted by the West Pasaman Development Board;

(3) The multi-sectoral list of projects prepared by the Kabupaten administration in Lubuksikaping in preparation for the third Five-Year Plan of the Province of West Sumatra (12/1977);

(4) The paper "Agricultural Development Project (ADP) in West Sumatra after 1979" (4a) prepared by the ADP team and the relevant reactions by the provincial government in Padang (4b) (12/1978 - o1/1979);

(5) The "Master Plan" for UNICEF activities in Indonesia which lists West Pasaman as a focal region (12/1978).

2 A STRATEGY FOR REGIONAL DEVELOPMENT IN WEST PASAMAN

In order to identify feasible approaches for development measures, the project area West Pasaman must be put in the national, provincial and district perspective. This analysis shows that the socio-economic conditions in West Pasaman are below provincial averages in many respects. Seen on the background of the above-mentioned objectives, this fact will urge both Indonesian and foreign agencies to spend above-average development means for West Pasaman. It should be pointed out that this planning approach will lay stress on the economic and social aspects, but it should not underestimate cultural, political and administrative aspects.

The main reason is that social and economic factors can more easily be operationalized and quantified. This immanent selection of aspects should be kept in mind when using terms like "integrated rural (or regional) development". In any case the cultural dimensions of development must be kept in mind. It is felt that the Indonesian side must make a major contribution here.

For the reason outlined above the chief objective of regional development will be the reduction of regional (or spatial) disparities. Since West Pasaman is lagging behind national and provincial conditions, all development measures should contribute to

- an increase of the social and economic welfare of West Pasaman's population;
- an increase of local job facilities;
- the fulfilment of the basic needs of as many West Pasaman's population as possible.

The basic requirement for the implementation of a programme as outlined above is the coordination of all sectoral development measures. This in turn requires manpower for planning well above the average.

There are various alternatives to bring about the necessary harmonization of multi-sectoral planning and implementation:

1. Subdivision of the area according to natural potentials or land capability (such as reserves for conservation forests, logging areas, areas for irrigation, fisheries potentials, and tree crop potentials). Such a selective approach is manageable; however, it neglects the secondary and tertiary economic sectors, and tends to ignore the social and cultural aspects.

2. All measures will be simultaneously implemented in the whole planning area. For lack of funds and personnel, this comprehensive approach must be ruled out.

3. According to the theory of a "big push", a single, massive input of investments is to generate spread- and multiplier-effects which will finally cover the whole area. In the light of many practical instances the theoretical assumptions behind this strategy prove faulty.

4. Development by way of strengthening the existing hierarchy of central places (or service centres). The main advantages of this approach are that

   - this hierarchy of places has naturally grown,
   - in search of good access to services, people have concentrated in the relatively small catchment areas of the service centres,
   - therefore by using the central place approach a maximum of people can be reached.

   In order to use all benefits of the central place approach, it must be complemented by planned spread effects in the surrounding rural areas.

The following conclusions can be drawn from this brief discussion. Alternative 4 combines most of the advantages of alternatives 1 to 3. Regional development through a service centre approach can be considered the most adequate approach. Besides the above-mentioned advantages this approach is characterized by the following elements:

- planning capacities can be concentrated on a manageable number of rural centres;
- further concentration of private and public development agencies can be based on existing facilities;
- coordination of development efforts is made easier, flexibility of planning will be enhanced;
- if the above-mentioned spread effects are created, a balanced development of the whole region can be achieved.

The lack of West Pasaman's integration into regional transport systems is considered the main bottleneck for development in the area. The construction of a new access road is the logical consequence of this finding. Besides, the internal road network of West Pasaman must be completely rehabilitated. Extension of the local road network and the development of a central place system are two sides of the same coin. The regional strategy of an integrated bipolar development of area potentials, as outlined on the attached map, recognizes this close relationship.

The main elements of this strategy are as follows:

(1) From a sectoral point of view, emphasis is laid on
   - infrastructure
   - smallholder agriculture
   - small-scale processing of agricultural products
   - flanking measures in the social and cultural fields.

(2) From a regional (or spatial) point of view, development in West Pasaman will be bipolar, i.e. concentrated on two centres (see the attached maps 1 and 2).

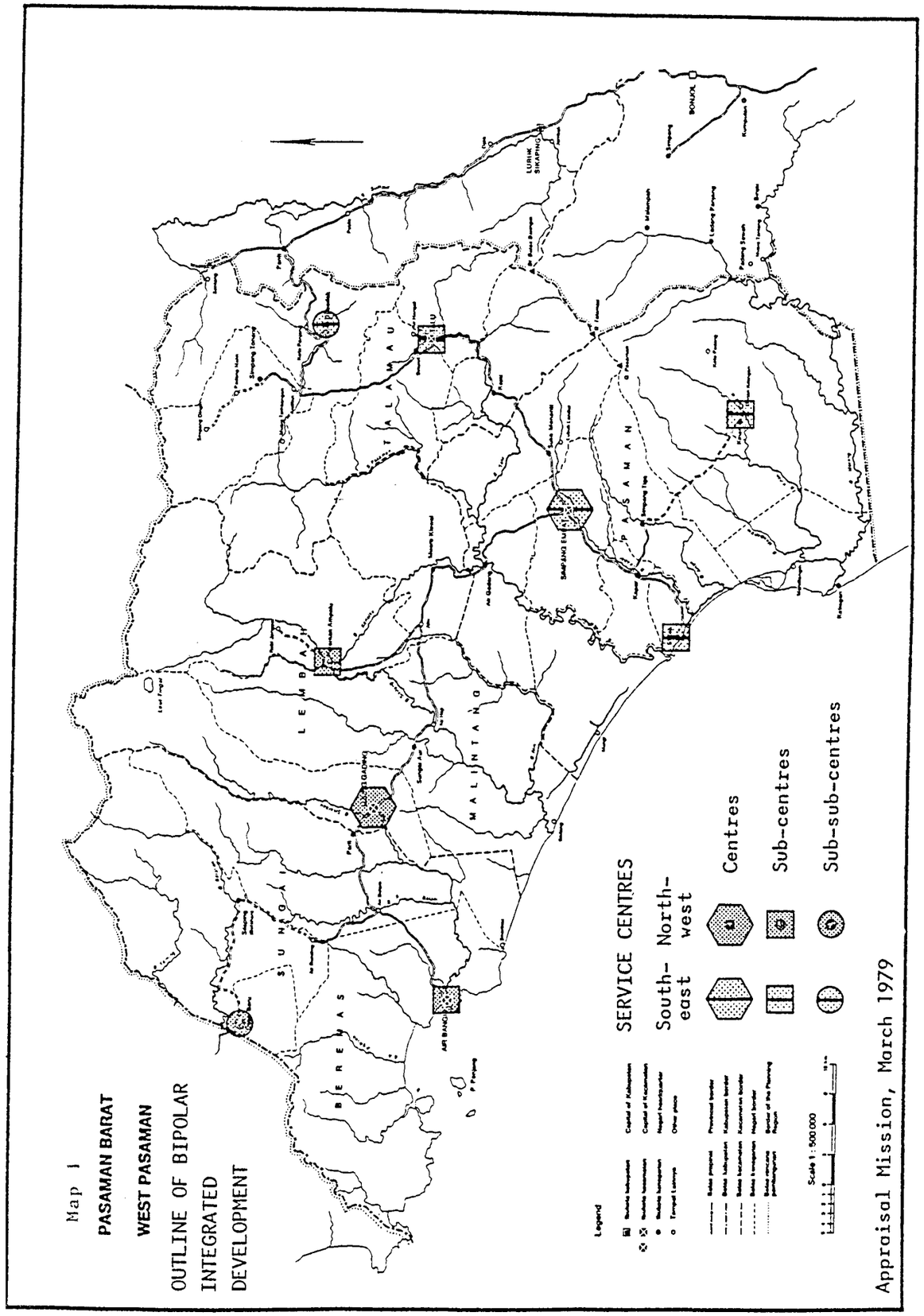
(3) Each of the two centres - Simpang Empat and Ujung Gading - stands on the top of a three-level hierarchy of central places or service centres. The southern sub-unit around Simpang Empat includes three sub-centres (Talu, Kinali, Sasak) and one sub-sub-centre (Cubadak). In the north-western part around Ujung Gading two sub-centres (Paraman Ampalu and Air Bangis) and one sub-sub-centre (Desa Baru) have been identified.

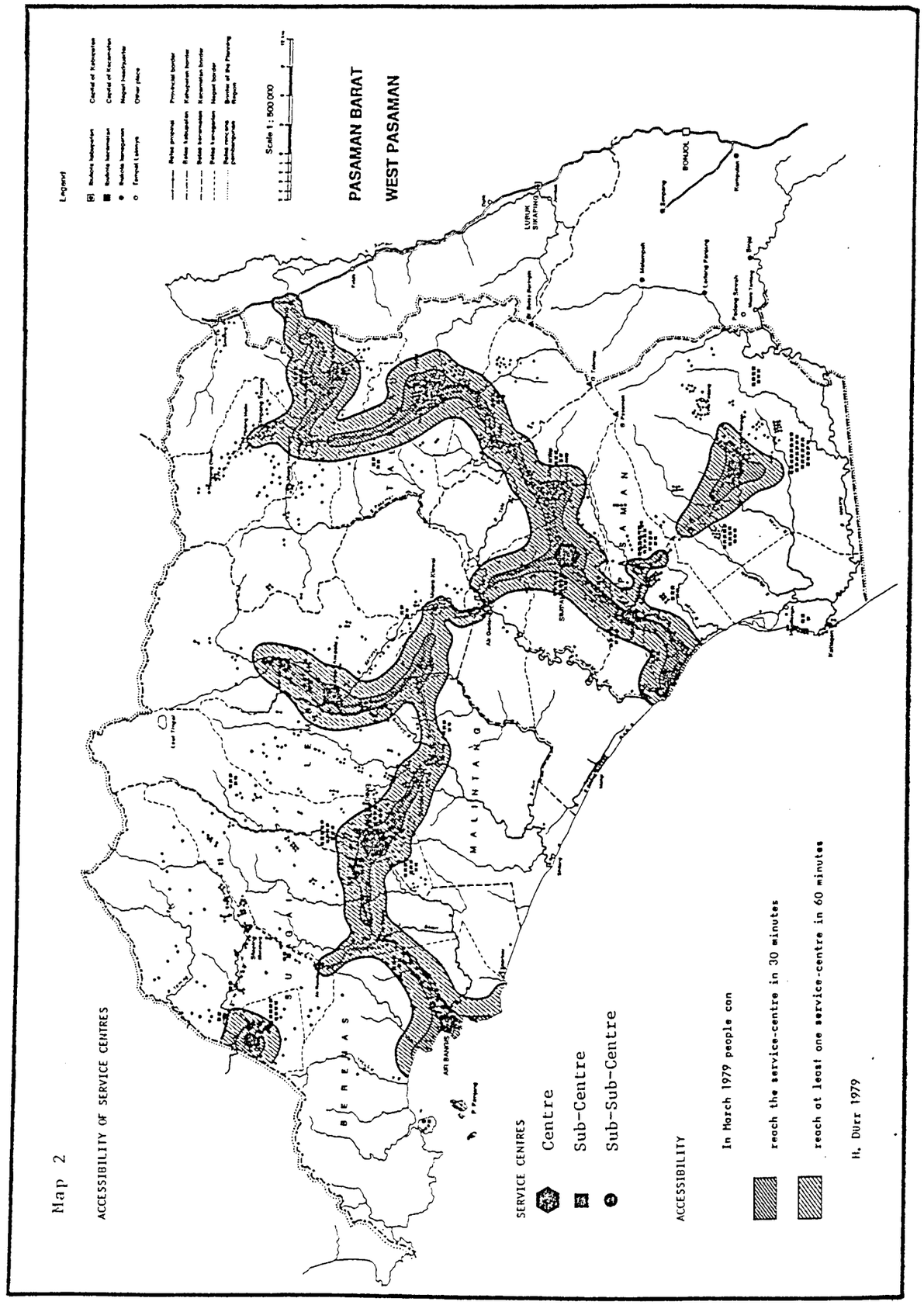
(4) These three-level hierarchies of central places are to supply as many of the people presently living in West Pasaman with
- fundamental (sub-sub-centres)
- basic (sub-centres)
- more refined (centres)

facilities of social and economic infrastructure.

(5) Under the given transport conditions, larger parts of the planning area remain outside any of these catchment areas. Relating this fact to the basic need approach, these parts of West Pasaman are "minus" or backward areas.

(6) With regard to area development the following priority order of land capability types can be set up. Potentials should basically be opened for settlement and agricultural land use in the given order:
- irrigable dry land
- potentials for sweet and brackish water fisheries in some swampy coastal areas
- primary swamp forests between the coast and the foothills of the volcanoes Ophir and Malintang.





3 DEVELOPMENT OBJECTIVES OF REPELITA III

The Indonesian objectives to be achieved during REPELITA III (1979-83) are as follows. The first objective is to increase the living standard and welfare of the majority of people. The second objective is to strengthen the resource base for the subsequent stages of development.

The starting point for attaining these objectives is that the emphasis of development activities is placed on three major areas: distribution, economic growth, and stabilization. Government taxing and spending is planned to affect these three major areas. Distribution is aimed at the dispersal of development benefits to all strata of the population and at geographical dispersal of development activities. Economic growth relates to a satisfactory rate to increase in the society's resource base ant to the subsequent growth of output on both an absolute and a per capita basis. Stabilization concentrates upon stable prices, full employment, and stable socio-political conditions.

Distribution deals directly with the first objective to be attained in REPELITA III. In order to properly translate this objective into programmes and projects, a policy has been created and termed as 'eight development avenues':

(1) the dispersal of an adequate supply of basic needs, in particular food, cloth, and shelter;

(2) the dispersal of education and health facilities;

(3) the dispersal of increasing incomes;

(4) the dispersal of employment opportunities;

(5) the dispersal of having opportunity to enter business activities;

(6) the dispersal of opportunities to participate in de-development activity, in particular for young people and women;

(7) the dispersal of opportunities to have justice;

(8) the dispersal of regional development programmes.

Operationally, the approach used in West Sumatra province in providing the necessary programme and project related to satisfy the basic human need is that the Province is divided into developing areas and lagging areas in the development process. The lagging area is called 'Kecamatan Miskin'. A chief target group in development is therefore the people living in the lagging area.

Economic growth, the second element for policy formulation, requires the identification of growth potential by economic sectors as well as by geographical location in the Province. The main growth potential of West Sumatra province is provided by agriculture, agricultural processing, and tourism. The overall economic growth target for West Sumatra is 7.o% annually during REPELITA III.

Economic and political stability is the precondition for economic growth and the dispersal of development benefits. This prerequisite is important to be considered since the experience indicates that a rapid growth will result in instability which in turn affects the economic growth and distribution.

As indicated above the approach used for development of lagging areas in West Sumatra will be based on the potential available to be developed. There is a strong correlation between the lack of adequate roads connecting an area to market places on the one hand, and thinly populated lagging areas on the other. Therefore, the development of a potential area with inadequate road network, as found in West Pasaman should be coupled with 'transmigration'

programmes (moving of people from a given densely populated area). This policy will not only assist the already existing people in the lagging areas, but will, at the same time, lessen the population pressure in the densely populated area.

The development of lagging area could be seen as an effort to disperse the development benefit geographically. In fact, it is also an effort to increase the economic resource base which in turn will result in subsequent output growth.

In accordance with the socio-economic situation in West Pasaman, the bipolar strategy and the development objectives of REPELITA III, the following project proposals have been worked out.[1]

1 Concretization should proceed on the basis of F 9/F 1o and REPELITA III for Indonesia and West Sumatra within the framework of the ADP Preparatory Seminar.

4 OVERALL PROJECT

Programme objective	Indicators			Verification sources	Essential assumptions
Realization of development policy goals of Repelita III (1979/80 - 1983/84) for West Sumatra: - Satisfaction of the basic needs of the population, especially in foodstuffs - Increase of gross domestic product (GDP) - Reduction of social imbalances (special consideration for hitherto disadvantaged population groups) - Reduction of regional disparities (special consideration for hitherto disadvantaged regions) - Creation and safeguarding of jobs	West Sumatra:	1979	1983	Repelita III for Province Annual reports by Jakarta authorities, especially BPS and Bank Indonesia Annual reports of the provincial authorities, especially BAPPEDA Andalas University study (Hendra Esmara) BI team studies ADP evaluation and project progress reports Kötter-Junghans study	Development of agricultural and transport sectors continues to have priority Earmarked budget funds are made available according to plan Optimal utilization of Indonesian and foreign inputs for development Power supply for West Sumatra is ensured (Maninjau power station) Development of West Sumatra continues to hold high priority within the framework of development planning Close co-operation with national and provincial authorities as well as with other projects of technical and financial co-operation is ensured
	Population (mill.)	3.25	3.53		
	Manpower potential (mill.)	1.14	2.28		
	Persons employed (mill.)	1.11	1.26		
	of these in agriculture (%)	66.4	63.7		
	GDP in mill. Rp	199.5	261.5		
	GDP: share of sectors (%)				
	. Agriculture	42.0	37.5		
	. Trade	16.3	16.9		
	. Transport/Telecom.	7.2	8.1		
	. Industry/Crafts	6.2	7.5		
	Target annual growth rates up to 1983/84 of	GDP	Employment		
	Agriculture	4.0	2.2		
	Trade	8.0	6.7		
	Transport/Telecom.	10.1	6.8		
	Industry	12.0	3.5		
	GDP per head	5.1			
	Production of agricultural products in t	1979	1983		
	Rice (mill.)	1.11	1.21		
	Maize	6,660	7,220		
	Coffee	5,000	6,000		
	Coconuts	40,350	46,850		
	Rubber	15,500	16,700		
	Cloves	1,700	1,950		
	Beef and buffalo meat	6,500	7,250		

Project objective	Indicators			Verification sources	Essential assumptions
Planning, operationalization and implementation of an integrated rural project in West Pasaman, especially with regard to - Reduction of inter-regional imbalances compared with the provincial average . Increase of GDP . Development of inter-regional transport links - Diminution of social imbalances/ supply of basic needs/increase of incomes . Integration of all population groups in social and economic development . Increase of productivity, esp. in rice cultivation . Increase of credit worthiness of small firms . Concentration of institutions of the social and economic infrastructure, such as health and educational facilities, in the service sector . Creation of additional jobs	Predicted and/or target growth rates for Repelita III:	Pasaman	W.Sumatra	Repelita III and Polar Desa Monthly and annual reports of the provincial authorities, esp. Bappeda, and of the Ministries LTA-16 study UNICEF Master Plan ADP Concept after 1979 Plan of the West Pasaman Development Board Evaluation reports F 9 and F 10 project progress reports Backstopping reports Liaison Officer's notes on his conversations and reports	Development of West Pasaman continues to have priority for provincial government West Pasaman Connecting Road as well as construction of 85 km of secondary roads are completed by 1983/84 (FZ/KfW). Construction of secondary roads proceeds in accordance with project priorities Punctual clarification of organizational, institutional and legal questions Application of multi-sectorial approach and of bipolar development concept Function-determined co-operation of Indonesian authorities as well as between GTZ and KfW Efficient project monitoring in Jakarta (Liaison Officer) and supportive project monitoring in Germany (backstopping)
	Gross domestic product	8.4 %	7.0 %		
	Per capita income	5.7 %	5.1 %		
	Population	2.7 %	1.9 %		
	Construction of West Pasaman Connecting Road to Padang (KfW) and rehabilitation of national roads				
	Advisory and training programmes for specially disadvantaged groups to promote productivity as well as increase and diversification of agricultural production in Pasaman:				
	Production in t	1979	1983		
	Rice	125,000	145,000		
	Maize	1,300	1,450		
	Groundnuts	1,350	1,500		
	Coconuts	2,050	2,400		
	Rubber	4,500	4,900		
	Pepper	65	109		
	Nutmeg	13	18		
	Cloves	55	65		

OVERALL PROJECT continued

Project Objective	Indicators	Verification Sources	Essential assumptions
- Reduction of intra-regional disparities . Development of intra-regional transport system . Opening up of northwestern potential areas for agriculture and settlement - Preservation and/or restoration of natural ecological stability - Qualification of planning and implementation authorities at provincial and Kabupaten levels	Beef/buffaloes (head) 7,152 7,900 Acreage under wet rice (ha) 36,800 39,500 Jobs 99,000 117,000 Development of Simpang Empat, Ujung Gading, Kinali, Sasak, Talu, Cubadek, Ampulu, Air Bangis and Desa Baru as service centres Utilization of KIK and KMPK credit programmes in West Pasaman 1978: 1,... 1983: ..... Construction of at least 85 km of secondary roads (KfW) and improvement of 30% of provincial and Kabupaten roads Forestry and forest utilization plan On-the-job and classroom training as well as provision of planning submissions for authorities		Punctual provision of Indonesian and German staff and equipment needs Provision of decision data for potential suppliers of finance Identification of and allowance for linkage effects Note: Growth rates and production figures in Col.2 refer to Paseman. The corresponding figures for West Pasaman are not yet available Project studies primarily serve the preparation of implementation

Output	Indicators	Verification sources	Essential assumptions
S 1: Preparatory seminar for shortening the settling-in time and increasing the efficiency of project activities of Indonesian and German experts as well as Backstopping Institute in January 1980	Network plans for project work, concretization of the logical framework Seminar report Submission 02/1980; number of participants	Seminar papers Work plan 1980/81	Participation of representatives of BMZ and GTZ Head Office in the seminar Preparation of a detailed seminar programme by 11/79
S 2: Planning data: topographical working map on a scale of 1:100,000 for West Pasaman	Black-and-white printing of 2,000 maps with textual explanation by 12/79	Working maps	Completion of the map prior to start of project
S 3/S 4: Qualification of authorities Increase of planning capacity of the authorities at provincial and district levels	Long-term advice and training of provincial authorities by 12/82 Concretization and operationalization of development planning for West Pasaman by 06/81	Project studies and working papers	
S 5: Planning and decision data: Improved data preparation by 04/80	Study on adequate data preparation and, if applicable, type and scope of computer employment	Feasibility study	Implementation from 01/81 until 12/82
S 6: Strengthening of marketing and information system	Regular preparation of market information on selected products	Market reports	Planking advice is ensured
S 7: Co-operatives and self-help organizations	Feasibility study by 12/80	Feasibility study	Implementation from 07/81 until 12/83
S 8: Preparation for utilization of acreage potentials in the northwest of the project area for agricultural and settlement activities	Maps (1:50,000) and texts on the topography, soils, hydrology, land use, land potential by 10/80	Planning data	Validation of potentials through other sub-projects
S 9: Preservation and/or restoration of ecological balance	Forest utilization plan for the preservation and/or restoration of the ecological function of the forest by 07/80	Masterplan	Implementation by Indonesian authorities is assured
S 10: Preparation of settlement and agricultural activities in the potential areas in the northwest of West Pasaman	Settlement plan, cost, timetable and personnel planning for follow-on project	Project studies	Sub-project is continued by Indonesian authorities
S 11: Advice: town planning	Development plans for service centres and new settlements by 12/80 1 training seminar	Town and settlement plans Seminar papers	Sub-project is continued by Indonesian authorities
S 12: Promotion of smallholding farm types	On-going problem-oriented advice by 12/83 Development of smallholding farm systems by 06/81	Project studies and work reports of the sub-project	
S 13: Utilization of existing credit programmes by small enterprises	Problem-oriented study with timetable, cost and personnel planning for trial by 05/80	Feasibility study BI reports	Close co-operation with BI team; trial from 01/81 until 12/82
S 14/S 15: Development of national and provincial roads	Pre-feasibility study on national roads by 02/81 Pre-investment study on secondary roads by 06/81	Project studies	Feasibility study on national roads 01/82 - 09/82 Feasibility study on secondary roads 03/82 - 12/82

OVERALL PROJECT continued

Output	Indicators	Verification sources	Essential assumptions
S 16: Identification of feeder roads	Study on construction of new secondary roads by 04/81	Project study	85 km of secondary roads are financed through KfW
S 17: Development of coastal harbours	Study on the harbours of Air Bangis, Sasak and Kutiagan/ Madiangan by 12/79	Feasibility study	Examination should be synchronous with fishery study Implementation 10/80 - 09/82
S 18: Provision of electricity	Pre-feasibility study by 01/81	Project study	Link-up financing is sought from 10/81 onwards
S 19: Activation of ADC Sukamenanti	Advice data and development of ADC by 12/83	Project reports	Provision of 20 ha for trial areas
S 20: Development of Agricultural College LPUT	Restoration of the buildings in Sukamenanti, holding of one course annually for 30 students	Project reports	Activation of ADC
S 21: Centre for perennial tree cultures	Creation and inauguration of a development centre at Sukamenanti by 12/83	Project reports	Provision of 10-15 ha of land by provincial government
S 22: Provision of seedlings by private nurseries	Feasibility study by 06/80	Feasibility study	Link-up finance is assured from 04/81 until 12/83
S 23: Intensification of plant protection service	Reduction of harvest losses through vermin by 32% by 12/83	Project reports	Laboratory capacity available
S 24: Implementation of rice irrigation projects Rimbo and Kapar	Bringing into use of 2,500 ha of rice irrigation acreage in Kapar and 1,800 ha in Rimbo by 12/81	Project progress reports	Validation through other sub-projects
S 25: Planning data on potential irrigation projects	Investment opportunity study on 21,886 ha of rice irrigation area by 11/80	Project study	Feasibility study 06/81 - 03/82. Implementation 10/82 - 12/83
S 26: Rice irrigation project Partupangan	Feasibility study on 3,200 ha of rice irrigation area by 06/81	Feasibility study	Follow-up financing arranged: 04/82 - 12/83
S 27: Trial demonstrations of mechanization of agriculture	Establishment and operation of 5 tractor units at Sukamenanti, Talu, Ujung Gading, Kinali and Air Bangis by 12/83	Reports on experience	Implementation through ADC Sukamenanti
S 28: Rice storage at village level	Pre-feasibility study by 09/80	Pre-feasibility study	Feasibility study 07/81 - 12/81. Implementation 01/83 - 12/83
S 29: Promotion of beef and buffalo keeping on smallholdings	Intensification of advice. Provision of .... insemination stations and deliveries of .... kg of grass seed by 12/83	Project reports	Operationally effective veterinary laboratory at Bukittinggi
S 30: Cattlebreeding on big farms	Pre-feasibility study by 12/81	Pre-feasibility study	Follow-up financing arranged: 06/82 - 12/82
S 31: Provision of data for universal agricultural advice service	Establishment and operation of an agricultural advice centre by 12/83	Project reports	Clarification of institutional questions
S 32: Promotion of integrated crop advice	Concentration of all advisory services; increase of agricultural production by 12/83	Project reports	Clarification of institutional competences
S 33: Promotion of fisheries	Feasibility study by 11/79	Feasibility study	Follow-up financing arranged: 07/80 - 12/83
S 34: Promotion of small-scale industry (Advisory Centres)	Study on training facilities incl. curricula by 02/81	Feasibility study	Implementation 01/82 - 12/83
S 35: Increase in charcoal production	Feasibility study by 03/81	Feasibility study	Follow-up financing assured through BI credit programmes from 06/81
S 36: Lime processing for fertilizers and building materials	Pre-investment opportunity study by 04/81	Project study	Feasibility study 10/81 - 01/82. Implementation from 07/82
S 37: Promotion of health and educational programmes	Long-term advice for appropriate authorities until 12/83	Project reports	Close co-operation with UNICEF; special consideration for women in the development process

OVERALL PROJECT continued

Input	Indicators	Verification sources	Essential assumptions
Foreign long-term experts	472 M/M	Project bookkeeping	Punctual provision of personnel and finance required
Foreign short-term experts	27 M/M	Budgetary accounting and rendering of accounts by Indonesian authorities	
Counterparts	1,431 M/M	GTZ account	
Financial and material requirements	DM 18.1 million		

Note: S = Sub-project

Table 1: PLAN OF ACTION OF SUB-PROJECTS FOR STAGE I

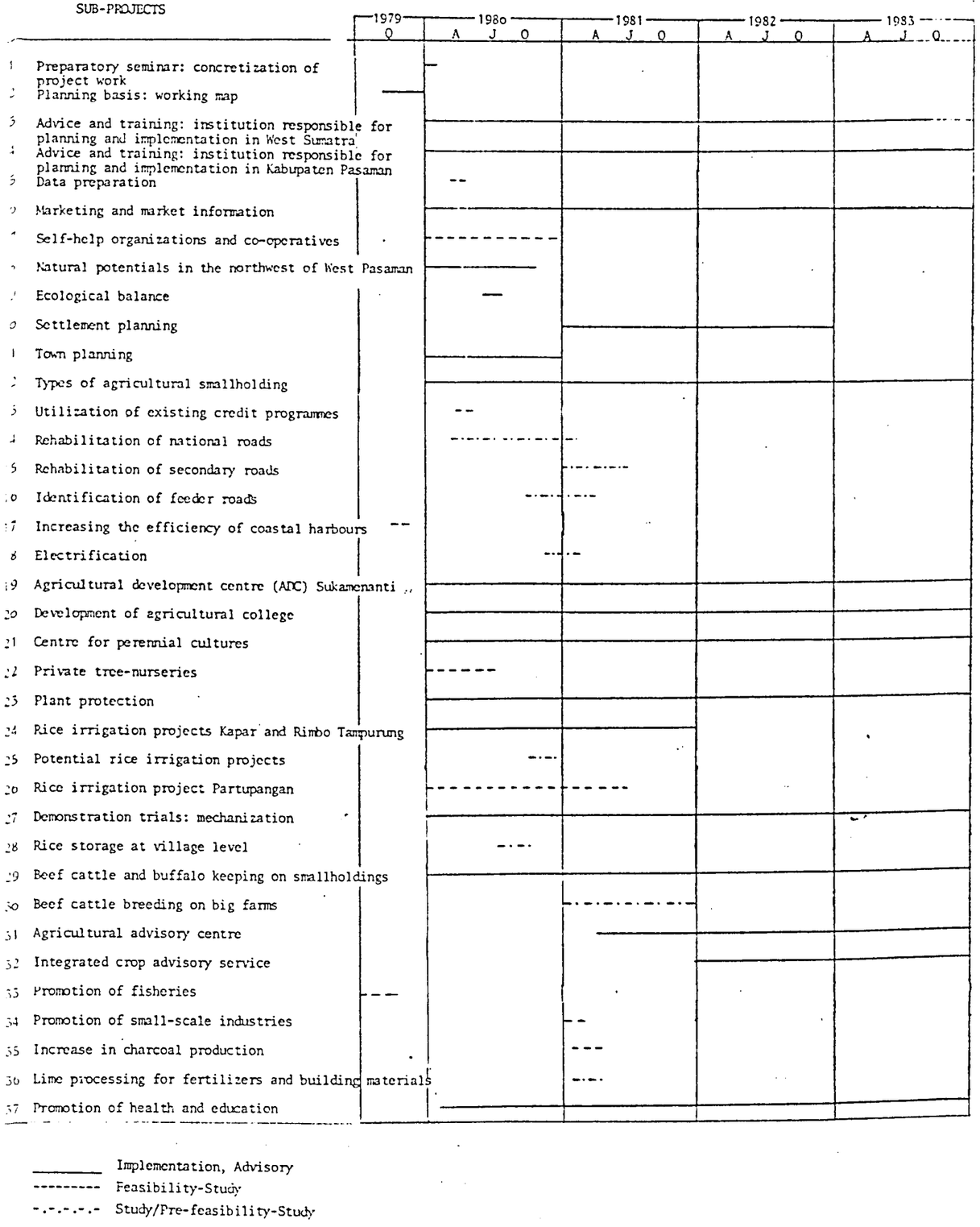


Table 2: PLAN OF ACTION OF SUB-PROJECTS FOR STAGE II

	SUB-PROJECTS	1979 Q	1980 A J O	1981 A J O	1982 A J O	1983 A J O
1	Preparatory seminar: concretization of project work					
2	Planning basis: working map					
3	Advice and training: institution responsible for planning and implementation in West Sumatra					
4	Advice and training: institution responsible for planning and implementation in Kabupaten Pasaman					
5	Data preparation		--			
6	Marketing and market information					
7	Self-help organizations and co-operatives			———	———	———
8	Natural potentials in the northwest of West Pasaman					
9	Ecological balance					
10	Settlement planning					
11	Town planning					
12	Types of agricultural smallholding					
13	Utilization of existing credit programmes			———	———	———
14	Rehabilitation of national roads				- - - - - - - - -	
15	Rehabilitation of secondary roads					- - - - - - - - -
16	Identification of feeder roads			- - - - - -		
17	Increasing the efficiency of coastal harbours			———	———	
18	Electrification			- - - - - -		
19	Agricultural development centre (ADC) Sukamenanti					
20	Development of agricultural college					
21	Centre for perennial cultures					
22	Private tree-nurseries			———	———	———
23	Plant protection					
24	Rice irrigation projects Kapar and Rimbo Tampurung					
25	Potential rice irrigation projects			- - - - - - - -		
26	Rice irrigation project Partupangan				———	———
27	Demonstration trials: mechanization					
28	Rice storage at village level			- - - - -		
29	Beef cattle and buffalo keeping on smallholdings					
30	Beef cattle breeding on big farms				- - - - -	
31	Agricultural advisory centre					
32	Integrated crop advisory service					
33	Promotion of fisheries			———	———	———
34	Promotion of small-scale industries				———	———
35	Increase in charcoal production				———	———
36	Lime processing for fertilizers and building materials			- - - - -		
37	Promotion of health and education					
	Implementation OPHR			———	———	———

——— Implementation, Advisory
- - - - - - - - - Feasibility-Study
-.-.-.-.- Study/Pre-feasibility-Study

Table 3: PLAN OF ACTION OF SUB-PROJECTS FOR STAGE III

	SUB-PROJECTS	1979 Q	1980 A J O	1981 A J O	1982 A J O	1983 A J O
1	Preparatory seminar: concretization of project work					
2	Planning basis: working map					
3	Advice and training: institution responsible for planning and implementation in West Sumatra					
4	Advice and training: institution responsible for planning and implementation in Kabupaten Pasaman					
5	Data preparation					
6	Marketing and market information					
7	Self-help organizations and co-operatives					
8	Natural potentials in the northwest of West Pasaman					
9	Ecological balance					
10	Settlement planning					
11	Town planning					
12	Types of agricultural smallholding					
13	Utilization of existing credit programmes					
14	Rehabilitation of national roads					———
15	Rehabilitation of secondary roads					———
16	Identification of feeder roads				———	———
17	Increasing the efficiency of coastal harbours					———
18	Electrification					———
19	Agricultural development centre (ADC) Sukamenanti					———
20	Development of agricultural college					———
21	Centre for perennial cultures					———
22	Private tree-nurseries				———	———
23	Plant protection					———
24	Rice irrigation projects Kapar and Rimbo Tampurung					———
25	Potential rice irrigation projects					———
26	Rice irrigation project Partupangan					———
27	Demonstration trials: mechanization					———
28	Rice storage at village level					———
29	Beef cattle and buffalo keeping on smallholdings					———
30	Beef cattle breeding on big farms					———
31	Agricultural advisory centre					———
32	Integrated crop advisory service					———
33	Promotion of fisheries					———
34	Promotion of small-scale industries					———
35	Increase in charcoal production					———
36	Lime processing for fertilizers and building materials					———
37	Promotion of health and education					———

——— Implementation, Advisory
- - - - - - - - - Feasibility-Study
-.-.-.-.- Study/Pre-feasibility-Study

Table 4: INTERDEPENDENCES AMONG SUB-PROJECTS

Precondition(s) for and effects/ influences on		1	2	3	4	5	6	7	8	9	1o	11	12	13	14	15	16	17	18	19	2o	21	22	23	24	25	26	27	28	29	3o	31	32	33	34	35	36	37
Preparatory seminar	1			o	o		o	o	o	o	o	o	o	o	o	o	o		o	o	o	o	o	o	o	o	o	o	o	o	o	o			o	o	
Planning basis: working map	2	o		o	o		o	o	o	o	o	o	o		o	o	o	o	o		o	o	o		o				o	o	o	o	o	o	o	o	o
Advice and training: provincial inst.	3	+	+		o	+	o	o	o	o	o	o	o	c	o	o	o	o	o	o	o	o	o	o	o	o			o	o	o	o	o	o	o	o	o
Advice and training: inst. in Kab.Pasaman	4	+	+	o		+	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o		o			o	o	o	o	o	o	o	o	o
Data preparation	5			o	o		o	o		o	o	o	o	c		o	o	o				o		o		o			o		o	o	o	o	o	o	o
Marketing and market information	6	+	+	+	+			o			o	o	o	o		o	o	o	o			o	o	o	o	o	o	o	o		o	o	o				o
Self-help organizations and co-operatives	7	+	+	+	+		o				o		o	o			o			.	o	o	o	o				o	o	o		o	o		o	o	
Natural potentials in the NW of W-Pasaman	8	+	+	o	o			o		o	o	o	o			o	o				o	o	o	o		o		o	o	o	o	o	o		o		
Ecological balance	9	+	+	+	+				o		o						o	o			o	o	o		o					o	o				o	o	
Settlement planning	1o	+	+	+	+	+		o	+	+		o	o		+	+	o		o	o		o	o	o		o		o	o	o	o	o	o			o	o	o
Town planning	11	+	+	+	+			o	+	+	+				o	o	o	o	o											o	o	o	o		o		o	o
Types of agricultural smallholding	12	+	+	+	+		o	+	+	+	o			o	o	o	o	o		o	o	o	o	o	o	o	o	o	o		o	o					o
Utilization of existing credit programmes	13	+		+	+		o			o	o	o							o	o	o	o	o	o				o	o	o		o				o	o
Rehabilitation of national roads	14	+		+			o	o			o	o				o	o	o				o		o	o	o			o		o	+	o	o	+	o	o	
Rehabilitation of secondary roads	15	+		+	+		o	o			o	o			o		o	o				o		o	o	o			o		o	o		o	+	o	o	o
Identification of feeder roads	16	+	+	+	+		o	o			o	o			+	o		o				o	o	o	o	o	o	o	o	o	o	o	o	o	o	o	o
Increasing the efficiency of coast.harbours	17	+	+	+	+		o	o			o	o			+	o	o		o			o	o	o	o	o	o		o									
Electrification	18	+	+	+	+			o			o	o		o				o		+	+									+	o	+	o		+			
Agricultural development centre (ADC)	19	+	+	o	o		+	o			o		o	+					+		+	+	o	+	o	o	o	+	o	+	o	+			o			
Development of agricultural college	2o	+					+	o	o	o	o	o	+	o	+	+	+		+	+		o	o	o				o	o	o		+	+			o		
Centre for perennial cultures	21	+	+	+	+	o	o	o	+	+	o	o	o	+	+	+	o	o		+	+		o	o				o		o		o	o		o		o	o
Private tree-nurseries	22	+		+	o		+	o	+	+	o		o	+	+	+	+			+	+		+					o		o		o	o		o		o	
Plant protection	23	+	+	+	+		+	o	+	+	o	o	o	o	+	+	+			+	+	+	o		o	o	o	o	o			o	o		o		o	
Rice irrigation projects Kapar and Rimbo	24	+		+	o		+	o			o	o	o	o	+	+	+	o		o	o		+					o	o	o		o	o	o				
Potential rice irrigation projects	25	+	+	+	+		+	o	+	+	o	o	o	o	o	o	o			+	+		+					o	o	o		o	o	o	o		o	
Rice irrigation project Partupangan	26	+		+	+		+	o			o	o	o	o	+	+	+	o			+			+	o					o		o	o	o	o		o	
Demonstration trials: mechanization	27	+					+	o	+	+	o	o	o	o						+	+		o	o	o	o	o	o		o	o	o	o	o		o	
Rice storage at village level	28			+	+	o	+	o	+		o	o	o	o	+	+	+	o	+	+	+			+	+	+	+	+		+		o	o		o		o	
Beef cattle and buffalo keeping	29	+	+	+	+		o	o		+	o	o	o	+						+	+	o	o		o	o	o	o				o	o					
Beef cattle breeding on big farms	3o	+	+	+	+	+	+	o	+	+	o	o		o	+	+	+					o	o	o	o	o	o	o		+		o	o		o		o	
Agricultural advisory centre	31	+	+	+	+		+	o	+	+	o	o	+	+	+	+	+	o	o	+	+	+	+	+	o	o	o	+	o	+	o		o	+	+		+	o
Integrated crop advisory service	32	o		+	+		+	o	+	+	o	o	+	+	+	+	+	o	o	+	+	+	+	+	o	o	o	+	+	+	o	+		+	+		+	o
Promotion of fisheries	33	+		+	+		o	o	o	o	o	o	o	o	+	+	+	+	+						o	o	o					o	o		o			o
Promotion of small-scale industries	34	+	+	+	+		o	o				o		+	+	+	+	+	o			o		o	o	o	o	o	o		o						
Increase in charcoal production	35	+	+	+	+		o		+	+	o	o		+	+	+	+	+	o			o	o															
Lime processing	36		+	o	o		o	o	+	+	o	o	o	o	+	+	+	+	o		+	+	+		o	o	o	o	o	o	o	o		o				
Promotion of health and education	37	+		+	+			o			o	o	o		o	o	o	o	+							o	o	o	o	o	o	o		o	o	+			

+ Precondition(s)

o Effects/ influences

Table 5: SUB-PROJECTS BY INSTITUTIONAL COMPETENCES

SUB-PROJECTS		Dep. of Agriculture					Dep. of Public Works			Dep.of	Dep.of	Dep.of	Dep.of		Dep.of			
		D.G. Fishery	D.G. Estates	D.G. Forest.	D.G. Foodcr.	D.G. Livest.	D.G. Bina M.	D.G. Irrig.	D.G. CK	Trade/ Coop.	Home Affairs	Trans-migr.	Indu-stry	PLN	Health/ Educat.	B.I.	D.G. Seacom
Preparatory seminar	1	x	x	x	x	x	x	x	x	x	x						
Planning basis: working map	2										x						
Advice and training: provincial inst.	3	x	x	x	x	x	x	x	x	x	x	x					
Advice and training: inst. in Kab.Pasaman	4	x	x	x	x	x	x	x	x	x	x						
Data preparation	5	x	x	x	x	x	x	x		x	x						
Marketing and market information	6	x	x		x	x				x	x						
Self-help organizations and co-operatives	7	x	x		x	x				x	x						
Natural potentials in the NW of W-Pasaman	8		x		x	x			x		x						
Ecological balance	9			x							x						
Settlement planning	1o				x	x			x		x	x					
Town planning	11								x		x	x					
Types of agricultural smallholding	12		x		x	x		x		x	x	x					
Utilization of existing credit programmes	13										x					x	
Rehabilitation of national roads	14						x				x						
Rehabilitation of secondary roads	15						x				x						
Identification of feeder roads	16						x				x						
Increasing the efficiency of coast.harbours	17										x					•	x
Electrification	18										x			x			
Agricultural development centre (ADC)	19				x						x						
Development of agricultural college	2o				x						x						
Centre for perennial cultures	21		x								x						
Private tree-nurseries	22		x								x						
Plant protection	23		x		x						x						
Rice irrigation projects Kapar and Rimbo	24						x										
Potential rice irrigation projects	25				x		x				x						
Rice irrigation project Partupangan	26						x				x						
Demonstration trials: mechanization	27		x		x	x											
Rice storage at village level	28				x						x						
Beef cattle and buffalo keeping	29					x											
Beef cattle breeding on big farms	3o					x					x						
Agricultural advisory centre	31	x	x		x	x											
Integrated crop advisory service	32	x	x		x	x											
Promotion of fisheries	33	x								x	x						
Promotion of small-scale industries	34										x		x				
Increase in charcoal production	35										x		x				
Lime processing	36										x		x				
Promotion of health and education	37										x				x		

• incl. BAPPEDA and Governor's office

5 SUB-PROJECTS

No.	Short title of sub-project
1	Preparatory seminar: concretization of project work
2	Planning basis: working map
3	Advice and training: agencies responsible for planning and implementation in West Sumatra
4	Advice and training: agencies responsible for planning and implementation in Kabupaten Pasaman
5	Data preparation
6	Marketing and market information
7	Self-help organizations and co-operatives
8	Natural potentials in the northwest of West Pasaman
9	Ecological balance
10	Settlement planning
11	Town planning
12	Types of agricultural smallholding
13	Utilization of existing credit programmes
14	Rehabilitation of national roads
15	Rehabilitation of secondary roads
16	Identification of feeder roads
17	Increasing the efficiency of coastal harbours
18	Electrification
19	Agricultural development centre (ADC) Sukamenanti
20	Development of agricultural college
21	Centre for perennial cultures
22	Private tree-nurseries
23	Plant protection
24	Rice irrigation projects Kapar and Rimbo Tampurung
25	Potential rice irrigation projects
26	Rice irrigation project Partupangan
27	Demonstration trials: mechanization
28	Rice storage at village level
29	Beef cattle and buffalo keeping on smallholdings
30	Beef cattle breeding on big farms
31	Agricultural advisory centre
32	Integrated crop advisory service
33	Promotion of fisheries
34	Promotion of small-scale industries
35	Increase in charcoal production
36	Lime processing for fertilizers and building materials
37	Promotion of health and education

PREPARATORY SEMINAR FOR THE CONCRETIZATION (TIMETABLE, SUBJECTS) OF PROJECT WORK (S 1) Location: Federal Republic of Germany (Hamburg)

Objective	Indicators	Verification Sources	Essential Assumptions
Increase of efficiency of ADP activities, especially in respect of - Regional outline planning - Preparation and implementation of a multi-sectorial integrated rural project - Qualification of planning and implementation authorities	Increase of per-capita GDP between 1979 and 1983 in: West Sumatra from 61,400 to 74,200 West Pasaman from 48,200 to 59,800 Concretization of regional outline planning for West Sumatra, esp. for West Pasaman Preparation and/or implementation of 37 projects Holding of 2 training seminars Enabling ... Counterparts p.a. to stay in Indonesia, its Asian neighbour countries and Germany for the purpose of study On-the-job training in the 37 ADP sub-projects	Repelita III for national and provincial levels BAPPEDA reports LTA-16 study Andalas study (Hendra Esmara)	Continuing high priority for West Pasaman within the framework of West Sumatra developing planning

Output	Indicators	Verification sources	Essential assumptions
Preparatory seminar with selected Indonesian and German ADP long-term experts, the Backstopping Institute and - to the extent that they are already known - the short-term experts Time: 01/80 (3 weeks)	Number of Indonesian and German participants Discussion of objectives of Indonesian and German development policy Discussion of objectives, measures and institutional prerequisites of integrated rural planning and implementation Verification and concretization of ADP project work, esp. for 1980 and 1981 Concretization of logical framework and network plan Discussion of results with GTZ and BMZ Presentation of discussion results in seminar papers Examination of seminar results with external experts and authorities in Germany	Seminar result report Logical framework Network plan ADP project progress reports HWWA Backstopping Comment	Close co-operation of GTZ project spokesman, ADP project leader and HWWA Institute Selection of Senior Counterparts in good time Participation - at least temporary - of representatives of GTZ Head Office and of BMZ in the seminar Preparation of a detailed seminar programme by 11/79 Participation of project-relevant decision makers from Indonesian authorities (Senior Counterparts) Participation of representatives of Andalas University and, if necessary, other institutions Seminar achieves shortening of ADP running-in period Discussion of working results in Working and Steering Committee

Input	Indicators	Verification sources	Essential assumptions
Seminar participants Financial requirements	yet to be determined approx. DM 80,000	GTZ rendering of accounts HWWA account	Preparation and organizational execution is effected within the framework of Backstopping performances

WORKING MAP OF WEST PASAMAN (S 2) Location: Germany

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the provision of necessary planning data as a prerequisite of the effective utilization of the planning capacities of ADP, BAPPEDA and other authorities at provincial and central levels	Statistics of West Pasaman at Kecamatan and Desa levels Working maps on scale 1:50,000 to 1:100,000, esp. in the areas of topography soils hydrology land use transport	Reports from ADP and provincial authorities LTA-16 study	Implementation of the sub-project "Planning data for West Pasaman"

Output	Indicators	Verification sources	Essential assumptions
Topographical working map on scale 1:100,000 printed in black and white Time: 09/79 - 12/79	Analysis of available cartographic and aerial photographic material Preparation of a topographical map, ready for the printer Printing of 2,000 working maps, incl. textual explanation	Working map ADP project progress reports	Punctual provision of the necessary cartographic and aerial photographic material, esp. a new topographical military map on scale 1:100,000 through an on-going ADP project and Indonesian authorities Order placed with an experienced cartographic bureau in Germany or Indonesia Punctual provision of the map at the start of the project 01/80

Input	Indicators	Verification sources	Essential assumptions
2 foreign experts	1 cartographer: 4 M/M 1 adviser: 0.5 M/M	Rendering of account by cartographic bureau	
Financial requirement	DM 3,500	GTZ account	

ADVICE AND TRAINING FOR AGENCIES RESPONSIBLE FOR PLANNING AND ACTION AT PROVINCIAL LEVEL (S 3) Location: West Sumatra

Objective	Indicators	Verification sources	Essential assumptions
Qualification of provincial authorities with regard to planning and implementation tasks within the framework of an integrated rural development, as the prerequisite of successful ADP activities in West Pasaman	Number of personnel of 1979 1983 BAPPEDA 40 Kantor Gubernur Agricultural authorities Public Works GDP per capita per annum Pasaman 48,200 Rp 59,800 Rp West Sumatra 61,400 Rp 74,200 Rp	Repelita III LTA-16 study Studies by provincial authorities and by the University	

Output	Indicators	Verification sources	Essential assumptions
Increase of planning capacity for integrated planning and implementation with the authorities concerned in Padang Time: 01/80 - 12/83	Analysis of all analytical and planning studies and planning executants relevant to the project area Long-term advice and training in all social, economic, ecological and regional planning matters Implementation of training programmes Support for ADP activities in West Pasaman Concretization and operationalization of development planning for West Pasaman, account being taken of the overall development in West Sumatra	Working papers of the sub-project Reports by the provincial authorities ADP project progress reports HWWA comment	Close co-operation with BAPPEDA and Kantor Gubernur Flanking sub-project is being carried out at Kabupaten level

Input	Indicators	Verification sources	Essential assumptions
1 foreign developmental economist	34 M/M (over 48 months)	ADP bookkeeping	Punctual provision of Counterparts
1 foreign regional planner	26 M/M (over 48 months)	Rendering of account by provincial authority	
Counterparts	Provincial authority personnel according to requirement	GTZ account	
Financial requirements	DM 10,000.-- (training materials)		

ADVICE FOR AND TRAINING OF AGENCIES RESPONSIBLE FOR PLANNING AND ACTION AT KABUPATEN LEVEL (S 4) Location: Pasaman (Lubuksikaping)

Objective	Indicators	Verification sources	Essential assumptions
Qualification of district authorities with regard to planning and implementation tasks within the framework of an integrated rural development, as the prerequisite of successful ADP activities in West Pasaman	Number of personnel of district authorities in Pasaman: 1979: ..... 1983: ..... GDP per capita per annum: 1979 1983 Pasaman 48,200 Rp 59,800 Rp West Sumatra 61,400 Rp 74,200 Rp Pasaman development plan	Repelita III at provincial level Pasaman planning studies LTA-16 study	Harmonization of advice and training in Pasaman with corresponding measures in Padang

Output	Indicators	Verification sources	Essential assumptions
Increase of capacity of responsible Kabupaten authorities in Lubuksikaping for the planning and development of integrated projects Time: 01/80 - 12/83	Long-term advice and training in all project-relevant matters Analysis of planning starting-points available for Pasaman, esp. the UNICEF programme Holding of training courses Concretization and operationalization of development planning for West Pasaman	Working papers of the provincial authorities and the sub-project ADP project progress reports	Close co-operation with Kabupaten authorities

Input	Indicators	Verification sources	Essential assumptions
3 foreign experts (developmental economist, regional planner, agricultural economist)	18 M/M	ADP bookkeeping	Provision of Counterparts in accordance with requirements
Counterparts	according to requirement	Rendering of accounts by Kabupaten authorities	
Financial requirement	DM 10,000.--	GTZ account	

EXAMINATION OF THE POSSIBILITIES OF IMPROVED DATA PREPARATION BY PROVINCIAL AUTHORITIES (S 5) Location: West Sumatra (Padang)

Objective	Indicators	Verification sources	Essential assumptions
Preparation of planning data for increasing the planning and implementation capacities of the provincial authorities in Padang	Number of personnel of 1979 1983 BAPPEDA 40 Kantor Gubernur Agricultural authorities Public Works Planning and implementation studies	BAPPEDA request TAD analyses	Use of computer justified by scope of tasks of provincial authorities and rendered possible by standard of training of personnel Flanking advice and training for provincial authorities is effected by ADP

Output	Indicators	Verification sources	Essential assumptions
Study on decision criteria and recommendations on standardized data processing in BAPPEDA Time: 03/80 - 04/80	Examination of scope of tasks of provincial authorities with regard to the demands for data provision Working out and assessment of alternative procedures Recommendations on improvement in data processing, possibly type and scope of computer use, incl. training needs Preparation of timetable, manpower and cost plans	Study of the sub-project Comment by provincial authorities, ADP and HWWA Institute	Close co-operation with BAPPEDA, Kantor Gubernur and finance administration Assignment of a TAD expert desirable Account to be taken of lessons from other provinces

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	1 M/M	ADP bookkeeping	
3 Counterparts	3 M/M	Rendering of account by provincial authorities	
Financial requirement	DM 2,000.--		

ANALYSIS, PROPOSALS AND STRENGTHENING OF THE MARKETING AND MARKET INFORMATION SYSTEM (S 6) Location: Padang / West Pasaman

Objective	Indicators	Verification Sources	Essential assumptions
Increase of market transparency Increase of efficiency of the marketing system Contribution to a rise of small-holders' incomes Improvement in the population's supply situation Alignment of production towards market requirements	West Pasaman production in t 1978 1983 Rice 29,200 Coconuts 1,620 Rubber 2,890 Cocoa Coffee 480 Pepper 50 Cloves 170	Repelita II and III at national and provincial levels Statistics of agr. authority FAO and International Bank studies Stock Exchange and association statistics and reports	Close co-operation with BAPPEDA AND Ministry of Agriculture Monetary orientation of the population Efficient advisory service Adequate storage facilities Rapid communications: HWWA - ADP - smallholders and marketing co-operatives

Output	Indicators	Verification sources	Essential assumptions
Provision of project-relevant information on marketing, on quantitative and price trends in the markets for selected products Time: 07/80 - 12/83	Analysis of existing marketing system, incl. production trends, storage facilities, market information Unvulcanized rubber (latex) Coffee Spices Rice Vegetables Coconuts Secondary crops Examination of cultivation potential of Palm fruits Cocoa Monitoring of market trends (world and domestic market) Provision of market information and advice to authorities and producers	ADP project progress reports Feasibility study Reports of agr. authority HWWA market reports	Co-operation with Dept. of Trade and Cooperatives Intensification of plant production Provision of the necessary infrastructure Performance of analyses concerning rice silos and co-operatives Utilization of the findings for West Sumatra

Input	Indicators	Verification sources	Essential assumptions
1 foreign agricultural economist	10 M/M	ADP bookkeeping	Backstopping performances are punctually provided
Counterparts	18 M/M	Account of GTZ and Indonesian authorities	
Financial requirement	DM 17,000.--		

PROMOTION OF CO-OPERATIVES AND SELF-HELP ORGANIZATIONS (S 7)

Location: West Pasaman (Padang)

Objective	Indicators	Verification sources	Essential assumptions
Making use of co-operatives and co-operative-like traditional self-help organizations in accordance with their tasks for - Increasing production - Facilitating supplies and marketing - Raising of income	15 agricultural co-operatives with 1,028 members 1 fishing co-operative with ..... members	Reports of the Dept. of Trade and Cooperatives Reports of the ADP forerunner project	Close co-operation with the Dept. of Trade and Cooperatives, with the Dept. of Agriculture, and with BAPPEDA

Output	Indicators	Verification sources	Essential assumptions
Feasibility study on the promotion of traditional self-help organization and of local co-operatives Time: 01/80 - 12/80	Analysis of membership figures, motivation, structure, organization, institutional framework, and statutes of co-operatives and self-help organizations Development of a promotion machinery, incl. training programmes (CBA), preparation of a timetable and cost plan for implementation Implementation in accordance with the preceding stage	ADP project progress reports Feasibility study Reports of the Dept. of Trade and Cooperatives and of BAPPEDA HWWA comment	Analysis and improvement of marketing system are effected Establishment of a bank branch in West Pasaman Close co-operation with the Dept. of Trade and Cooperatives Multiplication of the results in West Sumatra Implementation takes place from 1981 Account is taken of the lessons of the FES project in North Sumatra

Input	Indicators	Verification sources	Essential assumptions
1 foreign co-operative expert	12 M/M	ADP bookkeeping	
2 Counterparts	24 M/M	Reports of the Dept. of Trade and Cooperatives	
Auxiliary staff	42 M/M		
Financial requirement	DM 60,000.--	GTZ rendering of account	

PLANNING DATA FOR THE DEVELOPMENT OF THE NORTHWEST OF WEST PASAMAN (S 8)

Location: West Pasaman (Padang), Germany

Objective	Indicators	Verification sources	Essential assumptions
Realization of settlement and agricultural potentials in the northwest of West Pasaman for the provision of planning data on natural potentials and ecology	Development in the Kecamantans of Sungai Beremas and Lembah Malintang 1977 1983 Population 69,000 Inhabitants per km^2 32 Useful agric. area (km^2) 441 Head of cattle 245 Coconuts (ha) 830 Palm oil (ha) - Coffee (ha) 680	Repelita III LTA-16 study Provincial statistics	Ujung Gading remains Development Centre II

Output	Indicators	Verification sources	Essential assumptions
Cartographic representation and textual analysis of area potentials in the catchment area of Ujung Gading (Centre II) Time: 01/80 - 10/80	Examination of available aerial photography and cartographic material by 01/80 Overflying of region 01-02/80 Preparation of semi-controlled mosaics: 03-04/80 Field work: 05-06/80 Working maps: 06-07/80 Soil analysis (500 samples): 06-07/80 Maps and texts on - Topography - Soils - Hydrology - Land use - Land potentials on scale 1:50,000 by 10/80	Reports of the sub-project Reports by BAPPEDA and Directorate Agraria ADP project progress reports	Close co-operation with BAPPEDA and Directorate Agraria Provision of local experts by Andalas University Punctual employment of a consulting institution, if possible an Indonesian institution

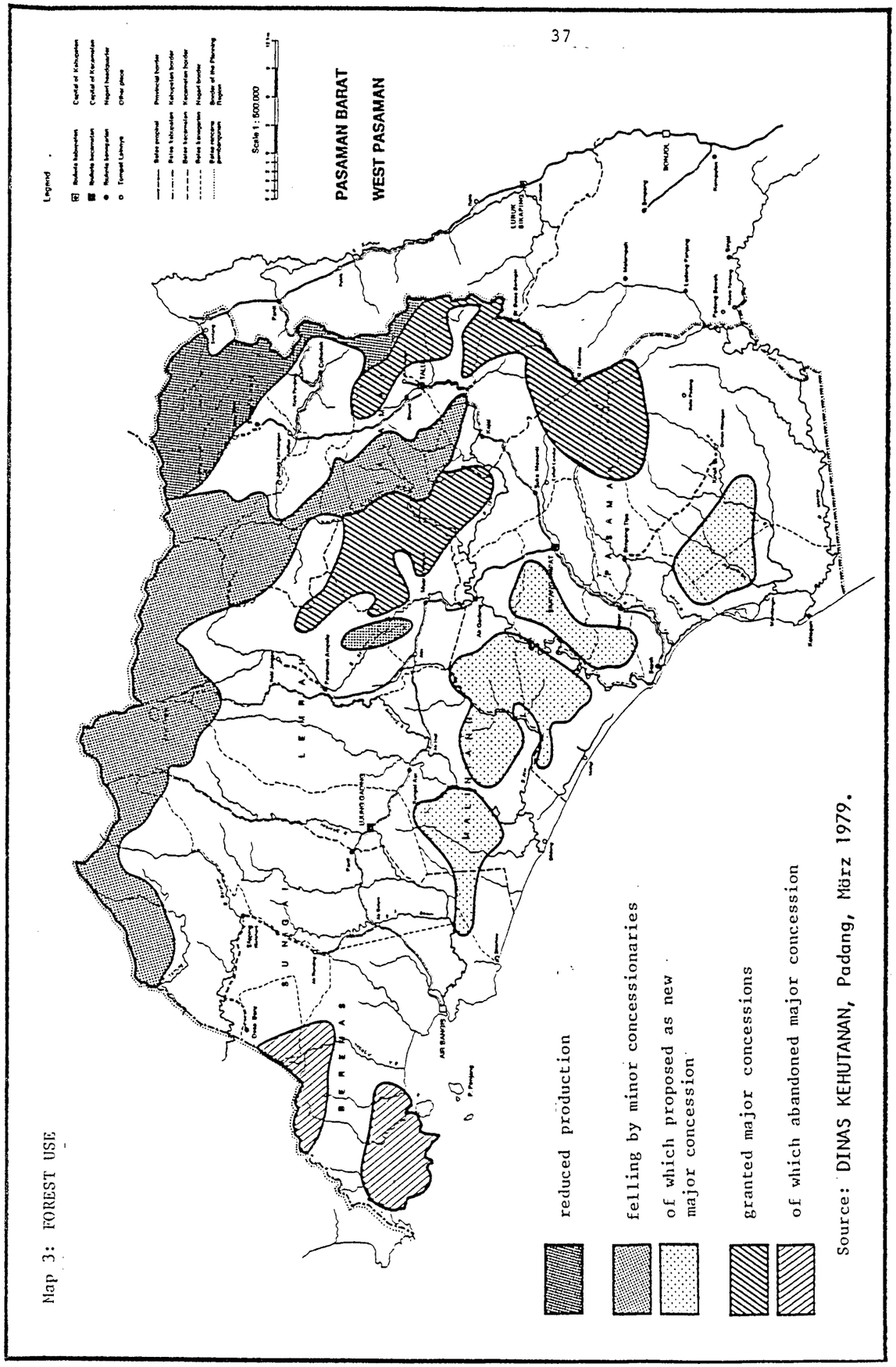
Input	Indicators	Verification sources	Essential assumptions
14 foreign experts	84 M/M	Rendering of account by consulting institution	Verification of costs through binding offer
22 Indonesian experts	147 M/M	Reports from BAPPEDA and Directorate Agraria	
Financial requirement, incl. overflying	DM 430,000.--	GTZ account	

PRESERVATION AND/OR RESTORATION OF THE ECOLOGICAL BALANCE (S 9) Location: West Pasaman

Objective	Indicators		Verification sources	Essential assumptions
Preservation and/or restoration of the ecological function of the forest in West Pasaman	Forest areas:	4,467 km^2	Repelita III	Implementation of the plan is assured by the provincial government
	Timber cutting p.a.:	.....	LTA-16 study	
	Reafforestation:	.....		

Output	Indicators	Verification sources	Essential assumptions
Masterplan "Forest and Forestry Use in West Pasaman", incl. map 1:100,000 Time: 05/80 - 07/80	Delimitation and classification of forest acreages Evaluation of preliminary work Preparation of recommendations on an ecologically sound land utilization plan, esp. with regard to the water budget	Study of the sub-project ADP project progress reports Comment by provincial authorities	Close co-operation with BAPPEDA, DINAS AGRARIA SUMBAR and Andalas University Availability of semi-controlled mosaics and of the topographical working map

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	2 M/M	Account of provincial authorities and ADP	
3 Counterparts	6 M/M		
Financial requirement	DM 20,000.--		



PREPARATORY WORK FOR SETTLEMENTS IN THE POTENTIAL AREAS IN THE NORTHWEST OF THE PLANNING REGION (S 10) Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Realization of settlement and agricultural potentials in the northwest of West Pasaman	Development in the Kecamantans of Dungai Beremas and Lumbah Malintang 1977 1983 Population 69,000 Useful agric. area (km²) 441 Number of local and/or national transmigrants settled between 1979 and 1983	Reports and statistics of provincial and Kabupaten authorities	Existence of a masterplan for forestry and forest utilization as well as of information on area potentials

Output	Indicators	Verification sources	Essential assumptions
Planning of new smallholding settlements within the framework of an integrated rural development Time: 01/81 - 12/82	Analysis of comparable plans Choice of macro-locations Planning of micro-locations Costing, timetable and personnel planning for follow-on project	Studies of the sub-project ADP project progress reports HWWA comment	Close co-operation with BAPPEDA, PMD and Kanwil Transmigrasi

Input	Indicators	Verification sources	Essential assumptions
1 foreign regional planner	6 M/M	ADP bookkeeping	
6 Counterparts	36 M/M	Account of provincial authorities and GTZ	
Financial requirement	DM 15,000.--		

ADVICE AND TRAINING FOR TOWN PLANNING (S 11) Location: Padang/Lubuksikaping (Pasaman)

Objective	Indicators	Verification sources	Essential assumptions
Qualification of provincial and Kabupaten authorities for planning and implementation tasks in the field of local and urban development	Number of personnel of 1979 1983 BAPPEDA PU planning units PMD Service centres and transmigration settlements in West Pasaman	Reports by provincial and Kabupaten authorities Local and urban planning for selected centres and settlements	Local and urban planning continues to hold a high priority in West Pasaman development policy

Output	Indicators	Verification sources	Essential assumptions
Translation of the concept of service centres into an operational development programme in Padang and in the Kabupaten centre of Pasaman, Lubuksikaping Time: 01/80 - 12/80	Problem-related advice on planning and implementation for the authorities at provincial and Kabupaten levels Holding of a training seminar (number of participants)	ADP project progress reports Reports and studies by the provincial authorities Seminar papers	Close co-operation with the PU planning unit in Padang and Lubaksikaping as well as with PMD and BAPPEDA High priority for proposed development strategy

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	4 M/M	Account of provincial authorities	Counterparts are detailed, according to requirements, by PU (2), BAPPEDA and PMD
4 Counterparts	16 M/M	ADP bookkeeping	
Financial requirement	DM 3,000.--	GTZ account	

ADVICE AND TRAINING IN THE PLANNING OF TYPES OF AGRICULTURAL SMALLHOLDINGS (S.12) Location: West Pasaman (Padang/Lubuksikaping)

Objective	Indicators	Verification sources	Essential assumptions
Qualification of agricultural and transmigration authorities at Kabupaten and provincial levels Creation of prerequisites of purposeful realization of integrated settlement projects	Number of personnel of 1979 1983 Kanwil Pertanian (Padang) Kanwil Pertanian (Pasaman) Kanwil Transmigrasi (Padang) Kanwil Transmigrasi (Pasaman) PMD BAPPEDA 40 Settlement projects	Reports by the provincial authorities, esp. on settlement projects WB studies ADP studies	Promotion of smallholders continues to have high priority

Output	Indicators	Verification sources	Essential assumptions
Increase of planning capacity of the bodies responsible for public agricultural production planning in Sukamenanti, Lubuksikaping and Padang Time: 01/80 - 12/83	Ongoing problem-oriented advice Development and selection of alternative smallholding farm systems Carrying out of training programmes	Reports and studies by the Kabupaten and provincial authorities ADP project progress reports Seminar papers	Close co-operation with Kanwil Pertanian, Kanwil Transmigrasi, PMD and BAPPEDA Implementation of settlement projects in connection with rice irrigation and smallholding plantation projects Implementation of ADC Sukamenanti

Input	Indicators	Verification sources	Essential assumptions
1 foreign agricultural economist	12 M/M	Rendering of account by ADP, provincial and Kabupaten authorities	
Counterparts	60 M/M		
Financial requirement	DM 25,000.--	GTZ account	

UTILIZATION OF EXISTING CREDIT PROGRAMMES FOR SMALL ENTERPRISES (S 13) Location: West Pasaman / Padang

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the increase of crop, livestock and craft production by the creation of prerequisites for the utilization of existing credit programmes for investments for increased efficiency and enlargement	KIK and KMKP programme Number of credits granted in 1978: 49, of which 1 in West Pasaman Credit opportunities in the fields of: Fisheries Livestock keeping Plantation products Mechanization Processing industries Small-scale industry and crafts	Studies of Bank Indonesia (BI), Small Enterprise Development Project, Provincial Project Management Unit West Sumatra Reports by agricultural and industrial authorities Zureck study: Supervised Credit GTZ study: Rural Credit Project	Opening of - at least - one Handling Bank in Simpang Empat (1980/81) and - subsequently - in Ujung Gading Credit agreements continue to be concluded with banks Support for the co-operative system The second major bottleneck - inadequate know-how - is removed (e.g. through proposed ADP advice and training projects)

Output	Indicators	Verification sources	Essential assumptions
Study of organizational and institutional opportunities for granting medium and long-term credits to smallholders, artisans and small entrepreneurs, esp. in view of inadequate security. Time: 04/80 - 05/80	Analysis of the credit system chiefly on the basis of BI studies, analysis of the opportunities of the target groups concerned for providing the security demanded by the banks for credits Working out of proposals for a trial Clarification of institutional prerequisites Preparation of TOR, timetable and cost plans for the trial	Sub-project report BI studies and comment ADP project progress reports HWWA comment	Close co-operation with BI team, agricultural and industrial authorities Follow-on financing for funds, etc., is assured from 1981 onwards

Input	Indicators	Verification sources	Essential assumptions
Phase 1		ADP bookkeeping	Study cannot be prepared by the BI team as a service
1 foreign banking expert	2 M/M	Reports of industrial and agricultural authorities	
2 Counterparts	4 M/M		
Financial requirement	DM 15,000.--	GTZ account	

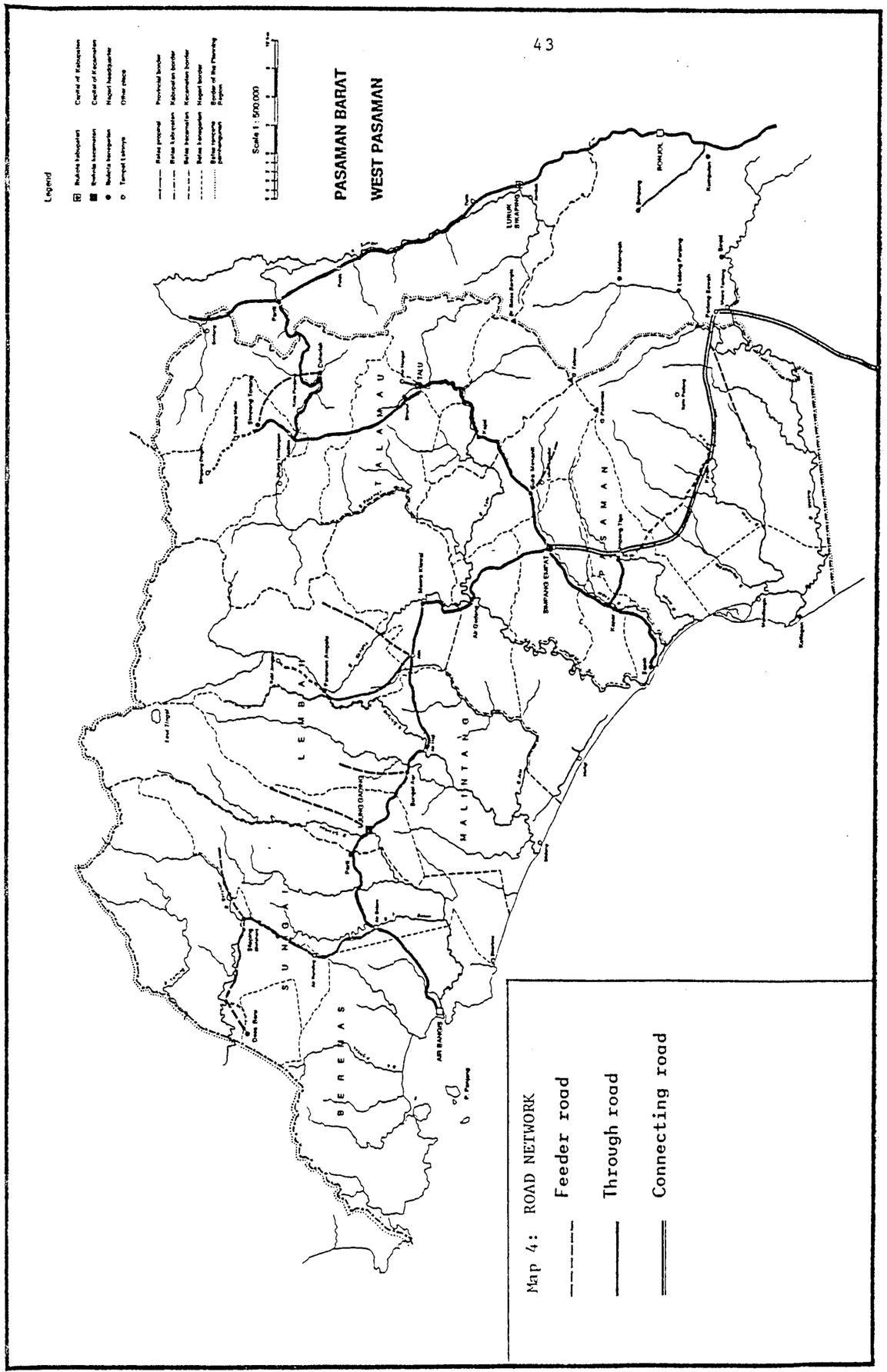
REHABILITATION AND/OR UPGRADING OF NATIONAL ROADS (S 14)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the creation of an adequate transport link for the population and economic centres (service centres) with the supply and outlet markets in West and North Sumatra	Adequate link-up of the service centres Simpang Empat Ujung Gading Talu Cubadak Sasak Air Bangis with the Trans-Sumatra Highway Vehicle fleet 1979 1983 West Pasaman 339 614 West Sumatra 9,142 16,553	Repelita III for West Sumatra LTA-16 study Reports by the provincial authorities	Construction of the national road Simpang Empat - Manggopok by 1984

Output	Indicators	Verification sources	Essential assumptions
Pre-feasibility study of intensity and priorities in the development of the national roads Time: 03/80 - 02/81	Analysis of the following sectors as to their need for improvement: Simpang Empat - Sasak (20 km) Simpang Empat - Panti (74 km) Simpang Empat - Ujung Gading (48 km) Ujung Gading - Air Bangis (26 km) Establishment of a scale of priorities Preparation of TOR, timetable and cost planning for a feasibility study according to road sectors	Pre-feasibility study Reports by BAPPEDA and Public Works ADP project progress reports HWWA comment	Close co-operation with Public Works and BAPPEDA Follow-on financing is ensured

Input	Indicators	Verification sources	Essential assumptions
1 foreign graduate engineer	3 M/M	ADP bookkeeping Rendering of account by BAPPEDA and PU GTZ account	Detailing of experts from other projects according to timetable
1 foreign economist	2 M/M		
Indonesian experts	10 M/M		
Financial requirement	DM 25,000.--		



REHABILITATION OF SECONDARY ROADS (S 15)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Rehabilitation of existing feeder roads and/or tracks with a view to linking up localities and/or economic regions with the service centres	Optimal link-up of the localities Silaping Desa Baru Pagambiran Situak Sungai Aur Alin Paraman Ampalu Rabi Jongar Andilan Air Panas Simpang Tonang Air Gadang	Reports by Public Works LTA-16 study	Funds for implementation by Indonesian or foreign suppliers of finance are being made available

Output	Indicators	Verification sources	Essential assumptions
Pre-investment opportunity study of necessary rehabilitation work to existing secondary roads Time: 01/81 - 06/81	Analysis of the following secondary roads Air Balam - Silaping (16 km) Silaping - Desa Baru (8 km) Silaping - Pagambiran (9 km) Ujung Gading - Situak (12 km) Alin - Paraman Ampalu (10 km) Alin - Rabi Jongor (10 km) Andilan - Air Panas (4 km) Andilan - Simpang Tonang (4 km) Sukamenanti - Air Gadang (7 km) - Establishment of a list of priorities for feasibility studies - TOR, timetable and cost planning for priority road sectors	Pre-investment opportunity study Reports by BAPPEDA and PU ADP project progress reports HWWA comment	Close co-operation with BAPPEDA and Public Works Concretization of regional outline planning until the start of the sub-project Follow-on financing is ensured

Input	Indicators	Verification sources	Essential assumptions
2 foreign experts	4 M/M	ADP bookkeeping	
Indonesian experts	10 M/M	Rendering of account by PU and BAPPEDA	
Financial requirement	DM 20,000.--	GTZ account	

IDENTIFICATION OF NEW FEEDER ROADS (S 16)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the opening up, in terms of transport, of potential development and settlement areas as well as of localities without road connections	Vehicle fleet 1979 1983 West Pasaman 339 613 West Sumatra 9,142 16,553 Opening up of development areas (Concretization of indicators to be effected within the framework of the study)	Public Works reports LTA-16 Feasibility study: West Pasaman Connecting Road	The West Pasaman Connecting Road and the secondary roads already identified: Kapar - Jambak (5.8 km) Bada rejo - Lubak Landur (9.2 km) Simpang Tiga - Kota Baru (4.3 km) Rimbo Tampurung - Disang (4.8 km) are being built within the framework of the Indonesian-German F 2

Output	Indicators	Verification sources	Essential assumptions
Pre-investment opportunity study to work out proposals for the construction of secondary roads with a view to — the West Pasaman Connecting Road — the opening up of existing development areas — the linking up of planned development projects Time: 09/80 - 03/81	Analysis of development areas in West Pasaman, taking account of the bipolar development strategy and of the localities Tongar Rimbo Landung Padang Lungkung Tanjung Pangkal Kota Baru Kota Padang Panjang Scale of priorities for feeder roads to be built TOR, timetable, personnel and cost planning for feasibility study of priority feeder roads Handing over of available planning data to KfW and Public Works	Pre-investment opportunity study Reports by BAPPEDA and Public Works ADP project progress reports HWWA comment	Close co-operation with BAPPEDA and Public Works The construction of 60 km of secondary roads is being effected within the framework of the above-mentioned F 2 agreement in accordance with ADP priorities

Input	Indicators	Verification sources	Essential assumptions
2 foreign experts	3 M/M (over 6 months)	ADP bookkeeping	
2 Indonesian experts	6 M/M (over 6 months)	Rendering of account by PU and BAPPEDA	
Financial requirement	DM 30,000.--	GTZ account	

INCREASING THE EFFICIENCY OF COASTAL HARBOURS (S 17) Location: West Pasaman (Air Bangis, Sasak, Katiagan/Madiangan)

Objective	Indicators	Verification sources	Essential assumptions
Ensuring rapid, safe and smooth service by coastal shipping and fishing vessels Utilization of the service and impulse functions of shipping Contribution to the reduction of regional disparities	Establishment of a scheduled service to Padang (2 x 3 trips per week) Average increase of GDP by 5.66% per capita per annum West Pasaman fishing fleet 1979 1983 motor boats 33 sailing boats 752	Repelita III Report by BAPPEDA, the fishery authority and the Department of Sea Communication LTA-16 study	Restoration of navigability along the Sasak - Simpang Empat route (planned for 1979)

Output	Indicators	Verification sources	Essential assumptions
Study of West Pasaman's three coastal harbours with a view to increasing their efficiency Time: 09/79 - 12/79	Analysis of the coastal harbours . Air Bangis . Sasak . Katiagan/Madiangan Analysis and prognosis of present and future volume of traffic Preparation of proposals for improving the infra- and superstructure Preparation of TOR, timetable and cost plans for follow-on projects Submission of study: 01/80	Study of the sub-project Reports by the Indonesian authorities ADP project progress reports BWWA comment	Close co-operation with BAPPEDA and the Dept. of Sea Communication Follow-on financing is assured Simultaneous action with fishery team desirable

Input	Indicators	Verification sources	Essential assumptions
2 foreign experts	3 M/M	ADP bookkeeping	Punctual provision of the inputs
2 Indonesian experts	6 M/M	Rendering of account by BAPPEDA and Department of Sea Communication	
Financial requirement	DM 20,000.--	GTZ account	

ELECTRIFICATION OF WEST PASAMAN (S 18) Location: West Pasaman (Padang)

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the introduction of an adequate electricity supply in West Pasaman for the promotion of small and medium-sized industry for raising the standard of living	Power generation: 1979: Only private supplies by means of diesel sets 1983: Number of enterprises: 1979: 428 1983: Number of television sets: 1979: 1983:	PLN reports Studies by the provincial authorities	Account taken of other planning and implementation projects in West Sumatra

Output	Indicators	Verification sources	Essential assumptions
Pre-feasibility study on the provision of electricity with special account being taken of alternative sources of energy Time: 11/80 - 01/81	Analysis of electricity generating potentials, incl. water power Establishment of demand for electricity according to sectoral and regional priorities Preparation of TOR, operational, timetable and cost plans for a feasibility study for selected regions Submission of study: 02/81	PLN studies International Bank reports TAD materials Study of the sub-project ADP project progress reports HWWA comment	Close co-operation with PLN and BAPPEDA Follow-on financing is assured Pre-investment study is passed on to potential suppliers of aid e.g. ADB Utilization of available know-how of the International Bank, esp. in Sulawesi

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	3 M/M	ADP bookkeeping	
2 Counterparts	5 M/M	Rendering of account by authorities	
Financial requirement	DM 15,000.--	GTZ account	

ACTIVATION OF ADC SUKAMENANTI (S 19)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Increase of agricultural production (quantitatively and qualitatively) Improvement of income situation of the agricultural population Reduction of intra-regional disparities	Number of agricultural enterprises 1978: 76,000 1983: Production in t 1978 1983 Rice 29,200 Palm oil - Coconuts 1,620 Coffee 480 Pepper 50 Cloves 170 Unvulcanized rubber 2,800	Repelita III Reports by agricultural authorities	Projects for the improvement of the marketing system, of the credit system and of the co-operatives are implemented The necessary infrastructure is provided Co-operation with BAPPEDA

Output	Indicators	Verification sources	Essential assumptions
Advice data and their transmission to advisers and specialized students	Number of advisers: 1978: 30 1983: Preparation of advice data for the introduction of location-adapted strains and cultivation methods Performance of trials Training of the advisory service and of specialized students in the areas: plant protection, plant nutrition, cultivation techniques, agricultural economy, rice and secondary crops Promotion of speciality-specific training of young farmers Provision of constructional needs (4 residential houses, accommodation for Counterparts, office complex, drinking water supply, electricity and landing strip) Examination of the possibility of transforming ADC Sukamenanti into an integrated agricultural development centre (IADC) through the incorporation of the centre for perennial cultures, the veterinary laboratory and possibly the stockbreeding station by 03/81	Operational plans and timetables as well as on-going reports of the sub-project ADP project progress reports Reports by Dinas Pertanian	Close co-operation with Dinas Pertanian Provision of 20 ha of trial grounds Implementation of LPUT Creation of attractive living conditions and existence of qualified staff Solution of administrative problems for an IADC

Input	Indicators	Verification sources	Essential assumptions
1 foreign agronomist	15 M/M	ADP bookkeeping	Project infrastructure can also be used - above all - for the sub-projects Agricultural College (LPUT), Plant Protection Advice, and Experimental Introduction of Mechanization
6 Indonesian case workers	288 M/M	Reports by the agricultural authorities	
Financial requirement	DM 200,000.--	GTZ account	

DEVELOPMENT OF THE AGRICULTURAL COLLEGE (LPUT) SUKAMENANTI (S 20)

Location: West Pasaman (Sukamenanti)

Objective	Indicators	Verification sources	Essential assumptions
Improvement of the training of farmers as the prerequisite of an increase in agricultural production	Agricultural enterprises 1978: 76,000 1983: Production in t: 1978 1983 Coconuts 1,620 Coffee 480 Pepper 50 Cloves 170 Rubber 2,800 Rice 29,200	Repelita III Reports by agricultural authorities	ADC Sukamenanti is further developed

Output	Indicators	Verification sources	Essential assumptions
Development and operation of a one-year specialized college in Sukamenanti Training of farmers ready for innovations Time: 01/80 - 12/83	Restoration of the school building with 2 classrooms and 2 offices as well as construction of boarding accommodation for 30 students between 04/80 and 03/81 Holding of 1 course for 30 students p.a. Creation of a core group of farmers eager for innovations (c. 150) as contact partners of the advisory service	ADP project progress reports Reports by Dinas Pertanian	Close co-operation with Dinas Pertanian and the experts of all agricultural sub-projects

Input	Indicators	Verification sources	Essential assumptions
Foreign teaching staff	Part-time staff 20 M/M	ADP bookkeeping Reports by Dinas Pertanian	Part-time staff are made available from other sub-projects
Indonesian teaching staff	Part-time staff	GTZ account	
Costs and teaching aids	DM 140,000.--		
Running charges	DM 160,000.-- (4 years)		

DEVELOPMENT CENTRE FOR PERENNIAL CULTURES (S 21) Location: West Pasaman (Sukamenanti)

Objective	Indicators	Verification sources	Essential assumptions
Increase in production of perennial culture products by raising yield and quality and extending cultivated areas Increased incomes for smallholders Contribution to increased exports from the province	Production in t 1978 1983 Coconuts 1,620 Palm oil - Coffee 480 Cocoa - Pepper 50 Cloves 170 Rubber 2,890 Cultivation area in ha 1977 1983 Coconuts 2,400 Palm oil - Coffee 1,850 Cocoa - Pepper 170 Cloves 1,920 Rubber 6,580	Repelita III Report by Ministry of Agriculture	Readiness for innovation on the part of the population Marketing possible High priority for the promotion of smallholders

Output	Indicators	Verification sources	Essential assumptions
Creation of a development centre for perennial cultures Transmission of project results to the agricultural authority, advisory services and specialized students Time: 01/80 - 12/81	Creation of a development centre in Sukamenanti by the end of 1980 Preparation of 10-15 ha of trial grounds by ..... Performance of experiments for the introduction of . location-adapted strains . location-adapted cultivation methods Identification of suitable areas for extending cultivation Six-monthly trial reports for the agricultural authority, LPUT Sukamenanti, advisory services and farmers On-the-job training for Extension Service and specialized students on the basis of the advice data produced	Six-monthly reports of the sub-project ADP project progress reports Reports by the agricultural authority	Close co-operation with Dinas Pertanian and Dinas Perkebunan Clarification of institutional competence Provision of 10-15 ha of land by the provincial government Multiplication of trial results through advisory services, etc. Effective marketing and credit system

Input	Indicators	Verification sources	Essential assumptions
1 foreign agronomist	35 M/M	ADP bookkeeping	Co-operation of 4 Indonesian ADC experts (part-time)
1 Indonesian Counterpart	48 M/M	Rendering of account by agricultural authority	Use of the project infrastructure of ADC Sukamenanti
Investment costs (1980)	DM 80,000.--	GTZ account	
Operating costs	DM 120,000.-- (for 4 years)		

PROVISION OF SEEDLINGS BY PRIVATE NURSERIES (S 22) Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Contribution to an increased production of perennial cultures through the production of high-grade seed stock by farmers with a small proportion of wet rice Utilization of manpower and land reserves available in agriculture Increase of the income of smallholders Relieving the advisory service of service functions	Production in t 1978 1983 Coconuts 1,620 Pepper 50 Rubber 2,890 Cocoa Coffee 40 Cloves 170 Area for tree cultures in ha 1978 1983 Coconuts 2,400 Pepper 170 Rubber 6,580 Coffee 1,850 Cloves 1,920	Repelita III BAPPEDA reports Publications of the agricultural authority ADP feasibility study Ophir	Provision of the necessary infrastructure Motivation of agricultural population Function-appropriate marketing Granting of credits by banks Continuing high priority for the promotion of smallholders Continuing high demand for seedstock

Output	Indicators	Verification sources	Essential assumptions
Feasibility study of the possibility of growing perennial cultures in private nurseries Time: 01/80 - 06/80	Analysis of demand and of the breeding programme of Dinas Perkebunan Examination of alternatives Cultivation under contract by private enterprises, and private strain growing with direct marketing, as well as CBA flanking measures Timetable, personnel and cost planning for follow-on projects	Work planning of the sub-project ADP project progress reports Reports by Dinas Perkebunan BWWA comment	Follow-on financing is ensured Good co-operation with Dinas Perkebunan Co-operation with ADC, the advisory services and the BI team

Input	Indicators	Verification sources	Essential assumptions
1 foreign agronomist	4 M/M (part-time)	ADP bookkeeping	Punctual provision of personnel and finance
Personnel of Dinas Perkebunan	according to requirement (part-time)	Account rendered by Dinas Perkebunan	
Financial requirement	DM 3,000.--	GTZ account	

INTENSIFICATION OF PLANT PROTECTION (S 23) Location: West Pasaman / West Sumatra

Objective	Indicators	Verification sources	Essential assumptions
Increase of agricultural production, esp. rice Facilitation of storage Increase of agricultural incomes	Reduction of losses through vermin, at present c. 30% for rice Increase of rice growers' incomes by 30%	ADP trials in Patembangan/ Agam (1976) Trials at ADC Sukamenanti Reports of ADP forerunner project	Costs of Extension Service are not borne by small-holders; costs of pesti-cides are charged in full Finance for existing Extension Service is provided on a sufficient scale

Output	Indicators	Verification sources	Essential assumptions
Creation of the prerequisites of effective plant protection advice in West Sumatra, esp. in West Pasaman Introduction of plant protection measures over the entire range of agriculture Time: 01/80 - 12/83	Number of advisers in West Sumatra .... (1978), ... (1983) Number of advisers in West Pasaman 30 (1978) .... (1983) On-going revision and provision of advisory material Creation of ... outstations in West Pasaman and ... stations in the remaining parts of West Sumatra Care and support for the 3 plant protection advisory centres in Kapar, Kinali and Ukung Gading as well as for 3 plant protection associations in West Pasaman Training of plant protection advisers in fortnightly courses Training and further training of contractors Improvement of the warning service Implementation of the credit programme for sprayers already established with BI Support for ADC Sukamenanti	ADP project progress reports Reports by Dinas Pertanian BI team reports	Close co-operation with Dinas Pertanian Co-operation with BI team Adequate number of extens. workers/officers and pesticides available Laboratory capacity available Implementation of ADC and LPUT Sukamenanti Properly functioning credit programme

Input	Indicators	Verification sources	Essential assumptions
1 foreign plant protection expert	39 M/M	ADP bookkeeping	Punctual availability of the inputs
Indonesian advisory service (31 advisers)	according to requirement, at least 48 M/M	Reports and budget of Dinas Pertanian	
Financial requirement	DM 30,000.--	GTZ account	

IMPLEMENTATION OF TWO RICE IRRIGATION PROJECTS (S 24) Location: West Pasaman (Kapar, Rimbo Tampurung)

Objective	Indicators	Verification sources	Essential assumptions
Contribution to an increase in wet rice production Provision of settlement areas and jobs for new settlers Relief for the overpopulated regions of West Sumatra Contribution to the reduction of regional disparities	Wet rice production (t) 1977: 2,600 1983: ..... Cultivation area 1977: 13,000 ha 1983: ..... Settlement of ..... families within the framework of Repelita III Planned increase of GDP per capita per annum in West Pasaman: 5.66% in West Sumatra: 5.08%	Repelita III Planning papers of the agricultural authorities PU studies Evaluation report 1977	Improvement of marketing and credit system Provision of an adequate advisory service Utilization of other potential rice irrigation areas in West Pasaman

Output	Indicators	Verification sources	Essential assumptions
Development of a total of 4,300 ha of irrigated area in Kapar and Rimbo Tampurung Settlement of about 8,500 persons (1,250 families) Time: 01/80 - 12/81	Development of 2,500 ha of rice irrigation area in Kapar and 1,800 ha in Rimbo Tampurung, incl. headworks, construction of canals, access roads and rice-fields by contractor Settlement of about 5,000 persons (abt. 1,000 families in Kapar and 3,500 persons (abt. 700 families) in Rimbo Tampurung (local and/or national trans-migration) Increase of rice production from 3,600 t p.a. (1978) to 34,000 t (1982/83) Concretization of indicators to be effected after submission of feasibility study (end 1979)	ADP feasibility study (1979) Reports by contractor PU reports ADP project progress reports	Close co-operation with Public Works Punctual completion of feasibility study and confirmation of provisional results West Pasaman Connecting Road and feeder roads are completed according to schedule No delay by contractor Punctual settlement of areas

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	18 M/M	ADP bookkeeping	Financial requirement - based on a cautious ADP estimate - is verified and made available on time
1 Counterpart	18 M/M	PU rendering of account	
Financial requirement (provisional)	Kapar: DM 9.0 million Rimbo: DM 6.5 million Total: DM 15.5 million	GTZ account	

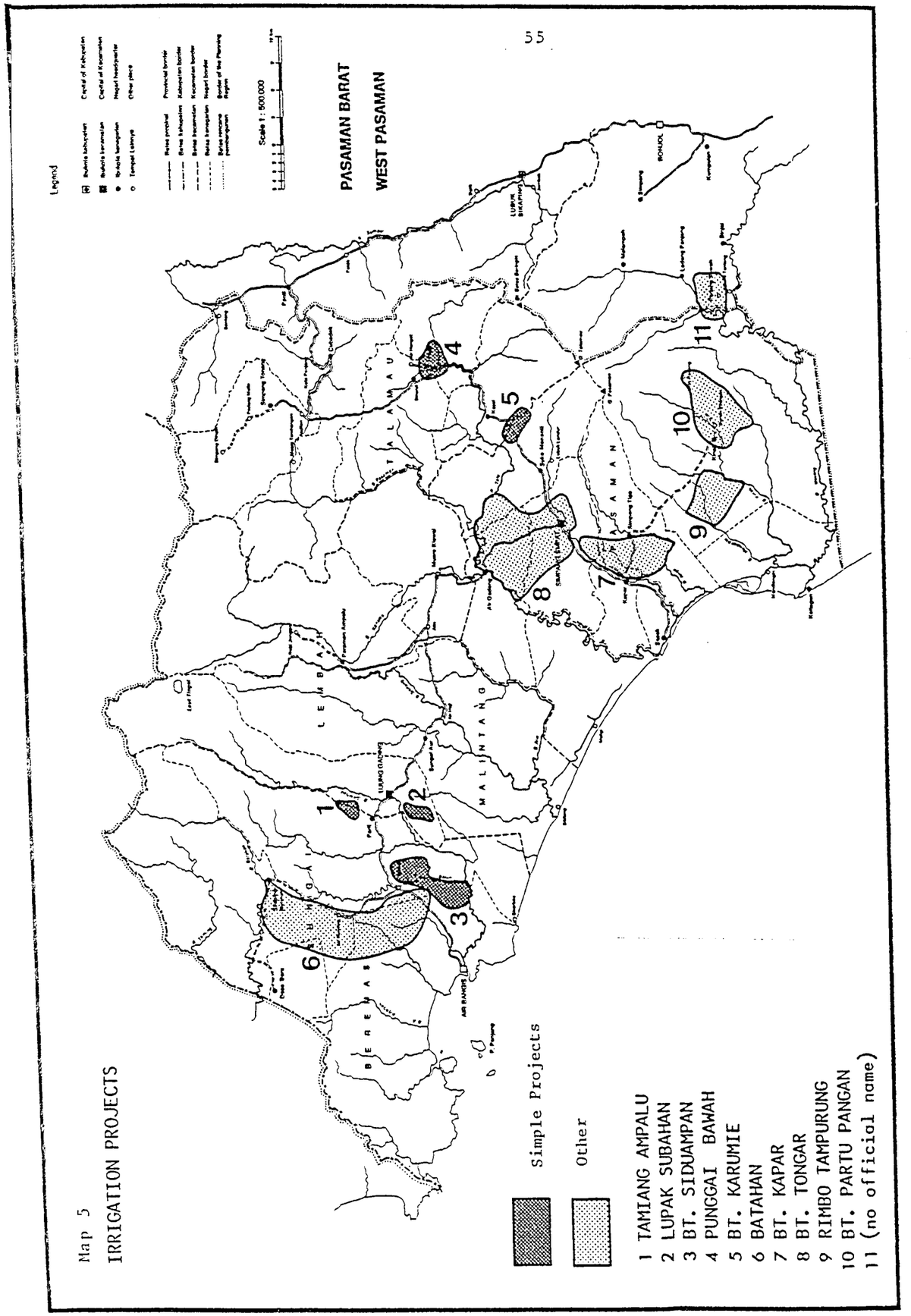
ANALYSIS OF POTENTIAL RICE IRRIGATION AREAS (S 25)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Contribution to an increase in wet rice production Provision of settlement areas and jobs for transmigrants from West Sumatra and/or Java Contribution to the reduction of regional disparities	Increase and better use of cultivation area in West Pasaman from 13,000 ha (1977) by up to 21,886 ha Increase of wet rice production by 40-60,000 t (at 1-1.5 harvests p.a. on average)	Repelita III Planning papers of the agricultural authorities PU and BAPPEDA reports	Improvement of the marketing and credit system Provision of an adequate advisory service and of the necessary infra-structure Implementation of the Kapar and Rimbo projects within the framework of Indonesian-German co-operation

Output	Indicators	Verification sources	Essential assumptions
Pre-investment opportunity study of all potential rice irrigation areas of West Pasaman Time: 10/80 - 11/80	Analysis and summary of all preliminary investigations by the International Bank (Tongar) and Indonesian authorities Additional preliminary investigations (soil and water budget, necessary flanking measures, land titles, settlement opportunities, etc.) Preparation of a scale of priority for the potential wet rice areas: Fatimah (1,000 ha) BT Koramie (440 ha) Panggai Bawah (670 ha) Lumbak Sumhahan (390 ha) BT Sidapan (2,000 ha) Batahan (9,300 ha) Tongar (8,056 ha) Preparation of TOR, timetable and cost plan for feasibility study Submission of study: 12/80	Studies and working papers of PU and International Bank Pre-investment opportunity study Feasibility study PU and BAPPEDA reports ADP project progress reports EWWA comment	Close co-operation with BAPPEDA (Phase 1) and Public Works Results of pre-investment opportunity study are made available to potential suppliers of finance Follow-on financing Clarification, in good time, of land titles for the projects to be examined

Input	Indicators	Verification sources	Essential assumptions
3 foreign experts	6 M/M	ADP bookkeeping	Experts can be released from the ADP team at the proper time
3 Counterparts	6 M/M	Rendering of account by PU and BAPPEDA	
Financial requirement	DM 12,000.--	GTZ account	



PLEMENTATION PREREQUISITES FOR THE RICE IRRIGATION PROJECT PARTUPANGAN (S 26)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
ontribution to an increase rice production in West asaman rovision of settlement areas ontribution to the reduction f regional disparities	Extension of wet rice cultivation area in West Pasaman from 13,000 ha (1977) by nearly 3,000 ha Increase of rice production from abt. 26,000 t (1977) by 12,000 t (given 2 harvests) Settlement of 1,000-1,500 families	Repelita III ADP data WB studies	Partupangan continues, alongside Rimbo and Kapar, to have top priority within the frame work of West Pasaman development planning Improvement of the marketing and credit system as well as of advisory services

Output	Indicators	Verification sources	Essential assumptions
easibility study for making ,200 ha available for wet rice ultivation (2 harvests) in artupangan (in the catchment rea of the West Pasaman Connecting oad) ime: 01/80 - 06/81	Analysis of preliminary investigations by Indonesian authorities Investigation of socio-economic framework conditions as well as of soils, water reserves and water requirement Preparation of a topographical map (1:5,000) Preparation of a project proposal incl. settlement plan and CBA by 01/81 Preparation of implementation-ready data, incl. timetable, personnel and cost plan for implementation by 08/81	Feasibility study ADP project progress reports Comment by Public Works HWWA Institute KfW	Close co-operation with Public Works Land titles are clarified prior to commencement of sub-project Harmonization of TOR with KfW Follow-on financing is assured

Input	Indicators	Verification sources	Essential assumptions
foreign graduate engineer	12 M/M	ADP bookkeeping	Indonesian and foreign experts can be employed according to schedule
economist	2 M/M	PU reports	
agricultural economist	10 M/M	GTZ account	
Counterparts	24 M/M		
inancial requirement	DM 200,000.--		

EMONSTRATION TRIALS FOR MECHANIZATION IN AGRICULTURE (S 27)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
ontribution to an increase in gricultural production, esp. ice, through intensive working f cultivated areas and/or ultivation of hitherto (partially) allow land of smallholders increase in labour capacity) aising of family incomes, esp. f smallholders, contribution the reduction of regional isparities	1978 1983 Number of rice growers 76,000 Area under rice (ha) 18,000 Rice production (t) 29,200 Man/days p.a. required for 1 ha rice: without mechanization: 240 M/D with mechanization: 172 M/D with full mechanization: 85 M/D	Reports by agricultural authority and BAPPEDA FAO reports Studies of ADP forerunner project BI studies	Rural population capable of being motivated Continued high priority for promotion of smallholders Multiplicability of the sub-project Sufficient cultivation areas are - as in the past - available

Output	Indicators	Verification sources	Essential assumptions
orking paper on the prerequisites, easibilities and effects of he introduction of increased echanization stablishment of 5 small tractor nits as a trial for demonstra-tion experiments ntegration of working paper ith trial results in a project study aiming at multiplicability Time: 01/80 - 12/83	Analysis of the introduction of mechanization (cost, know-how, repair demands, credit requirements) by 06/80 Establishment of 5 tractor units with one specialized rice tractor each (by 1981) Sukamenanti Talu Ujung Gading Kinali Air Bangis Training and servicing of an average of .... farmers per tractor unit Assumption of costs for maintenance, repair and initial replacements during run-in phase (1980 and 1981) Advice for tractor units (1980 - 1983) Completion of trial report, incl. timetable, operational and cost plan for follow-on project by 06/83	Reports by ADC Sukamenanti ADP project progress reports Reports by Dinas Pertanian	Close co-operation with Dinas Pertanian Implementation of ADC Sukamenanti Training of workshops for repair service Co-operation of Extension Service according to schedule Provision of bank credits for additional tractor units on private initiative

Input	Indicators	Verification sources	Essential assumptions
Foreign personnel	4 M/M	ADP bookkeeping	Punctual detailing of personnel from the advisory services (part-time)
Indonesian personnel	Advisory service (at least 40 M/M)	Dinas Pertanian account	
Financial and material requirements	DM 150,000.--	GTZ account	

ICE STORAGE IN CONNECTION WITH IRRIGATION PROJECTS (S 28)

Location: West Pasaman (Padang)

Objective	Indicators	Verification sources	Essential assumptions
ncreasing the incomes of rice rowers	1977 1983 Wet rice growers	Repelita III	Implementation of the irrigation projects
eduction of intra-regional isparities	Wet rice production (t) 2,600	Reports by agricultural authority and BAPPEDA	
	Seasonal price fluctuations from Rp 55 to Rp 78 per kg of rice		

Output	Indicators	Verification sources	Essential assumptions
re-feasibility study on - dampening price fluctuations - reducing losses resulting from sale at low-price and repurchase at high-price periods - better use of transport capacity - reducing rice losses Time: 06/80 - 09/80	Analysis of - market situation for rice - rice production in irrigated areas - storage capacity required - responsibility - political framework conditions, incl. Bulog/Dolog Preperation of proposals for follow-on project: CBA, cost, timetable and personnel plan	Pre-feasibility study ADP project progress reports Reports by Dinas Pertanian	Close co-operation with agricultural authority, Ministry of Trade and Cooperatives, and BAPPEDA

Input	Indicators	Verification sources	Essential assumptions
1 foreign agricultural economist	4 M/M	ADP bookkeeping	Follow-on financing for possible feasibility study is assured
1 Counterpart	4 M/M	Reports by Dinas Pertanian	
Financial requirement	DM 10,000.--	GTZ account	

BEEF CATTLE AND BUFFALO KEEPING ON SMALLHOLDINGS (S 29)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Quantitative and qualitative increase of livestock keeping, primarily by smallholders (breeding, draught and store cattle) Improvement of meat supply Increase in labour capacity	1978 1983 Head of beef cattle 4,994 Head of buffalo 2,154 Meat consumption per capita per annum 0.6 kg	Repelita III Reports by agricultural authority and BAPPEDA Teuscher study BI studies	Incorporation of livestock keeping into an integrated rural development

Output	Indicators	Verification sources	Essential assumptions
Intensification of advice Establishment of insemination stations Strain-growing and dissemination of fodder grasses Increased stock of draught animals Time: 01/80 - 12/83	Number of advisers 1979 ..... 1983 ..... Provision of breeding bulls in Kecamatan Pasaman and altogether .... servicing stations in West Pasaman (rotation of bulls to avoid in-breeding) Cultivation of .... ha for development of strains of fodder grasses Delivery of .... kg of grass seed p.a.	ADP reports Reports by Dinas Peternakan BWWA comment	Close co-operation with Dinas Peternakan Functioning of central veterinary laboratory in Bukittinggi Strengthening of co-operatives and/or self-help organizations

Input	Indicators	Verification sources	Essential assumptions
1 foreign livestock expert	37 M/M	ADP bookkeeping	
1 foreign veterinary surgeon	24 M/M	Reports by Dinas Peternakan	
1 Indonesian livestock expert	48 M/M	GTZ account	
8 Indonesian stockbreeding advisers	384 M/M		
1 Indonesian veterinary surgeon	48 M/M		
Financial requirement	DM 240,000.--		

BEEF CATTLE BREEDING ON BIG FARMS (S 30)

Location: West Pasaman

Objective	Indicators		Verification sources	Essential assumptions
		1978 1983		
Quantitative and qualitative increase of livestock keeping, primarily by smallholders (breeding, draught and store cattle)	Head of beef cattle	4,994	Repelita III	Incorporation of livestock keeping into an integrated rural development (provision of cattle to smallholders through multiplication ranch)
	Head of buffalo	2,154	Report of the agricultural authority	
Improvement of meat supply	Meat consumption per capita per annum	0.6 kg	Teuscher study	
			BI study	
Increase in labour capacity and incomes				

Output	Indicators	Verification sources	Essential assumptions
Pre-feasibility study to discover an optimal starting point for the provision of efficient cattle breeding stock	Analysis of the establishment of a beef cattle farm	Reports by Dinas Peternakan	Close co-operation with Dinas Peternakan
		Study of the sub-project	
Time: 01/81 - 12/81	- beef cattle farms - alternative land use	ADP project progress reports	Apparent readiness by farmers to adopt modern livestock keeping methods
	- beef cattle breeding on big and small farms	HWWA comment	
	- suitable locations		Sufficient demand for breeding stock
	- size of farms and degrees of intensity		
	- conversion of Alang-Alang areas into pasture		Follow-on financing for feasibility study is assured
	- breeding stock requirement		
	Preparation of TOR for feasibility study and timetable, personnel and cost plan		

Input	Indicators	Verification sources	Essential assumptions
1 foreign agronomist	4 M/M	ADP bookkeeping	
1 foreign livestock expert	2 M/M	Reports by Dinas Peternakan	
1 Indonesian expert	6 M/M		
Financial requirement	DM 7,000.--	GTZ account	

CREATION OF AN AGRICULTURAL ADVISORY CENTRE (S 31)

Location: West Pasaman (Sukamenanti)

Objective	Indicators		Verification sources	Essential assumptions
	Production in t	1978 1983		
Qualitative and quantitative increase in crop and livestock production	Rice	29,200	Statistics of the agricultural authorities	
	Coconuts	1,620		
Increase of smallholders' incomes	Rubber	2,890	BAPPEDA reports	
	Coffee	480		
	Cloves	170	Feasibility study Ophir	
	Head of beef cattle	4,994		
	Head of buffalo	2,154		

Output	Indicators	Verification sources	Essential assumptions
Provision of basic requisites for a universal agricultural advisory service	Co-ordination of sectoral investigations with a view to the requirements of all-round farming operations through	Reports by agricultural authorities	Close co-operation with the appropriate Directorates-General of the Ministry of Agriculture
	a common leader,	ADP project progress reports	
Time: 04/81 - 12/83	the bringing together of ADC,		Clarification of administrative problems
	the development centre for perennial cultures,		
	the college,		
	the veterinary laboratory,		
	the stockbreeding stations		

Input	Indicators	Verification sources	Essential assumptions
5 foreign experts	30 M/M	ADP bookkeeping	
1 Indonesian Director	32 M/M		
Indonesian experts	32 M/M (minimum)	Rendering of account by agricultural authorities	
Financial requirement	Sum of individual components	GTZ account	

PROMOTION OF AN INTEGRATED CROP ADVISORY SERVICE (S 32)

Location: West Pasaman

Objective	Indicators			Verification sources	Essential assumptions
Qualitative and quantitative increase in crop and livestock production Increase of smallholders' incomes	Production in t	1978	1983	Statistics of the agricultural authorities BAPPEDA reports Feasibility study Ophir	
	Rice	29,200			
	Coconuts	1,620			
	Rubber	2,890			
	Coffee	480			
	Cloves	170			
	Head of beef cattle	4,994			
	Head of buffalo	2,154			
	Rice growing advisers	28			
	Plant protection advisers	30			

Output	Indicators	Verification sources	Essential assumptions
Utilization of the agricultural advisory centre (AAC) in Sukamenanti for all agricultural advisory services Time: 01/82 - 12/83	Concentration of all advisory services for joint training courses (continuation of individual measures) Advice and provision of help with the staging of demonstration trials on private farms Regular official conversations between the AAC staff and the permanent contacts in the individual advisory services	Reports of the sub-project and by the Ministry of Agriculture ADP project progress reports	Close co-operation with agricultural authorities Establishment of the AAC Clarification of institutional competences

Input	Indicators	Verification sources	Essential assumptions
4 foreign experts	12 M/M	ADP bookkeeping	
Counterparts	Part-time over 9 M	Rendering of account by agricultural authorities	
Non-recurrent investments	DM 50,000.--		
Running charges	DM 40,000.-- (for 2 years)	GTZ account	

PROMOTION OF FISHERIES (S 33)

Location: West Pasaman

Objective	Indicators			Verification sources	Essential assumptions
Contribution to an increase in fishery production Contribution to closing the protein gap in West Pasaman and West Sumatra	Fish production in West Pasaman (t)	1978	1983	Reports by fishery authority and BAPPEDA Repelita III BI studies	Close co-operation with Department of Trade and Cooperatives as well as with BAPPEDA Projects for improving the market system and the co-operatives are carried out The necessary transport infrastructure and ice factories are provided
	Freshwater fish c.	350			
	Sea fish	2,216			
	Number of fishermen (sea fishing) 1977: 2,000 1983:				
	Number of fishing vessels:	1978	1983		
	Sailing boats	742			
	Motor boats	33			
	Fish consumption per capita (kg)	1978	1983		
	West Pasaman	9.5	12.8		
	West Sumatra	8.9	12.8		

Output	Indicators	Verification sources	Essential assumptions
Feasibility study of selected project proposals by Dinas Perikanan in West Pasaman Time: 09-11/79	Examination of Dinas Perikanan proposals on - freshwater fishing - brackish water fishing - sea fishing with allowance for the state of training Cost benefit analyses of selected problems TOR for operational, personnel, cost and timetable plan for the implementation phase	Study of the sub-project ADP project progress reports BWWA comment	Close co-operation with Dinas and Directorate Perikanan Co-operation desirable with experts of the harbour study Follow-on financing is assured

Input	Indicators	Verification sources	Essential assumptions
1 foreign fishery expert	3 M/M	ADP bookkeeping	One Counterpart each is made available by Dinas Perikanan at provincial and central level
2 Counterparts	6 M/M	Reports by Dinas Perikanan	
Financial requirement	DM 3,000.--	GTZ account	

PLAN FOR THE ESTABLISHMENT OF SMALL BUSINESS ADVISORY CENTRES (S 34)

Location: West Pasaman (Padang)

Objective	Indicators	Verification sources	Essential assumptions
Promotion of quantitative and qualitative production by industry and crafts Contribution to the diversification of the production structure	West Pasaman 1979 1983 Number of enterprises: 428 of these lime kilns 3 sawmills 92 joinery shops 30 rattan weaving shops 12 workshops 103 agrarian industry 60	Repelita III Reports by Dinas Perindustrian and BI	Adequate credit financing is assured Production of studies on charcoal and lime processing Continuing high priority for the development of small-scale industries

Output	Indicators	Verification sources	Essential assumptions
Study for the establishment of a training centre in West Pasaman (Simpang Empat) with special consideration of ADP-relevant areas: - wood processing - lime production for fertilizers and building materials - wrought iron work - workshops - reprocessing of agrarian products Time: 01/81 - 02/81	Analysis of the programmes of similar projects in Indonesia Examination of the potential demand in West Pasaman Establishment of space and staff requirements as well as necessary teaching aids and machines Drafting of curricula for courses of 4-8 weeks Preparation of TOR, timetable and cost plans for follow-on project Submission of report: 03/81	Reports by Dinas Perindustrian and BI ADP project progress reports Study of the sub-project HWWA comment	Close co-operation with Dinas Perindustrian Follow-on financing is assured Project data of other training programmes in Indonesia obtained by Liaison Officer

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	2 M/M	ADP bookkeeping	
1 Indonesian expert	3 M/M	Rendering of account by Dinas Perindustrian	
Financial requirement	DM 15,000.--	GTZ account	

INCREASE IN THE PRODUCTION OF CHARCOAL (S 35)

Location: West Pasaman

Objective	Indicators	Verification sources	Essential assumptions
Contribution to the diversification of the production structure by the development of a small-scale charcoal industry Creation of jobs Reduction of unused raw material reserves from lumbering (waste)	1979 1983 Number of enterprises: 428 Charcoal kilns 3-4 Number of persons in jobs: c. 1,000 of these in the production of charcoal: c. 10	Reports by Dinas Perindustrian BI study (in preparation)	Continuing high priority for the development of small-scale industry High level of demand for charcoal in West Sumatra and, above all, North Sumatra Credit granting through banks Implementation of the project proposal: "Provision of Training Facilities"

Output	Indicators	Verification sources	Essential assumptions
Feasibility study on the further development of charcoal processing in West Pasaman Time: 02/81 - 03/81	Analysis of raw materials and raw material reserves as well as marketing Drafting of proposals for the development of the charcoal industry Preparation of operational, timetable and cost plans Submission of report: 05/81	Feasibility study ADP project progress reports HWWA comment	Close co-operation with Dinas Perindustrian Utilization of BI pre-feasibility study and of TAD project proposals (Uldall mission)

Input	Indicators	Verification sources	Essential assumptions
2 foreign advisers	3 M/M	ADP bookkeeping	
2 Indonesian experts	4 M/M	Rendering of account by Dinas Perindustrian	
Financial requirement	DM 25,000.--	GTZ account	

INCREASE IN THE PRODUCTION OF LIME AS A FERTILIZER AND BUILDING MATERIAL (S.36) Location: West Pasaman

Objective	Indicators			Verification sources	Essential assumptions
Contribution to the diversification of the production structure by the development of a small-scale industry	West Pasaman	1979	1983	Reports by provincial authorities and own surveys	Development of small-scale industry continues to have high priority
Increasing the production of agriculture and the building trade through the provision of fertilizers and/or builder's lime	Number of enterprises:	428			Development of advisory services
Creation of jobs	of these: lime kilns	3			Credit granting by banks for producers and buyers
	Number of persons in jobs:	c. 1,000			
	of these in lime kilns:	6-9			
	Fertilizer consumption per person (kg)				
	West Sumatra	8.9	14.5		
	West Pasaman	3.8	14.5		
	(national average = 14.2)				

Output	Indicators	Verification sources	Essential assumptions
Pre-investment opportunity study of the development of lime processing in West Pasaman, chiefly as a fertilizer	Analysis of supply of raw materials and of trend of demand	Sub-project study	Close co-operation with Dinas Perindustrian
Time: 02/81 - 04/81	Drafting of proposals for the development of the lime processing industry	ADP project progress reports	Agricultural advice from ADP and economic advice from HWWA
	Preparation of provisional operational, timetable and cost plans	Reports by Dinas Perindustrian	Follow-on financing is assured
	Establishment of TOR for feasibility study	HWWA comment	Utilization of lessons of FES co-operative project North Sumatra
	Submission of report: 05/81		

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	3 M/M	ADP bookkeeping	
1 Indonesian expert	3 M/M	Rendering of account by Dinas Perindustrian	
Financial requirement	DM 20,000.--	GTZ account	

PROMOTION OF HEALTH AND EDUCATIONAL PROGRAMMES (S 37) Location: West Pasaman

Objective	Indicators			Verification sources	Essential assumptions
Promotion of the sectors of health and education		1978	1983	Reports by provincial authorities	UNICEF programme is continued
Qualification of the provincial authorities concerned	Number of primary schools	149		ADP project progress reports	
Utilization of the UNICEF programme for an integrated development of West Pasaman	pupils	26,990			
	teachers	880			
	Puskemas	5			
	KKIA	10			
	BP	16			
	doctors	5			

Output	Indicators	Verification sources	Essential assumptions
Increasing the efficiency of planning and implementation of development projects (health, education) in West Pasaman, with special regard to the UNICEF programme and the target group of women	Long-term advice by Dinas Kesehatan, Dinas P & K	Reports by provincial authorities	Co-operation with Dinas Kesehatan and Dinas P & K
Time: 01/80 - 12/83		ADP project progress reports	Co-operation with UNICEF in Jakarta
			Co-operation of a project representative in Jakarta

Input	Indicators	Verification sources	Essential assumptions
1 foreign expert	6 M/M	ADP bookkeeping	Adequate provision of Counterparts
Counterparts	according to requirements (abt. 96 M/M)	Account rendered by provincial authorities	
Financial requirement	DM 10,000.--	GTZ account	

6 INSTITUTIONAL STRUCTURE OF THE PROJECT

Internal German Project Structure

The proposed sub-projects are predominantly concentrated on two locations: Padang and Sukamenanti. The work to be done in Padang is chiefly of a conceptional, co-ordinating and planning nature, whereas the sub-projects have to be implemented in West Pasaman from Sukamenanti or - at a preliminary stage - examined as to their implementability. In Sukamenanti also any further starting points for regional development will have to be identified within the framework of the overall concept.

In setting up a project structure for German-Indonesian co-operation this division will have to be taken into consideration in the despatch of German personnel. If, moreover, a further expert is to be responsible not only for special tasks in West Pasaman but also for acting as an adviser within his specialized field for the whole of the Province from Bukittinggi, the German personnel would then be distributed among three locations in West Sumatra.

This team, operating from three locations, will have to implement, jointly with the responsible Indonesian officials, a regional development in West Pasaman. It will only be able to discharge its task if the sub-groups interact with one another: the predominantly conceptional/planning tasks of the Padang group will have to be examined as to their implementability by the experts at the other stations, just as the actions proposed from West Pasaman will have to be fitted into the overall concept by the planning group.

To this extent, then, the groups must see themselves as forming part of an overall team. The prerequisite of this

is that their work is co-ordinated by a project directorate which, for the sake of proximity to the local Indonesian decision-makers, will have to be set up - as will be demonstrated below - in Padang.

It is furthermore necessary to make continuous communication possible between the sub-groups. The infrastructural prerequisites needed for this will have to be set up within the framework of the project.

In conclusion it must be pointed out that all German experts will be engaged on the training of Counterparts. In this connection arrangements must be made to ensure that both they and the Indonesian Counterparts are provided with sufficient facilities for advanced and further training.

Integration of the project and links with other development executants in Indonesia

For multi-sectoral projects, such as the new ADP will be, Indonesia does not yet possess a unified executant. ADP will therefore be dependent on the co-operation of several project executants. The attached diagram shows the institutional tie-up of the project into the Indonesian administration. On the central plane in Jakarta the project activities are to be co-ordinated and determined by a Steering Committee; the members of this body are representative of the four principal Departments concerned with the project

- Agriculture,
- Public Works,
- Trade and Co-operatives,
- Home Affairs.

In this way the attempt will have to be made to have the budgetary resources available to these Departments for West Pasaman employed in accordance with the regional development

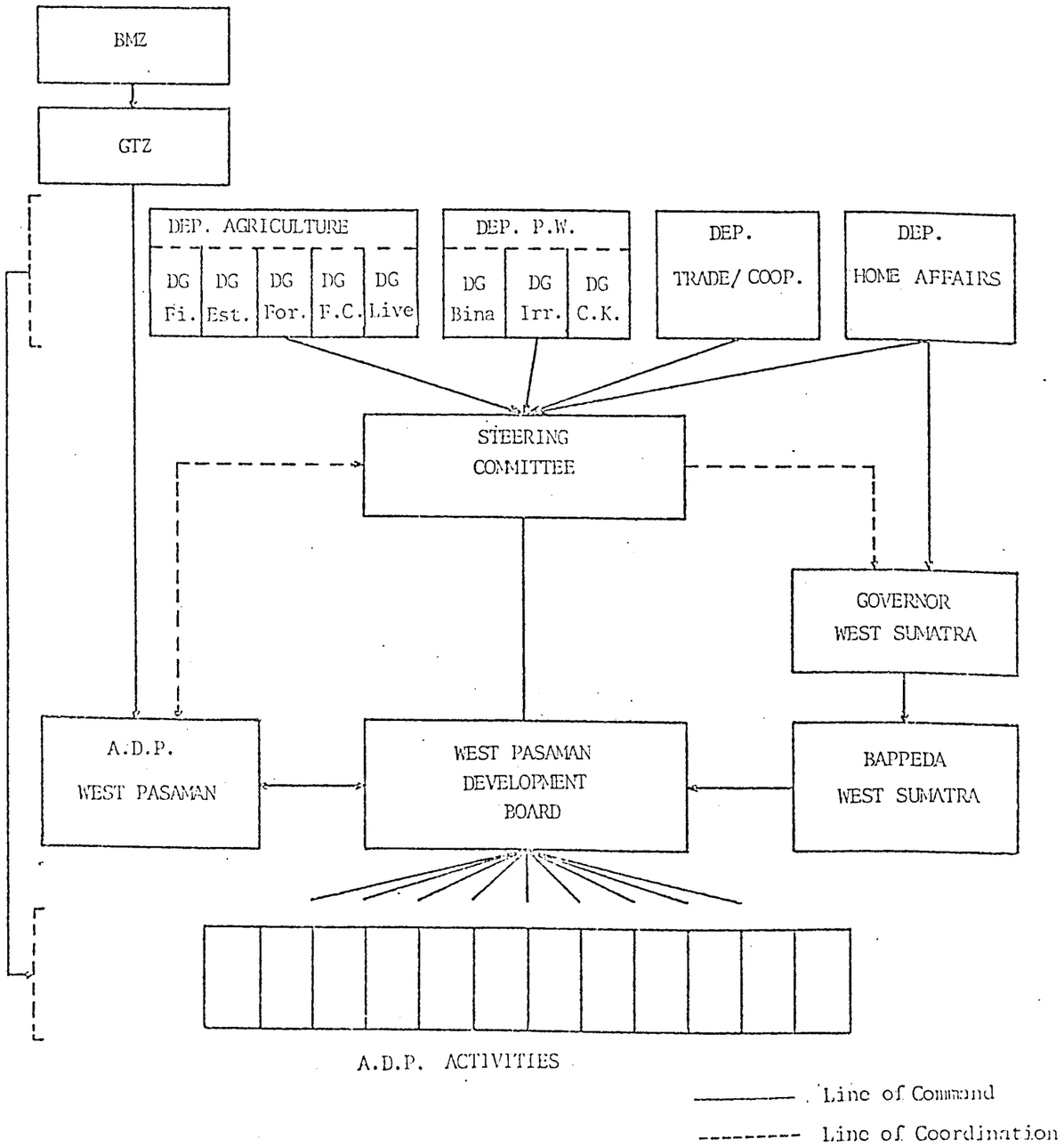
concept; this is the more important as the national budget has to be viewed as the most important Indonesian source of finance for West Sumatra.

The chairmanship of this Committee[1] should be held by the Department of Agriculture, while the two Deputy Chairman are to be appointed by the Department of Home Affairs and the Department of Public Works. The reason for the choice of this organizational structure is that the new ADP will continue, for domestic Indonesian organizational reasons, to run under the former Indonesian code number, though with a suffix. Even though preliminary conversations have shown that this kind of procedure is also being aimed at by the other participant during the initial phase, the question should be examined, within the framework of bilateral negotiations, of whether this structure is binding for the entire lifetime of the project; according to the "Blue Book" it is the Department of Home Affairs and/or the Department of Public Works which should be in control of regional projects.

The Steering Committee will be entitled to give directions to the West Pasaman Development Board which, within the Province of West Sumatra, has to be viewed as the co-ordinating body at the working level proper. Here BAPPEDA must hold the chairmanship in view of its functions. The Governor, too, can exert direct influence on the work of this body through BAPPEDA. Against this background the importance of participation in the work of the project by the Department of Home Affairs at the central level emerges again in its full significance since BAPPEDA is linked to that Department through the Governor. In this way a link, decisive for the success of the project work, can be established between the provincial and national levels.

1 See Fig.

Fig. Institutional Tie-up of the Project



At the working level BAPPEDA will have to be responsible with the Board for seeing the development concept determined by it for West Pasaman carried out in a manner mandatory on all authorities and for accordingly co-ordinating all measures envisaged for West Pasaman. ADP co-operation with BAPPEDA is in line with this idea.

The ADP project directorate must, for reasons of co-ordination, be a consultative member of the bodies at the central and the provincial levels.

Further foreign donors for West Pasaman to be considered, apart from the project, are UNICEF in particular but also the World Bank and the European Development Fund.

7 PERSONNEL AND FINANCIAL REQUIREMENTS OF THE PROJECT

Personnel Requirements

The sub-projects listed are examined below as to personnel requirements and length of deployment. For the foreign personnel a distinction was made between long-term and short-term experts.

Table 6 on the foreign long-term experts was devised in such a way as to assign to the specialists the activities to be performed by them in connection with the individual sub-projects. A continuous line (———) indicates the total rime span of deployment; a broken line (-----) was used whenever duration of deployment and duration of the sub-project were identical; a line of alternative dots and dashes (-.-.-.) indicates the period during which the activity should be completed. The table does not include any preparation time needed by the experts at home, auxiliary personnel for administration, other local staff or scientific back-stopping.

Posts 1 - 12 altogether require 472 man/months (M/M); under post 13a full-time scientist for the project representation in Jakarta (likewise without auxiliary staff) has been listed as a reminder. All experts must be available for deployment from o1/8o; for the project leader and the development economist deployment (together 4 M/M) is envisaged as early as 1979.

It should be pointed out that the plan has been evolved on the basis of the present state of information. It is, however, beginning to the apparent that, for various sub-projects which may be implemented in the event of positive findings of the feasibility study, an additional requirement for foreign personnel may arise. It may therefore be assumed that both

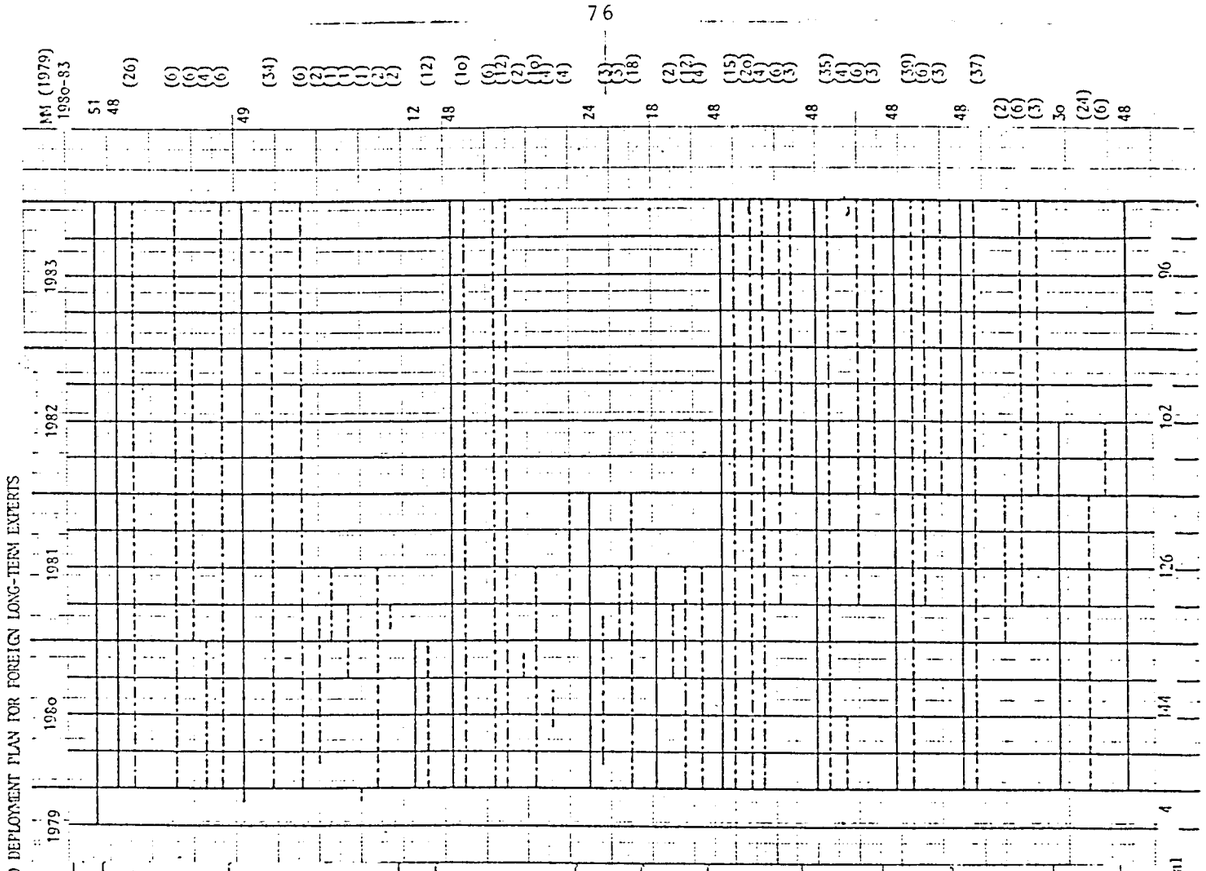


Table: 6 PERSONNEL REQUIREMENTS AND DEPLOYMENT PLAN FOR FOREIGN LONG-TERM EXPERTS

Post No.	Designation of experts and assigned task	Location	Sub-project No.	1979
1	Project leader	Padang/W-Pasaman	1 - 37	
2	Regional planner - Advice and training for planning and implementation officials West Sumatra - Advice and training for planning and implementation officials Kab. Pasaman - Settlement planning, NW Pasaman - Local and urban planning - Advice for health and education	Padang/W-Pasaman Padang Lubuk Sikaping W-Pasaman/Padang Padang/L.Sikaping Padang/L.Sikaping	3 4 10 11 37	
3	Development economist - Advice and training for planning and implementation officials West Sumatra - Advice and training for planning and implementation officials Kab. Pasaman - Study rehabilitation of national roads - Study rehabilitation of secondary roads - Identification of feeder roads - Study West Pasaman harbours - Feasibility study Partungan - Study charcoal industry	Padang/W-Pasaman Padang Lubuk Sikaping W-Pasaman W-Pasaman W-Pasaman W-Pasaman W-Pasaman	 3 4 14 15 16 17 26 35	
4	Expert on co-operatives - Study self-help org. and co-operatives	Padang/W-Pasaman Padang/W-Pasaman	7	
5	Agricultural economist - Marketing and market information - Advice and training for planning and implementation officials Kab. Pasaman - Advice and training on types of farms - Study potentials rice irrigation perimeters - Feasibility study Partungan - Planning data on rice storage - Study cattle breeding	W-Pasaman Padang/W-Pasaman L.Sikaping/W-Pasaman W-Pasaman W-Pasaman W-Pasaman W-Pasaman	6 4 12 25 26 28 36	
6	Construction engineer - Study rehabilitation of national roads - Study rehabilitation of secondary roads - Implementation rice irrigation	W-Pasaman/Padang W-Pasaman/Padang W-Pasaman	14 15 24	
7	Construction engineer - Identification of feeder roads - Feasibility study Partungan - Planning and construction supervision	Padang/W-Pasaman Padang/W-Pasaman Padang/W-Pasaman	16 26 3 u. 19	
8	Agronomist for annual cultures - Activation AUC Sukamenanti - Establishment of agricultural college - Demonstration trials of mechanization - Establishment of agricultural adv.centre - Promotion of integrated crop planning	W-Pasaman W-Pasaman W-Pasaman W-Pasaman W-Pasaman	19 26 27 31 32	
9	Agronomist for perennial cultures - Establishment of centre for perennial cult. - Examination of facilities of priv. nurseries - Establishment of agric. advisory centre - Promotion of integrated crop planning	W-Pasaman W-Pasaman W-Pasaman W-Pasaman/Padang	21 22 31 32	
10	Agronomist for plant protection - Development of plant protection - Establishment of agric. advisory centre - Promotion of integrated crop planning	W-Pasaman/Bukittinggi W-Pasaman/Bukittinggi W-Pasaman/Padang	23 31 32	
11	Livestock expert - Prom. of beef cattle and buffalo keeping - Pre-feasibility study beef cattle breeding on big farms - Establishment of agric.advisory centre - Promotion of integrated crop planning	W-Pasaman W-Pasaman W-Pasaman W-Pasaman/Padang	29 30 31 37	
12	Veterinary surgeon - Establishment of vet.laboratory for beef cattle and buffalo keeping - Establishment of agric. advisory centre	W-Pasaman W-Pasaman W-Pasaman	29 31	
[13]	[Project representative]	[Jakarta]	[1 - 37]	
			Total	

the co-operative experts (post 4) as well as the construction engineer in West Pasaman (post 6) will have to be extended. Foreign personnel may also prove to be necessary for the implementation of fishery measures.

The following distribution therefore results for the main locations: five experts (posts 1 - 4 and 7) in Padang, six experts in Sukamenanti/West Pasaman (posts 5, 6, 8, 9, 11, 12), one expert dividing his time between Sukamenanti and Bukittinggi (post 1o). Mention should again be made at this point of the expert representing the project in Jakarta.

For the short-term experts[1] the requirements at present extend only until the beginning of 1981. As several of these projects are pre-feasibility or feasibility studies it may again be assumed that follow-on projects will arise with appropriate personnel requirements. It is moreover highly probable that, as planning of the integrated regional development of West Pasaman progresses, further expert opinions, studies and investigations will become necessary and that these will have to be carried out by further short-term experts - presumably from 1981 onwards, when the first intermediate results will have become available.

Of particular importance for personnel planning are the two sub-projects on "Stock-taking of potential areas in the north-west of Pasaman" (S 8) and "Advice in forest utilization planning" (S 9). These are exceedingly complex (S 8) and mutually interlinked sub-projects, whose implementation within the framework of a normal project would encounter great organizational difficulties. The possibility of handing these two sub-projects over as an entity to a consulting group should therefore be examined.

1 See Table 7.

Table 7: PERSONNEL REQUIREMENT AND DEPLOYMENT PLAN FOR FOREIGN SHORT-TERM EXPERTS

Post No.	Designation of experts and assigned task	Location	Sub-project No.	1979	1980	1981	Total MM
1	Cartographer - working map	Germany	2				1
2	Geographer - working map	Germany	2				0,5
3	Data processing expert	Padang	5				1
4-8	Soil scientists (5exp.) for natur.pot.	W Pasaman/Germany	8				35
	Soil scientists (1exp.) for natur.pot.	W Pasaman	25				2
	Rice irrigation study						
9-1o	Topographers (2 exp.)	W Pasaman/Germany	8				12
11	Hydrologist - natural potentials	W Pasaman/Germany	8				77
	Hydrologist - rice irrigation study	W Pasaman	25				2
12	Forestry expert - natural potentials	W Pasaman/Germany	8				8
	Forestry expert - forest utilization plan	W Pasaman	9				2
13-18	Cartographers (5exp.) for natur.pot.	W Pasaman/Germany	8				22
19	Credit programme expert	W Pasaman/Padang	13				2
2o	Harbour operation expert	W Pasaman	17				2
21	Electrification expert	W Pasaman	18				3
22	Fishery expert	W Pasaman	33				3
23	Industrial training expert	W Pasaman/Padang	34				2
24	Charcoal expert	W Pasaman	35				2
25	Lime-processing expert	W Pasaman	36				3
	Various regional development experts	Germany	1				various
	Total						112,5
	of these S 8 and 9						86
	altogether						26,5

If this proposal is accepted and the corresponding man/months are deducted the total M/M for the short-term experts is reduced from 112.5 to 26.5 M/M of foreign short-term personnel.

As for the Indonesian Counterparts - see Table 8 - the data are often very vague, which is why the appended tables frequently only list minimum figures. No distinction has been made between long-term and short-term. Nor have training measures or training programmes which cannot be implemented within the project framework been included. Indonesian auxiliary staff has likewise not been taken into account.

The total of Counterpart man/months to be made available by the Indonesian side therefore amounts to 1,584; if, as proposed above, sub-projects S 8 and S 9 are lifted out the number is reduced to 1,431.

In terms of overall requirements the following picture therefore emerges (excluding S 8 and S 9):

- Foreign long-term experts	472	M/M
- Foreign short-term experts	26.5	M/M
- Indonesian Counterparts	1,431	M/M
Total	1,929.5	M/M

The Indonesian share thus amounts to 74 %.

Financial and material requirements

The sub-projects listed give rise to a financial requirement - excluding personnel costs - of DM 18.1 million for the period from 1979 to 1983. Of that total a figure of DM 15.5 million is accounted for by the implementation of two rice projects alone.

Table 8: PERSONNEL REQUIREMENT FOR INDONESIAN COUNTERPARTS

Sub-project No.	Title of the Subproject	Personnel requirement M/M
1	Preparatory seminar	-
2	Planning basis: working map	1
3	Advice and training: provincial inst.	6o minimum
4	Advice and training: inst. in Kab.Pasaman	18 minimum
5	Data preparation	3
6	Marketing and market information	18
7	Self-help organizations and co-operatives	24
8	Natural potentials in the NW of W Pasaman	147
9	Ecological balance	6
1o	Settlement planning	36
11	Town planning	16
12	Types of agricultural smallholding	6o
13	Utilization of existing credit programme	4
14	Rehabilitation of national roads	1o
15	Rehabilitation of secondary roads	1o
16	Identification of feeder roads	6
17	Increasing the efficiency of coastal harbours	6
18	Electrification	5
19	Agricultural development centre (ADC)	336
2o	Development of agricultural	part time of S 19 and other teachers
21	Centre for perennial cultures	48 and 32 of S 19
22	Private tree-nurseries	part time of S 21
23	Plant protection	48 minimum
24	Rice irrigation projects Kapar and Rimbo	Contractor and 18
25	Potential rice irrigation projects	6
26	Rice irrigation project Partupangan	24
27	Demonstration trials: mechanization	4o minimum
28	Rice storage at village level	4
29	Beef cattle and buffalo keeping	48o
3o	Beef cattle breeding on big farms	6
31	Agricultural advisory centre	32 minimum and part time of S 19
32	Integrated crop advisory service	part time of S 19
33	Promotion of fisheries	6
34	Promotion of small-scale industries	3
35	Increase of charcoal production	4
36	Lime processing	3
37	Promotion of health and education	96 minimum
Subtotal		1.584
of these S 8 and S 9	./.	153
Total		1.431

Breakdown of costs according to years is shown in the appended Table 9. It should be pointed out that, for reasons of essential preliminary work, costs are accruing even before the start of the project on 1.1.198o.

Not included in the calculation are the costs of so-called flanking measures which nevertheless are indispensable, such as

- representation of the project in Jakarta
- backstopping by ADP in Germany

and above all

- the infrastructure necessary in Padang and Sukamenanti for the Indonesian-German team.

Because of the unfavourable conditions in West Pasaman relatively large sums will have to be earmarked for the provision of housing, electricity and water supplies, as well as communication between the project locations.

Table 9: ROUGH CALCULATION OF COSTS, EXCLUDING PERSONNEL COSTS, FOR THE PERIOD 1979 - 1983 IN DM

Sub-project No.	1979	1980	1981	1982	1983	Total
1		80,000				80,000
2	3,500					3,500
3		2,500	2,500	2,500	2,500	10,000
4		2,500	2,500	2,500	2,500	10,000
5		2,000				2,000
6		4,250	4,250	4,250	4,250	17,000
7		60,000				60,000
8		430,000				430,000
9		20,000				20,000
10			7,500	7,500		15,000
11		3,000				3,000
12		6,250	6,250	6,250	6,250	25,000
13		15,000				15,000
14		12,500	12,500			25,000
15		20,000				20,000
16		15,000	15,000			30,000
17	20,000					20,000
18		7,500	7,500			15,000
19		80,000	40,000	40,000	40,000	200,000
20		180,000	40,000	40,000	40,000	300,000
21		110,000	30,000	30,000	30,000	200,000
22		3,000				3,000
23		90,000	70,000	70,000	70,000	300,000
24		7,000,000	8,500,000			15,500,000
25		12,000				12,000
26		130,000	70,000			200,000
27		62,500	12,500	12,500	62,500	150,000
28		10,000				10,000
29		90,000	50,000	50,000	50,000	240,000
30			7,000			7,000
31	.	.	.	.	.	.
32				70,000	20,000	90,000
33	3,000					3,000
34			15,000			15,000
35			25,000			25,000
36			20,000			20,000
37		2,500	2,500	2,500	2,500	10,000
Total	26,500	8,430,500	8.960,000	338,000	330,500	18,085,500