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FINAL REPORT

EVALUATION INSTITUTIONAL
ARRANGEMENT AND POLICIES FOR MULTIPLE-USE
CONSERVATION AREA AND ITS SURROUNDINGS MANAGEMENT:
PILOT APPLICATION FOR THE BUKIT BAKA/BUKIT RAYA AND
THE BUNAKEN NATIONAL PARK

Jakarta, November 1993

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FOREWORD

This is a Final report of "Evaluation Institutional Arrangement and Policies for Multiple-Use Conservation Area and Its Surroundings Management : Pilot Application for The Bukit Baka / Bukit Raya and The Bunaken National Park", composing by Indoconsult Team.

This Report forms a Reviewing based on the Approach and Methodology proposed in the Technical Proposal, Field Surveys and Discussions with Counterpart Team from the Ministry of Forestry.

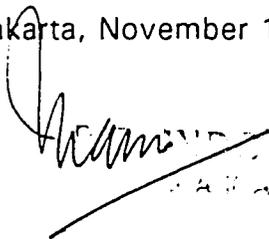
Our Team consists of :

Nature Conservation Specialist	:	Ir. M.P.L Tobing
Institutional/Social Economy Spec	:	Drs. B.Widaryanto
Staf/Surveyor	:	Drs. Thobby Wakarmamu, MSc
Staf/Surveyor	:	Doddy Ito, SE
Project Secretary	:	Yunitasari, SE

We hope that this study meets the requirements of MOF and can be in a use of assisting the Development in Forestry sector specifically for the National Park.

We are very much appreciate for any assistance given either in a form of information, data or suggestions.

Jakarta, November 1993



SOEMARNO SOEDARSONO
JAKARTA

Soemarno Soedarsono
President Director

PT. INDOCONSULT

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CHAPTER I

INTRODUCTION

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INTRODUCTION

i. Background

The study on evaluation institutional arrangement and policies for management of multiple-use conservation area and its surroundings: pilot application for the Bukit Baka/Bukit Raya and the Bunaken National Park has been entrusted by the Department of Forestry to PT. INDOCONSULT in relation to compiling an institution arrangement pattern and government regulations for conservation areas in general and national parks in particular.

National parks in Indonesia were established to protect and conserve unique natural resources, apart from which they also provide social economic benefits for the surrounding inhabitants, increase tourism, provide a recreational place, etc.

To achieve the objective of usage, protection and conservation of national parks, a coordinated activity is required as the interests of various institutions are involved in the implementation of these regulations.

The development of a national park in Indonesia requires various resources and a lot of time. The small number of expert human resources and the deficit in funds has become an obstacle in the management of national parks in Indonesia. Therefore, it is the opinion of the Department of Forestry that this study should be conducted with the Pilot Project at the Bukit Baka/Bukit Raya National Park and the Bunaken National Park. The expected result will be an effective and efficient Conservation Area Management Pattern in general and for National Parks in particular.

2. Objective and Scope of Study

a. Study Objectives

- 1). To review and explain existing institutional arrangement in managing the two National Parks: Bukit Baka/Bukit Raya and Bunaken National Parks
- 2). To identify several institutions and agencies (Government, private sector and social organizations) involved in the management of both national parks
- 3). To identify possible improvements of existing institutional arrangements.

b. Scope

This study has been conducted to develop an understanding of the development and management of national parks on the basis of working relations between the government, private sectors and the society, and the effectiveness of efforts to increase the agency role in achieving national development objectives in general and, the forestry development in particular.

3. Research Methodology

The research methodology implemented in this study consists of : firstly, Research Approach; secondly, Research Area and, thirdly, Data collection and analysis.

a. Research Approach

In accordance with the objective of this study, institutional approach is the research approach used in collecting data and information which can be used as input to develop new policies in institutional development. This approach is also used to observe inter-institution cooperation in implementing laws or policies related to national parks.

b. Research Area

The original study design included the Bukit Baka/Bukit Raya National Park located in the provinces of West Kalimantan and Central Kalimantan and the Bunaken National Park in the North Sulawesi Province. However, the consultants and the counterpart team at the Departement of forestry agreed to exclude the Bukit Raya partian of former, due to its large size accessibility problems and the fact that it is located in 2 (two) proviencies. The Bukit Baka National Park, located in Sintang, West Kalimantan Proviencie represents a Land National Park pattern with its various implications, whereas the Bunaken National Park located in Manado, North Sulawesi province represents an Ocean National Park.

c. Data Collection and Analysis

To complete material and analysis, data sources have been divided into two groups:

- 1). **Secondary Data**, originating from government/private/society institutions involved in management of a national park.
- 2). **Primary Data**, originating from a surveyor conducting directing observation at the research area through questionnaires and interviews of various parties involved

4. Framework of Analysis

The development of a National Park as part of a forestry development cannot be separated from the complete development process including, economics, religion, social-culture, politics, legal, defense and security and international relations aspects. Therefore, planning and implementation of national parks should be coordinated to create a mechanism of "equal partnership" with elements outside the forestry institution.

Related elements in the management and development of a National Park can basically be divided into three groups:

- 1). Government;
- 2). Private sector;
- 3). Society (the local community).

The Government element in this aspect involves vertical as well as autonomous institutions which have direct access to the management and development of a national park.

Private sectors indicated here, according to Regulation Legislation No. 5/1990 on Conservation of Biological National Resources and Ecosystems article 34 sub-article 3,

are parties not included within government institutions who are permitted to conduct natural tourism, transportation to and from the national park and accommodation facilities.

Society in the management of national parks are the Lembaga Swadaya Masyarakat and the people living within and around the area who are able to participate in the conservation of biological natural resources and ecosystems.

The involvement of these three elements in the management and development of national parks is a short-term as well as longterm conservation effort which, naturally, has its own objectives. Within the fishery sector, for instance, conservation measures taken to conserve sources and to protect the environment is implemented, for example, by prohibiting explosives, prohibiting fishing using ships and setting aside nuclear zones for breeding, etc.

In developing and managing a national park external effects should be minimized in order that nature may develop and achieve a balance in accordance with natural cycles as the basis of a continuous and lasting development pattern.

Keeping in mind that a national park is an integral part of forestry development, the definition and aims of conservation, the basis for appointing and determining an area, terminology, etc. must be completely understood by all sectors and related parties.

5. Management and Development of Conservation Area

The Department of Forestry, specifically the Directorate General of Forest Protection and Natural Conservation (PHPA) is responsible for the management and development of the existing biological natural resources within conservation areas. However, in executing its responsibilities it is expected that there will be a cooperation with other agencies running programs in the field of biological natural resource development.

A. Development Strategy of Conservation Area

- a). Stabilizing conservation areas according to its function as protector of a life support system, including underground areas (hydrologic function), to protect the surrounding area for the protection of the variety of flora fauna and its ecosystem. Also for lasting use of biological natural resources and its ecosystem, especially for research, science, education, cultivation support and natural tourism.

- b). Control of spatial use within a conservation area should be in accordance with its set function.

b. Development strategy of cultivation area

- a) Spatial use for cultivation activities, production as well as settlement.
- b) Control over society exploitation on cultivation areas to avoid inter-activity/sectoral conflicts.

This conservation strategy includes the concept at sustainable development being a development which proportionally considers all factors related to humanity and nature and its exchange value, to meet society's requirements and to improve the quality of life in the present as well as the future. Because natural resource conservation is one of the elements of sustainable development, protection becomes one of the important activities. Protection activities have two aspects : firstly, to enhance conservation; secondly, to support the development objectives.

Therefore, an effective management system is required, which guarantees that biological resources will not only be is not only be to preserved in their our right but can provide benefits. This conflict between natural resources conservation and development. Reserved

areas are areas which possess a legal basis to limit the use of natural resources by man. In Indonesia this is regulated in Legislation No. 5 of 1990 on conservation of biological natural resources and its ecosystem and which states that a conservation area consists of a natural reserve and conservation area.

In a natural reserve area, because its main function is to support life, direct exploitation is strictly prohibited. Whereas natural conservation areas on the other hand, can be used for research, natural tourism and to support cultivation.

Natural reserve areas consist of a natural reserve and animal sanctuary. Whereas a natural conservation area can consist of a national park, a forest park or a natural tourism park. In Indonesia the authority to manage Natural Resource Conservation areas is given to the Directorate General of Forest Protection and Natural Conservation (Ditjen PHPA) of the Department of Forestry. Management of these areas is implemented by Technical Implementation Units, for national parks as well as Natural Resource Conservation Agency (BKSDA) and Sub-BKSDA.

Sub-BKSDA manages a natural reserve area and administratively is in coordination with the Regional Office of the Department of Forestry of the concerned Province and technically coordinates with BKSDA at its respective region. Specifically for national

parks, management is implemented by the National Park Technical Implementation Unit under the Directorate General PHPA.

At implementation, the management must actively coordinate with the Regional Government. Conceptually, the role of the Regional Government is not limited in managing a conservation area, and is also unlimited in appointment planning, appointment and preparation of management plans.

Cooperation of various parties is meant to avoid conflict of interest in the allocation of spatial and regional use. In addition, the management must also involve various related agencies and the stakeholders in all phases of activity so that the interests of various parties can be accommodated and coordinated and hence result in an integrated and participative management plan.

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CHAPTER II

BASICS OF FORESTRY DEVELOPMENT

CHAPTER ii
BASICS OF FORESTRY DEVELOPMENT

1. The Objective of Forestry Development

The essence of national development is the development of a wholly united human being and the development of the entire Indonesian society from Sabang to Merauke. This means that national development not only aims at physical progress or mental satisfaction but is also a balanced and harmonious combination of both. Furthermore, national development must be implemented equally throughout the entire country and at all strata within society, and should not be directed for the benefit of one particular group or region only. The results of national development should benefit the entire population through a better life and life quality.

On this basis of the national development essence, the objective of national development is to create a fair and equally prosperous society materially and spiritually, based on The Five Basic Principles (Pancasila) and the 1945 constitution within a united state of the Republic of Indonesia which is independent, in full sovereignty, united and under the

over eighty of the people in a condition where safety, tranquility, order and dynamics are maintained for the people and nation within independent, friendly, orderly and peaceful world relations. The essence and objective of this national development is the concept used in setting the strategies of regional development.

In an effort to achieve the national development objectives, the Indonesian nation is subject to Wawasan Nusantara which basically means that the entire Nusantara Region with the air above it, the sea connecting the islands and all its contents, are considered to be one entity. The realization of the Wawasan Nusantara concept requires the ability to develop the well-being and security of the Indonesian nation throughout the entire jurisdiction of the Nusantara islands. The demand to be able to achieve the national development objectives requires that the entire sea potential should be compiled and regulated as one units and one entity in order to be utilized at the right time and in the right ways.

Forestry development, as part of the national development, must also be able to present a series of efforts which reflects the philosophical, constitutional and conceptual basis in order to ensure that development is controlled and stays within the national development framework. The principle of forestry development is forest sustainability and providing an optimum benefit. This can also be classified as forestry development oriented

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towards natural resources conservation.

On this principle and orientation, the objectives to be achieved in forestry development are: the guarantee of stability and presence of forest resources at an optimal scale while fulfilling the requirements of forest production for industry and the people, the availability of a gene pool to maintain biological diversity, maintenance of ground water balance, life support and the achievement of a high economic function.

On this basis, forestry development is carried out to provide and maintain forest resources, reflected in the conservation at a variety, of flora as well as fauna, through conservation within and outside of the area on land as well as on water, to preserve the continuity of progressive production benefit, without disturbing the ecosystem and still maintaining a healthy environment, and to stabilize designated forest area including forest use for non-forestry requirements.

Forestry development, besides requiring a destined principle, orientation and objective, should also consider the implementors' ability and events which may or will occur in the future.

The main outputs targets of a successful forestry development plan are:

1). Forest resource and natural wealth

- a. Forest industry raw material originating from natural forests as well as planted forests.
- b. Society's requirement for forest products and working fields
- c. A forest's function in providing the following services: recreation, research, education.
- d. Life support : maintenance, protection and conservation.

2). Human Resources

The creation of a forest-loving human being who looks far into the future, has a broad horizon, loves nature and possesses a pioneering spirit.

Local communities have been well developed, act conscientiously and participate in forestry development.

natural resources, the development of the North Sulawesi area is mainly aimed at agriculture, fishery and tourism, whereas West Kalimantan's development is aimed at agriculture, forestry, mining and tourism.

In relation to this report, the main focus of its review is on natural tourism objects. This is due to the fact that North Sulawesi and West Kalimantan have developed these natural resource potentials to become the main attraction for the growth of tourism in this area.

2. Natural Resource Development Strategy

The Development of Natural Resources is basically the utilization of natural resources to support the national development objectives. It must be supported by a strong and serious will with the availability of skilled manpower, systems and infrastructure as well as funding in one integrated planning. This condition will accelerate the development of national parks in a precise and well-oriented manner which provides firm support for the management of natural resources conservation.

Considering the potentials and the obstacles present, and within considering the potential and constraints of natural resource exploitation, their utilization and management should consider the following basic principles:

- a. Job opportunities should be increased and fairly distributed.
- b. Utilization of natural resources cannot be managed separately but should always be integrated within its ecosystem.
- c. Utilization of natural resources should be implemented rationally and not damage the environment.
- d. Utilization of natural resources should consider the principles of sustainability and continuity.

3. Development Strategy of National Parks

Development is a continuous process and to obtain an optimal result the use of all available resources should be well-planned considering the priority scale within a certain time period of particular concern is the other depending of biological resources: damage to one species can be have far-reaching effects on the ecosystem.

The fifth Five-Year Development Plan (Pelita V) of Forestry is mainly directed towards the creation of production facilities, utilization of forest products which continuously and sustainably directly influences the power and ability of forest production processing industry.

The management of a national park is aimed at conserving biological natural resources and its ecosystem in order that it can meet the function of: conservation of life support system, maintain the variety of flora and fauna and its ecosystem in an optimal manner so that they can contribute to research, education, cultivation development, tourism and recreation. To support this, the area should be protected from any form of danger and damage which might occur.

Conservation and national park areas' utilization must be improved and expanded to:

- a. Equalize the distribution of people's welfare.
- b. Fairly distribute regional development benefits.
- c. Create work.
- d. Increase regional and state income through devisa income.
- e. Increase love for nature and one's homeland and to improve environmental harmony.

- f. Meet the increasing demand of natural tourism.
- g. Improve education and science.
- h. Increase efforts in natural conservation and environment.

The development of a national park is implemented to support the national development. These efforts must be based on the fact that forestry tourism can provide benefit and profit for the society, if these efforts are implemented in policies, planning and implementations.

In order to conserve natural resource (forest) and the environment a planned, oriented and integrated management should be implemented in order that the possible negative effects of development itself can be minimized. These negative effects can be the destruction of part of the rare flora and fauna and genepool which is the result of development which disregards an environmental management concept.

Therefore, in order to control disturbances in the form of area clearance, area cross-sectoral security should be improved by giving priority to active participation through education, persuasion and prevention. In this way, forest disturbances can be controlled.

Operational measures in the increase of national park functions, the development and management of national parks directed only at obtaining profit without regarding its improvement, will enhance the possibility of damage within the national park ecosystem as well as its aesthetic condition.

To succeed gain success in the conservation program, support should not only be sought from the population surrounding the area but a participative cooperation should also be implemented among related institutions and departments at the central as well as regional government. These measures can be implemented in two ways: **firstly**, internal enhancement related to institutional development, and enhancing the quality and quantity of national park personnel; **secondly**, external enhancement related to enhancing the economy of the inhabitants around the national park. Through income increase, it is hoped that they will support conservation within the national park.

The aim of developing an integrated national park is to integrate sectoral programs in relation to the development of a national park and regional development. Hence, the implementation of an integrated program will decrease the possibility of a disoriented national park development.

The system used in the management of national parks is the zoning system. Zoning is required and is created to avoid conflicts which may arise between the interests of a national park: conservation, tourism and the requirements of local inhabitants.

Zoning system consists of:

Nuclear Zoning: functions as conservation area.

Utilization Zone : tourism utilization zone functions as an intensive tourism area of the natural resources usage zone by local inhabitants in non-destructive methods.

Supporting Zone: functions as settlement for the local inhabitants.

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CHAPTER III

NATIONAL PARK DEVELOPMENT

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NATIONAL PARK DEVELOPMENT

1. National Park

a. Utilization of Natural Resource Conservation Area

In Repelita V (Fith-Year Development Plan), the development and improvement of conservation areas have been conducted continuously, including the appointment it new conservation areas. At present the appointed conservation areas nurnber 364 units with an area of approximately 22.45 million hectares.

These areas can be broken down into 184 nature preservation units with an area of 8,494,118 hectares, 73 animal conservation units with an area of 5,586.209 hectares, 56 tourism park units with an area of approximately 263,470 hectares, 13 hunting park units with an area of 241,378 hectares, 7 ocean park units with an area of approximately 72,390 hectares and 31 national park units with an area of 7,788,140 hectares or 34.70 percent of the total area of conservation in Indonesia.

Table III-1
Natural Resource Conservation Area
1992/1993

No.	Area Fungtion	Total Unit		Total Area	
		Unit	Percent	Hectare	Percent
1.	Nature Preservation	184	50.55	8,494,118	37.84
2.	Fauna Conservation	73	20.05	5,586,209	24.89
3.	Tourism Park	56	15.38	263,470	1.17
4.	Hunting Park	13	3.57	241,378	1.08
5.	Ocean Park	7	1.92	72,930	0.32
6.	National Park	31	8.52	7,888,140	34.70
	T o t a l	364	100	22,446,245	100

Source: State Speech of the Indonesian President, 17 August 1993.

b. Total Number of National Parks

In Indonesia National Parks have been developed since REPELITA II; in 1992/93 an one national park, the Siberut (West Sumatera) National Park, was added. Therefore there are now 31 national parks with an area of 7,888,140 hectares. The iegal basis for appointing a national park can be either decree from the Minister of Agriculture (responsible for 11 national parks), or (who is responsible for 20) decree of the Minister of Forestry. A more detailed description on the area and location of national parks in Indonesia can be seen in Table III-2.

Table III-2
Area and Percentage of
National Park Area in Indonesia
1992/93

No.	National Park	Area Location	Area Ha	Percent
1	Gunung Lauser	Aceh and North Sumatra	792,675	10.0
2	Kerinci Seblat	West Sumatra, Jambi Bengkulu, South Sumatra	1,484,650	18.8
3	South Bukit Barisan	South Lampung	365,000	4.6
4	Way Kambas	Central Lampung	130,000	1.6
5	Ujung Kulon	West java	136,656	1.7
6	Seribu Isles	akarta	526	0.0
7	Gunung Gede	West Java	15,196	0.2
8	Karimun Jawa Islands	Central Java	111,625	1.4
9	Bromo Tengger Semeru	East Java	58,000	0.7
10	Meru Betiri	East Java	50,000	0.6
11	Baluran	East Java	22,868	0.4
12	West Bali	Bali	77,727	1.0
13	Kutai	East Kalimantan	200,000	2.5
14	Tanjung Puting	Central Kalimantan	355,000	4.5
15	Dumoga Bone	North Sulawesi	300,000	3.8
16	Bunaken, Manado	North Sulawesi	89,065	1.1
17	Lore Lindu	South-east Sulawesi	222,187	2.8
18	Aopa Watumohae	South-east Sulawesi	105,194	1.3
19	Komodo	East Nusatenggara	75,000	1.0
20	Manusela	Maluku	189,000	2.4
21	Gunung Rinjani	West Nusatenggara	40,000	0.5
22	Wassur	Irian Jaya	4,000	0.1
23	Gunung Palung	West Kalimantan	90,000	1.1
24	Cendrawasih Sea	Irian Jaya	1,453,500	18.4
25	Kalimutu	East Nusatenggara	5,000	0.1
26	Gunung Halimun	West Java	40,000	0.5
27	Berbak	Jambi	162,700	2.1
28	Taka Bone Rate	Ujung Pandang	530,765	6.7
29	Alas Purwo	East Java	43,420	0.6
30	Bukit Baka Raya	West Kalimantan	200,000	2.5
31	Siberut	West Sumatra	533,386	6.8
Total			7,888,140	100

Source: Department of Forestry: "Indonesian National Parks", 1992

Of the number of national parks existing in Indonesia, the Ujung Kulon National Park and the Komodo National Park has been acclaimed world-wide as a World Site Heritage by UNESCO as they possess fauna not present in any other area, the population of which is very limited. The Ujung Kulon National Park is the home of the Java rhinoceros and the Komodo National Park houses the komodo dragon. Apart from that, the Gunung Gede Pangrango National Park has been appointed as a biosphere conservation because this national park possesses an ecosystem consisting of natural mountain-rain forest, whereas the Bogani Nani Waterbone Toraut National Park in North Sulawesi houses flora which cannot be found in other areas.

c. Number of Visitors to National Parks

Based on available data from 15 national parks in Indonesia during 1990/1991, the total number of visitors to the national parks numbered 286,227 tourists consisting of 259,692 local tourists and 26,535 overseas tourists. From these national parks visitors, 141,203 tourists visited Meru Betiri National Park (East Java), whereas 81 thousand visited Gunung Lauser National Park (Aceh & North Sumatera). For further details, see table III-3

Table III-3
 Number of Visitors at National Parks
 1990/1991

No.	National Park	Visitors' Origin		Total
		Local	Overseas	
1	Gunung Lauser	75,000	6,255	81,255
2	South Bukit Barisan	50	15	65
3	Ujung Kulon	2,250	1,500	3,750
4	Gn. Gede Pangrango	10,250	150	10,400
5	Baluran	11,455	1,000	12,455
6	West Bali	14,575	2,350	16,925
7	Komodo	750	8,845	9,595
8	Tanjung Puting	500	235	735
9	Kutai	854	175	1,029
10	Dumaga Bone	3,115	25	3,140
11	Kerinci Seblat	4,525	700	5,225
12	Meru Betiri	136,078	5,125	141,203
13	Lore Lindu	250	18	268
14	Rawa Aopa Watamohai	25	17	42
15	Manusela	15	125	140
Total		259,692	26,535	286,227

Source: Indonesian Forestry Statistics, 1990/1991.

2. Description of Bukit Baka and Bunaken National Park

a. Bukit Baka National Park

1). Geographical location

The Bukit Baka National Park is located in the region of Sintang, West Kalimantan Province with an area of approximately 70,500 hectares. Geographically, the National Park is located between $0^{\circ} - 30'$ to $0^{\circ} - 45'$ Southern Latitude and $112^{\circ} - 15'$ to $113^{\circ} - 0'$ East Longitude. Bukit Baka National Park is located at a height of 500 - 2,278 metres above sea level, which is the highest hill in Kalimantan. This area's topographic characteristics range from slightly hilly ground to steep hills. Bukit Baka National Park is a river flow area (daerah aliran sungai) of the Malawi river which flows into the Kapuas in West Kalimantan.

Bukit Baka has been appointed as a Nature Reserve based on the Decree of the Minister of Agriculture No. 1050/Kpts/Um/12/1981 with an area of 100,000 hectares. The Nature Reserve changed its status into a National Park on 26 February 1992 based on the Decree of the Minister of Forestry No. 281/Kpts-II/1992 on Bukit Baka/Bukit Raya National Park with an area of 181,900 hectares.

Chronology in appointing Bukit Baka/Bukit Raya National Park is as follows:

- a). Decree of the Minister of Agriculture No. 1050/Kpts/Um/12/1981 on: The appointment of the Sarwai and Menukung forest complex with an area of 100,000 hectares located in the region of Sintang, West Kalimantan Province as a nature reserve, further to be named Bukit Baka Reserve.
- b). Decree of the Minister of Forestry, No. 192/Kpts-II/1987, on the alteration of the decree of the Minister of Agriculture No. 1050/Kpts/Um/12/1981 on the appointment of the Sarwai and Menukung forest complex with an area of 100,000 hectares located in Sintang, West Kalimantan Province as a nature reserve, further to be named Bukit Baka Reserve.
- c). Decree of the Minister of Forestry, No. 281/Kpts-II/92 on: Change of function and appointment of Bukit Baka Nature Reserve (70,500 ha) located at Sintang, West Kalimantan Province and Bukit Raya Nature Reserve (110,590 ha) at East Kota Waringin, Central Kalimantan Province into a National Park with an area of 181,900 hectares, further to be named Bukit Baka/Bukit Raya National Park.

2). Inhabitants

In West Kalimantan, the inhabitants living in the surrounding areas of the national park are settled in groups of several villages: Siyai, Balaban Ella, Teratak, Sungkap, Encana, Nanga Apat and Nanga Mumbung. But after resettlement they have been integrated into one village: the Balaban Ella Village where their understanding of the importance of conserving natural resources, which have previously been very minimal, has increased. For the total number of inhabitants within the surrounding area of the national park see table III-4.

Table III-4

Situation of the Village and Population Growth

No.	Village	Total Inhabitants	Percentage
1.	Balaban Ella	135	5.2
2.	Nanga Ella Hilir	1,357	51.8
3.	S. Sampak	760	29.0
4.	Batu Ampar	133	5.1
5.	Belanti	100	3.8
6.	Sutingkup	134	5.1
	T o t a l	1,619	100

Source: Argomitra Team, 1992

The inhabitants depend on the forest to supply their daily requirements, for example getting wood for housing material, firewood, hunting for meat, as well as the use of other auxiliary forest products. Some still adhere to the pattern of nomadic farming (huma berpindah). However, this method has been gradually abandoned as more of them use previous farming areas to plant rubber trees, durian, rice, corn and cassava. In addition the area is also utilized as animal grazing grounds.

PT Sari Bumi Kusuma and PT Kurnia Kapuas Plywood operate as forest concession holders in the area. Apart from implementing forest harvesting, also have an obligation to conduct positive activities for the inhabitants of the surrounding area through a program initiated as Desa Binaan (Village Development), which is expected to develop a campaign for forest protection. Compulsory activities implemented by both companies have shown results : the inhabitants are beginning to understand that the forest is very useful for their future. According to the Agro Mitra LSM study, approximately 60 percent of the inhabitants are aware that the entire contents of the national park holds a wealth which they should conserve and protect from damage.

The latest data shows that both companies have taken approximately 70 percent of their work force from the surrounding communities. The inhabitants have subsequently become

more aware of the importance of forest protection for regional development and for society itself.

3). Potential

This area is a specific tropical rain forest and is a centre of biological variety including a natural land ecosystem type which varies from one place to the other and is closely related to geographical span, topography, depth of the soil layer and other physical characteristics including the effects of natural disaster. Potential in this area is Engkoras wood and Belian wood, vegetation is dominated by Meranti and Ubah and is of a mixed forest vegetation type, fauna include animals mentioned in the Pocket Guide to the Birds of Borneo and information No. 1 on protected wild animals in Indonesia as well as other mammals such as boars and Klampiau/Owa.

4). Accesibility

To gain access to the Bukit Baka National Park from Pontianak two routes can be taken: through the town of Sintang or directly through the town of Nangapinoh and can be accessed by air, land or river.

Air

The air route is the fastest and goes from Pontianak to Nanga Pinoh: 450 km (± 1 hour flight).

Land

From Pontianak one can use land transportation (bus) to the municipality of Sintang (± 7 hours), continued by water transportation (speed boat) along the Melawi river to Nanga Pinoh (± 2.5 hours on water).

Nangapinoh - Popao - TN Bukit Baka

From Nanga Pinoh by speed boat one goes to the base camp (logpond) of PT Sari Bumi Kusuma (SBK) in Popai (Ela Hilir), with an approximate travel time of 2 hours. From PT SBK logpond (considered as 0 km) one continues by land through PT SBK logging tracks for 35 km.

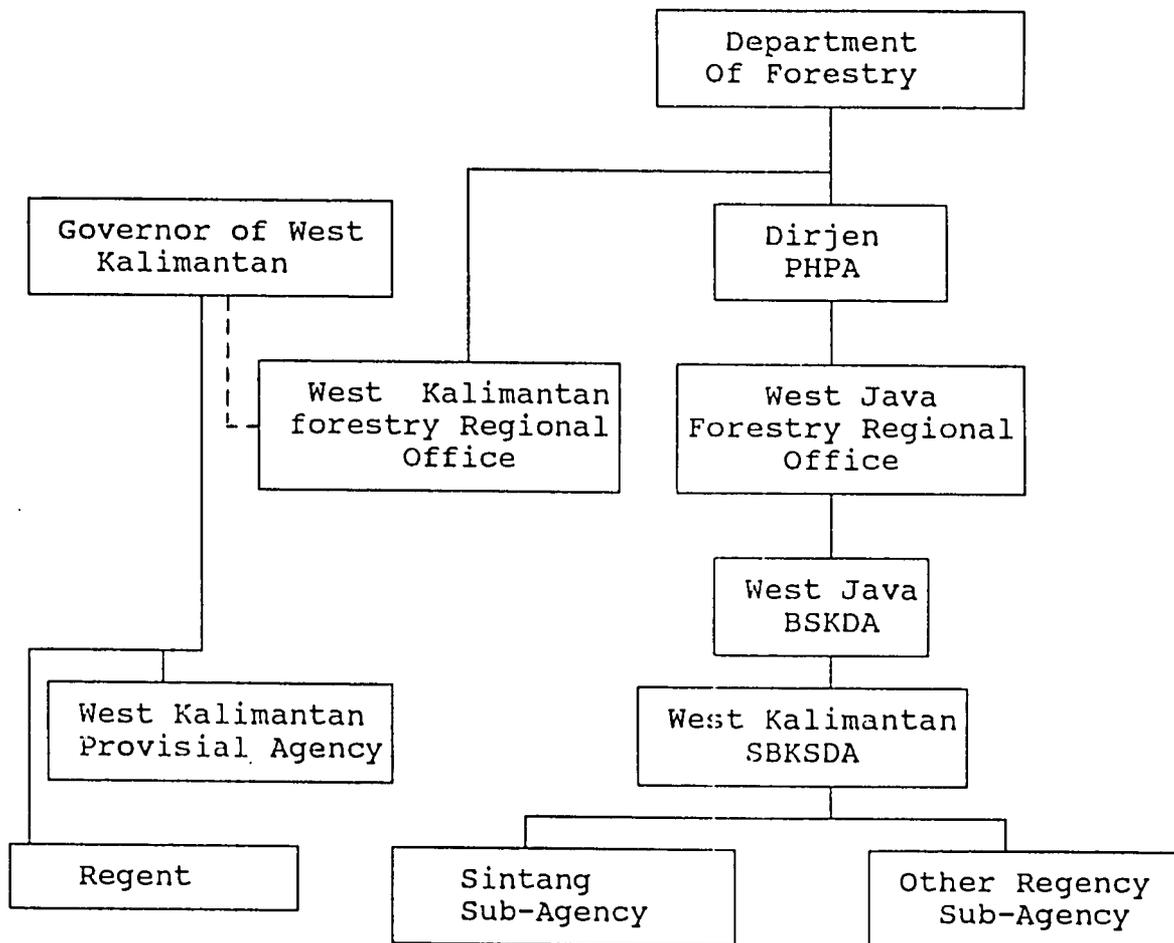
The Bukit Baka National Park commences from km 29 until km 41. It is a logpond track of PT SBK and at once the border line with Central Kalimantan. PT SBK's logpond track circles the western, southern and eastern part of the National Park.

5). Park Management Organizational Structure

The organizational structure of the West Kalimantan SBKSDA based on the Decree of the Minister of Forestry No. 144/Kpts-II/92 on the organization and working method of BKSDA is as follows:

Diagram III-1

Organizational Structure of the Bukit Baka/
Bukit Raya National Park



Source: SBKSDA, West Kalimantan

Legend: — = Line of command

----- = Line of coordination

6). Park Management

The Bukit Baka National Park is currently under the management of the West Kalimantan Natural Resource Conservation Sub-Division (SBKSDA) as one of the Technical Implementation Unit (UPT) in Forest Protection and Nature Conservation (PHPA). In its function and duties this unit is functionally and technically responsible to the Natural Resource Conservation Division (BKSDA) III, Directorate General of Forest Protection and Nature Conservation (PHPA); whereas, administratively it is responsible to the West Kalimantan Regional Forestry Office.

The West Kalimantan BKSDA's duties are to implement legislation in forest protection and nature conservation. Its functions are to control natural reserve areas, tourism forests, to enhance the use of the area and the types of vegetation and animals as well as to control biological natural resource conservation and its ecosystem.

Employees of the national park are also employees of the West Kalimantan Sub-KSDA and assisted by sub-sections of the Sintang KSDA. Up to the end of the 1992/93 fiscal year the number of West Kalimantan SBKSDA personnel totals 56 persons consisting of 37 civil servants and 19 nonorary employees.

The total West Kalimantan SBKSDA employees by status are as follows:

1). Civil Servants	: 37 persons
Honorary Employees	: 19 persons

T o t a l	56 persons
2). By Educational Level:	
University graduates (Forestry)	: 1 person
College graduates (non-forestry)	: 1 person
High School	: 38 persons
Junior High School	: 11 persons
Primary School	: 5 persons

	56 persons

7). The National Park Development Plan

Bukit Baka has been appointed as a national park, but due to its relatively recent existence (2 years) there is almost no activity in this national park yet. At present, personnel are working on the National Park Development Plan.

In the management of Bukit Baka National Park as a conservation area, the Department of Forestry (in this case SBKSDA) is assisted by USAID and ITTO.

This assistance come in the form of:

1. Provision of Research stations
2. Drawing up a Bukit Baka National Park Management Plan
3. Development of inhabitants in the vicinity of the national park.

Apart from that, both companies as forest concession holders: PT SBK and PT KKP have the obligation to implement a Village Development Forest as an effort to provide direct information to the surrounding inhabitants on nature conservation and lasting forest management.

b. Bunaken National Park

As a general description of the Bunaken National Park (underwater) in Manado (North Sulawesi) the following information and data are presented:

1). Geographic Location

The Bunaken National Park is located at 0°57' - 1°50' North Latitude and 28' - 49' East Longitude. This area includes Bunaken Mantehage, Siladen, Manado Tua and Nain, as well as Arakan and Wawontulap with an area of 89,065 hectares.

2). Inhabitants

According to Dr. J. Belsky's report (Livelihood Strategies and Marine Resource Use Among Residents of Bunaken National Park, North Sulawesi, 1992), more than 10,000 people live within the national park (see table III-5).

Table III-5

Situation of Inhabitants in several
Islands of the Bunaken National Park
in 1991

No.	Village	Number of Inhabitants	Percentage
1.	Bunaken/Siladen	1,605	6.2
2.	Manado Tua	4,607	44.4
3.	Alungbanua	682	6.5
4.	Mantehage	869	8.4
5.	Nain	2,539	24.5
	T o t a l	10,382	100

Source: Proposal Plan for the Management of Bunaken National Park, findings of Kusen et al, 1992

A total of 50 percent of the inhabitants main income is derived from the sea. Every village, however, has a different socio-economic profile. For example, most of the fishermen in Bunaken village usually catch fish from the sea using relatively large boats, whereas in Mantehage and in Arakan only a small number of fisher men are able to catch fish from the sea. Almost the entire inhabitant of Nain Island depend on sea products for their handiercraft, whereas Manado Tua and Mantehage mainly produce staple food.

3). Potential

Bunaken National park has 3 (three) main potential uses which could be developed:

- a). Natural conservation area, concentrating on sea "biota" which are protected in Indonesia and found in parks, coral reefs and mangrove forests with a high variety of vegetation.
- b). Tourism object, coral reef (its ocean park) is famous as one of the best places for diving.
- c). Natural resources, exploitation to support the life of more than 10,000 inhabitants living in the park and the surrounding areas.

Details of these potentials indicate that in reality the national park possesses a large ocean natural resource which is also unique. The resource consists of beautiful coral reefs, crystal clear waters with a high visibility, large fish, small fish of various species in colours which draws admiration from those who view them. Besides, there is also a great variety of ocean life, such as: sea cucumber, susu bundar, crab, giant clams, tortoise and prawns which should all be protected and considered as cultivated commodity.

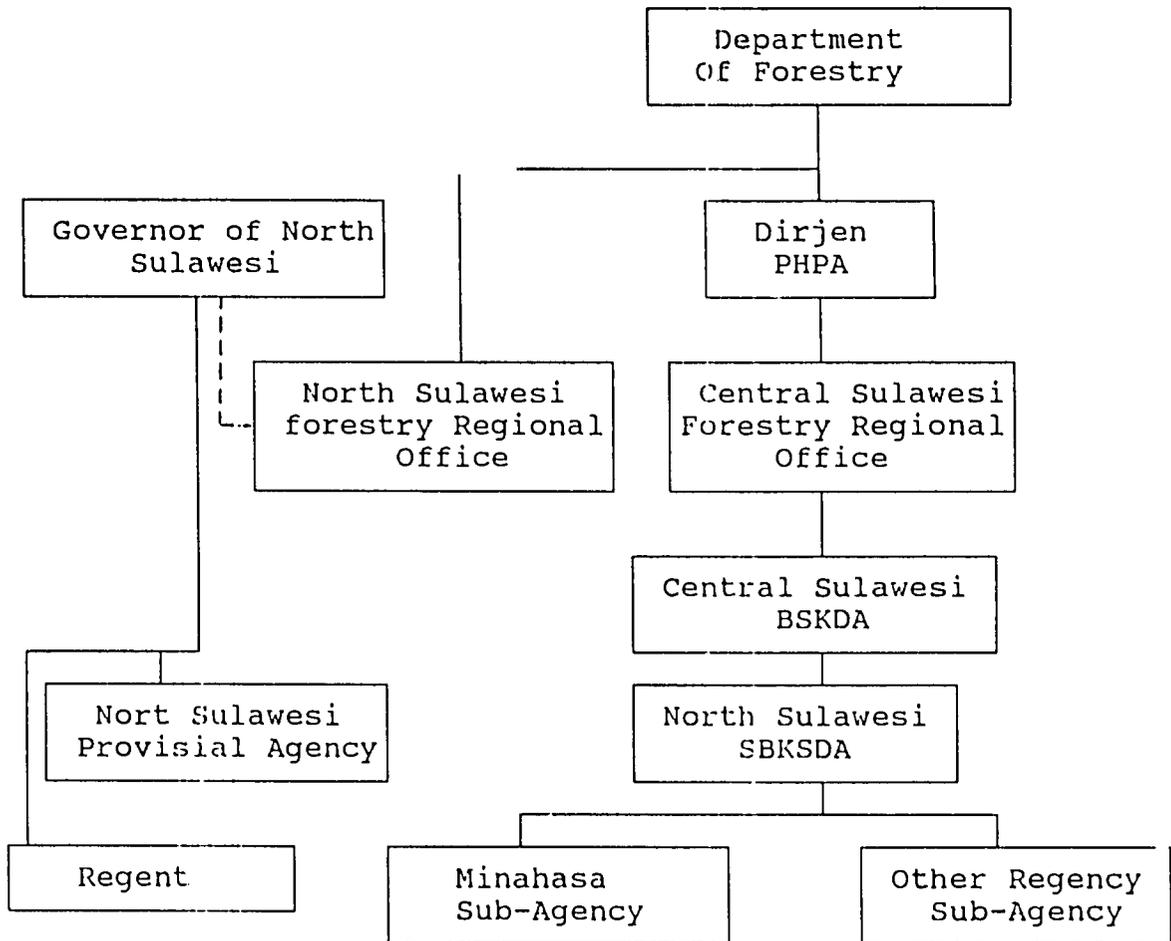
4). Accesability

It is relatively easy to reach the Bunaken National Park because water transportation (speed boats) managed by private persons as well as organizations, such as Nusantara Diving Club, Murex and Baracuda are available. The trip to the national park takes approximately 45 minutes from Manado by using hired or regular water transportation managed by these private persons or organizations.

5). Organizational Structure

The working structure in the management of the Bunaken National Park can be seen from the following organizational structure:

Diagram III-2
 Organizational Structure
 Bunaken National Park



Source : SBKSDA, North Sulawesi
 Legend : ————— = Line of command
 - - - - - = Line of coordination

6). Management

At present North Sulawesi Province possesses 2 (two) national parks: the Bogani Nani Wartabone Toraut and Bunaken National Parks; the management is under the coordination and responsibility of the North Sulawesi Natural Resource Conservation Sub-division with a total of 110 personnel with the classification of 34 personnel in structural positions and 76 in functional positions. Apart from managing the Bunaken National Park, the North Sulawesi KSDA sub-division is also responsible for the management of the Biological Natural Resource Conservation Area in North Sulawesi except for the Bogani Nani Watabone National Park.

7). Plans for the Development of National Parks

The Bunaken National Park receives assistance from USAID in NRMP (Natural Resources Management Project). This project is involved in drawing up management planning for the Bunaken National Park, as well as the enhancing participation of the inhabitants in conserving natural resources. By the end of 1993 zoning will hopefully have been completed and can be used as a reference in further management the national park.

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CHAPTER IV

FINDINGS AND ANALYSIS OF THE NATIONAL PARK

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FINDINGS AND ANALYSIS OF THE NATIONAL PARK

1. Findings

Forest development has a wide impact on jobs and other activities. This is due to the fact that forest development touches almost all aspects of the life of a society and a nation. Hence, the implementation of forest development is not only the responsibility of the Department of Forestry but is also related to other departments. The implementation of forestry activities not only occurs within the forest by forestry officials, but also occurs outside of the forest and is the responsibility of other institutions and the society. In accordance to the characteristics of forestry development, these activities are therefore related to conserving natural resources and the environment.

To obtain success in a conservation program, not only should approaches be implemented towards the inhabitants in the vicinity but a participative cooperation between related institutions and departments at the central as well as regional government should also be conducted. One example of this cooperation is that between

the Department of Tourism, Post and Telecommunication, the Department of Public Works and several regional forestry agencies, in the form of conservation area management in North Sulawesi at the Bunaken National Park with the ocean as a base. Another is the Bukit Baka National Park with a land base in West Kalimantan.

It falls on the Department of Forestry to construct a strategy planning system in Natural Resource Conservation. This system is directed at an integration of various plans in Forestry and related problems, sectoral as well as regional, thus resulting in an integrated plan. However, in implementation, often various problems are encountered which are related to government policy. Restrictions encountered in job implementations are:

- a. Regulations on natural resource conservation.
- b. Conservation area management organization.
- c. Funding sources for the national park management.

The problem of regulations encountered in this context is more on the aspect of understanding and interpreting the legislation for conservation. The differences in interpretation of these pieces of legislation often becomes a restriction in the management of conservation areas.

The management of an object cannot be separated from the availability and allocation priority of provided funds. The small amount of operational funds results in a limited management activity and thus resulting in a relatively slow development of a national park.

On the one hand, considering its potential, the Bunaken National Park has been appointed as one of the leading sectors of the North Sulawesi province and therefore requires attention, management and fund allocation for its development without having to forfeit the quality of its own environment. On the other hand, the Bukit Baka National Park, with such an extensive area and with an impact on the lives of the inhabitants in the vicinity, should at least take a preventive attitude in relation to land area conservation efforts in order to control damage being done to natural resources there.

Improvement of organizational system is implemented by:

- a. Affirming the mandate and coordination mechanism between working units within the Department of Forestry.
- b. Enhancement of coordination mechanism with other related institutions, at central as well as regional level.

- c. Enhancing cooperation and coordination with private sectors, State Owned Companies (BUMN) as well as Forestry Cooperative
- d. Enhancing forestry cooperation, bilateral as well as multilateral.
- e. Improving the society's self supporting organization in forestry.

2. Analysis of the National Park

a. National Park Institution

Any effort implemented in the development of a national park cannot be separated from the aim of the national forest development. Its management and development requires a system with integration as its main characteristic. This means that a national policy on forest development, specifically the development of national parks, is required.

According to the essence of the State of Indonesia as a law-based country, the development and management of a national park should be provided with a clear legal base, should be firm and consistent in order to ensure the legality for its management.

The legislation is based on the idea that the principle of a set inter-related working method is the focus of the Central Government (Department of Forestry) on other sectors in related areas moving towards the maximal and lasting use of natural resources.

Due to its wide range of uses and because it involves various interests, utilization of natural resources is the responsibility and obligation of all parties in society. The participation of all concerned is directed through a useful and fruitful activity by integrated control under one command. By an involvement on the basis of similar perceptions of the existence of natural resources and its ecosystem reflected in the valid regulations, there is an opportunity to place funding for management of a national park into an integrated development, at the same time reducing instances of favoritism. This is because the aim of an integrated national park development as mentioned above is to integrate sectoral programs into national park development and regional development. Hence, the implementation of an integrated program will diminish the possibility of a disoriented national park development.

The National Park Management Plan should be based on and refer to as well as elaborate the General Forestry Plan as set out in the Decree of the Minister of Forestry No.830/Kpts-II/1992 on Forestry Planning System and should be integrated with regional development plans, ie :

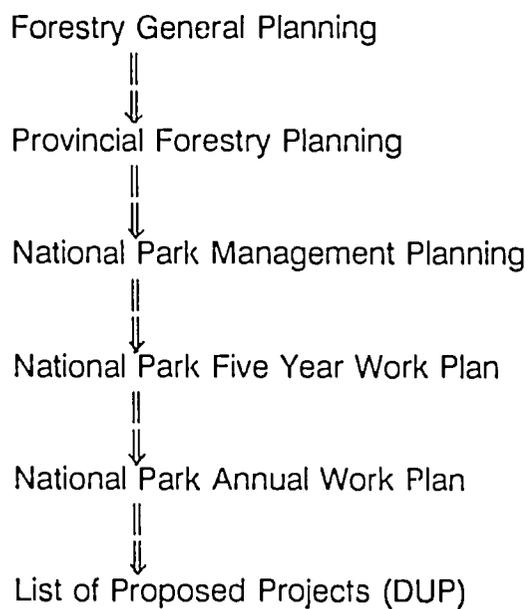
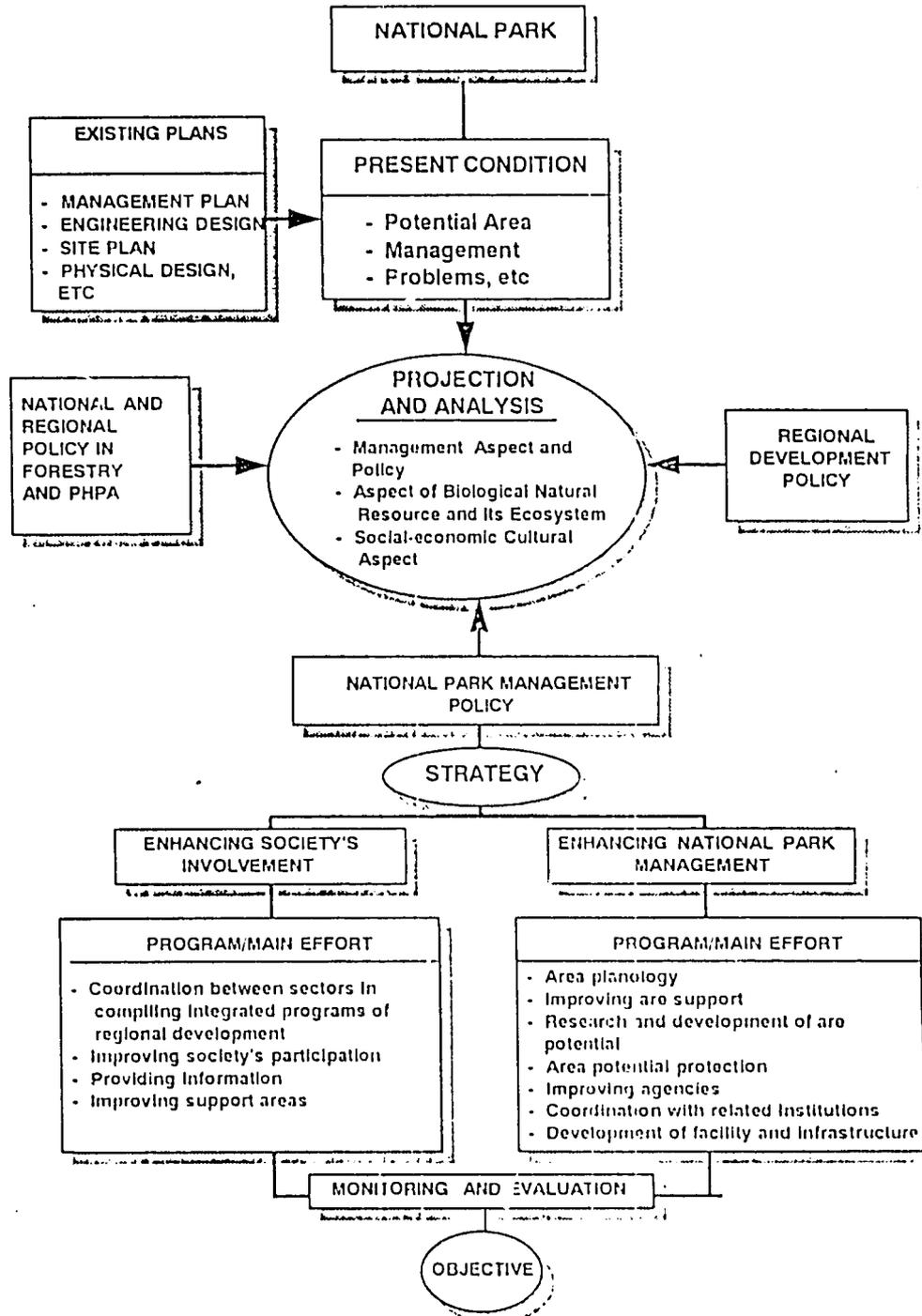


DIAGRAM OF IDEA FLOW OF THE NATIONAL PARK MANAGEMENT PLAN



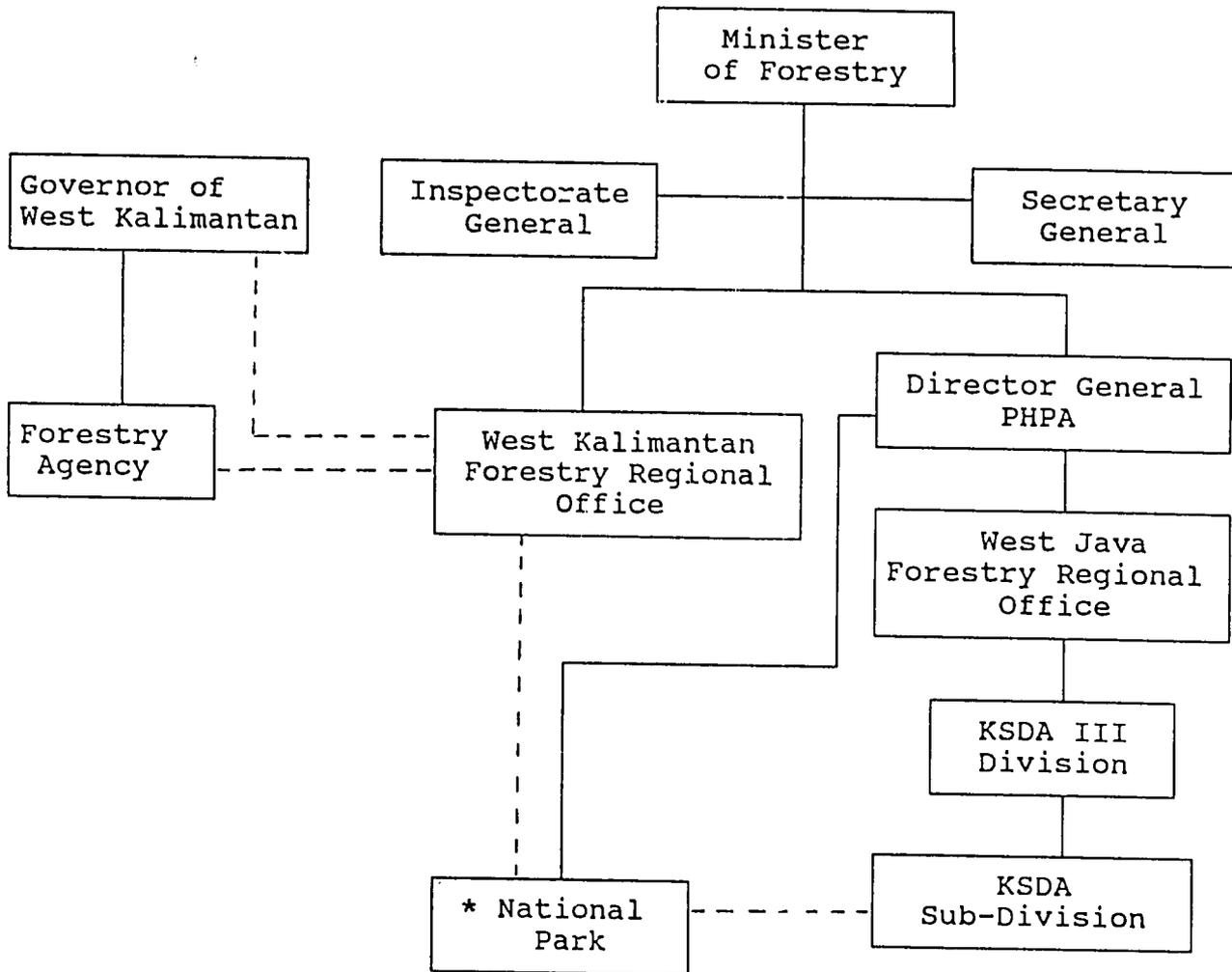
1). Bukit Baka National Park Management Organization

Although the Bukit Baka National Park is relatively new, it has been proven that its management and security has become a burden which cannot be resolved by the Department of Forestry alone, in this case the Natural Resource Conservation Sub-Division. Considering the importance of forests as foreign exchange commodity and their importance in improving the environment, the national park's management and security should be handled in coordination with related parties/institutions.

a). National park organizational structure

Because the Bukit Baka National Park Technical Implementation Unit has not yet been established, the Bukit Baka National Park's status is temporarily that of a project within the structure of the West Kalimantan SBKSDA, hence, functionally coordinatively it is responsible to the Directorate General PHPA through the West Java BKSDA II. This condition has become the primary limitation in developing the national park itself. If the national park's status can be appointed as a Technical Implementation Unit the organizational structure and its working relations would be as shown in the following diagram.

Diagram IV-2
 Proposal of Bukit Baka National Park
 Organizational Structure



Legend:

- * = Project proposed to become Technical Implementation Unit
- = Line of command
- - - = Line of coordination

b). Finding

Funding sources for the management of Bukit Baka National Park is incorporated in the funding plans of the West Kalimantan Natural Resource Conservation Sub-Division. In general, for conservation development an amount of Rp. 208,545,000 has been allocated for 1991/1992 consisting of a routine budget of Rp. 75,083,000, Conservation Area Preservation Project budget of Rp. 34,240,000, budget from the Forestry Development Improvement and Control Project of Rp. 43,545,000, Grading Fee of Rp. 7,000,000 and budget from Moist Land Development Project at Sentarum Lake of Rp. 48,768,000 (source West Kalimantan SBKSDA 1992).

The conservation area under the authority of the Natural Resource Conservation Sub-Division is 1,198,787.8 hectares and the area of Bukit Baka National Park alone is 70,500 hectares. If each hectare of the Conservation Area receives a fund of Rp. 173.96 it is our assumption that the national park budgeting will require: $70,500 \times 173.96 =$ Rp. 12,264,180. This is a very small amount to be used in the management of a conservation area with a difficult site condition and including an extensive radius.

Forestry development funding in Indonesia, apart from that originating from the National Budget (APBN), is also supported by overseas funding assistance for forestry development which the Indonesian Government receives in the form of a grant or loan, for example in the 1991 fiscal year it consists of:

Bilateral cooperation from: Japan, the Netherlands, Italy, Canada, France, New Zealand, Britain, USAID amounting to US\$ 101,838,000.

Multilateral cooperation such as ITTO, USAID, World Bank, ADB, World Food Programme (WFP) FAO, NIB/NDF, IFAD/the Netherlands/WFP of US\$ 160,525,000. Cooperation with NGOs such as Ford Foundation, Interwarder/AWB, ABRC-PJG (USA), AAZPA and USA, amounts to US\$ 1,035,000. The total amount is US.\$ 263,398,000 (source: Department of Forestry, 1990/91).

Of this total, naturally not all has been directed at the management and development of the Bukit Baka National Park or the Bunaken National Park; but management of these aids have been utilized for the development of Indonesian forestry in general. Fund allocation for both national parks can be seen in the Project List (DIP) for the present fiscal year.

c). Legal working grounds

The 1990 Legislation No. 5 is the legal basis for implementing Natural Resource Conservation; therefore, it is necessary that the development should incorporate the objective of these legislations and hence, all implementation of regional development at all existing sectors/institutions should depart from the objective. Besides, it is also important to consider other legislations, such as the 1982 Legislation No. 4 on Management of the Environment which should be considered as a standard in explicating regional development activities.

Next is the 1974 Legislation No. 5 on Regional Government Basics which should be understood by all officials stating that the Governor, acting as head of the region, is the Development Coordinator in his region. On the other hand, the use of forests as a tourism object has been regulated in the 1990 Regulations No. 9 on Tourism and that which is related to Land is regulated in the 1960 Agriculture Legislation No. 5.

Based on various existing legislation the implementation cannot disregard the development system, and vice versa. Other institutions cannot, unilaterally determine its authority in implementing its program.

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2). Management Organization of the Bunaken National Park

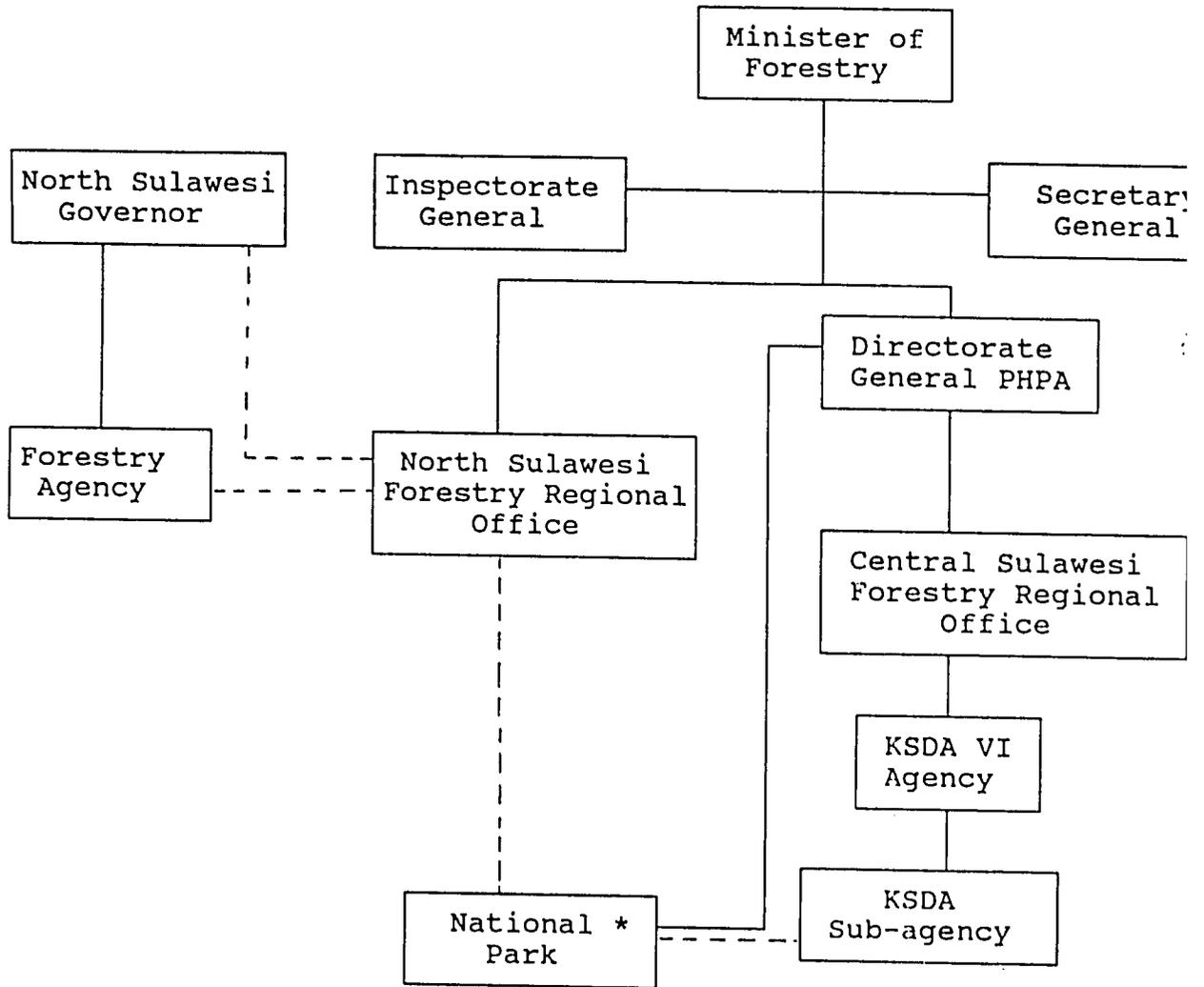
a). Organizational Structure

To ensure that forestry development continues, especially at national parks which should refer to the objective and in order to effectively avoid obstacles, challenge and threats which may occur, the management and development of a National Park is implemented through an institutional approach. Keeping in mind that a national park is a national asset, it should be further developed and preserved in order to gain lasting benefit for the National Development and the welfare of the society.

However, because the Bunaken National Park Technical Implementation Unit has not yet been established, the Bunaken National Park's temporary status is as a project within the structure of the North Sulawesi SBKSDA, hence, functional coordinatively responsible to the Directorate General of PHPA through the Central Sulawesi BKSDA VI. This condition creates the primary constraint for the development of the national park itself. The organizational structure and working relation can be seen from the following diagram.

Diagram IV-3

The Bunaken National Park
Organizational Structure Proposal



Legend:

- = Project proposed to become Technical Implementation Unit
- = Line of command
- - - - - = Line of coordination

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The development and management of the Bunaken National Park cannot be separated from the cooperation of all parties, including cooperation within the Department of Forestry itself as well as between the Department of Forestry and the Regional Government and even with other vertical institutions. The cooperation between the Forestry Institution and the Regional Government stipulated above is to formulate and integrate the working program of the Central Government to be implemented in the area and the Regional Government's Working Program.

The Central Government's Working Program in relation to the Bunaken National Park is to manage and develop the national park concerning natural resources conservation, whereas on the other hand, the Bunaken National Park is the plyship Project of ocean tourism of the Province which will hopefully enhance the growth of regional tourism.

Considering the above reasons and the proposed organizational structure in relation to regional working coordination, it is necessary to follow-up this coordination as part of the organizational structure of the national park by establishing a steering committee for the management of the Bunaken National Park as a natural resource conservation area as well as an important regional tourism object.

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The Bunaken National Park Management Coordination Team would be as follows:

- Advisor : the Governor cq. the North Sulawesi Regional Development Bank
- Chairman : Head of the Regional Office of the Department of Forestry
- Vice-Chairman : Regional Government Representative (Regional Tourism Agency)
- 1st Secretary : Regional Government Representative (Forestry Agency)
- Members : Representative of the Forestry Agency (Program Development)
- Representative of the Regional Forestry Agency (RRL)
- Representative of BPN
- Regional Government Representative (BANGDA)
- Regional Government Representatif (Fishery)

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This Coordination Team would do the following:

Resolve all matters related to the use of the Bunaken National park.

Formulate policies and recommendations for the Minister of Forestry and the Minister of Home Affairs.

Stabilize planning and development of the National Park Management Strategy in the form of programs and projects in harmony with natural resources and environmental management plans.

Ensure coordination in the implementation of natural preservation and conservation development so that the aims and objectives can be achieved as effectively and efficiently as possible.

The steering team is a forum of a coordinative nature established in order to obtain optimal results in relation to the implementation of an integrated national park management effort.

Keeping in mind the function of each institution involved in this process, the team will coordinate and control operational activities related to integrated management in order to assist the Department of Forestry in improving and enhancing a stable condition within the national park and the maintenance of a forest's function as well as the implementation of forestry development in general.

The entire policy and implementation for the integrated use of a national park is under the auspicion and responsibility of the Minister of Forestry; therefore, the Team is responsible to the Minister of Forestry through the North Sulawesi Province Governor in implementing its activities.

Agreement on mutual benefitting cooperation principles, agreement on the object for cooperation as well as its handling, organizational structure and personnel to be involved as management or team member in this project, and the agreement on funding and the duration of cooperation should be formulated in a joint agreement agreed upon by all parties. These matters must be agreed upon as the basis for compiling a project plan which incorporates cooperation details to be implemented. Hence, it can be expected that the implementation of these plans will go smoothly.

Conditions within the Bukit Baka and Bunaken National Park elaborated in Chapter III indicate that the scope of cooperation made possible by the existing legislations and regulations is quite extensive. This cooperation may include usage of the national park as a natural tourism object, controlling forest felling, intrusion on ocean park, etc.

All these cooperations indicate that almost all matters which might occur can be cooperated on. Analysis shows that there is a possibility of gaining reciprocal benefit for related sectors.

Details mentioned above shows that juridically cooperation between institutions has a solid basis in the 1975 Legislation No. 5 which has been equipped with the Regulation of the Minister of Home Affairs No. 6/1975 as its implementing regulation, 1990 Legislation No. 5 on KSDAH and Ecosystem, 1990 Legislation No. 9 on Tourism, 1982 Legislation No. 4 on environmental management and other regulations. These juridical stipulations basically not only provide opportunities for implementing institutional cooperation in managing this national park but, implicitly, also propose that the cooperation is a means to resolve mutual problems through this cooperation forum.

b). Funding

Bunaken has been established as a national park on the basis of these ocean potentials and has been inaugurated by the Indonesian President on 24 December 1991 as one of the (ocean) tourism objects in this Province. Considering its developmental prospects, the function and role of the Bunaken National Park, apart from receiving routine funding through the National Budget, SBKSDA, also receives additional funding from the central

government originating from a bilateral and multilateral as well as NGO cooperation which totals Rp. 112,377,855.00 (for the 1990/1991 fiscal year).

Whereas the conservation area is 453,833 hectares, so that assuming that all other aspects remain unchanged (*Ceteris Paribus*), each hectare of conserved area is funded by Rp. 247.62. If the Bunaken National Park covers an area of 89,065 hectares the total funding allocated for the management of this national park will be $89,065 \times \text{Rp. } 247.62 = \text{Rp. } 22,054,273.30$. Based on the above assumption it is clear that the funds are too small, whereas in the 1990/1991 fiscal year management of this area has relatively not been implemented except for site plan compilation.

c). Legal Basis

The objectives set in the Conservation legislation should be wholly understood by all parties so that details of regional development activities will not deviate from the main forestry development objective and the national development objective.

The 1967 Legislation No. 5, 1982 Legislation No. 4 and other regulations should be viewed as one entity within a continuous development context with environmental considerations.

b. Inter-institutional working relation

Excessive exploitation of natural resources for developmental means in an area will result in a change of an ecosystem's basic structure which will damage the continuity of the development itself. Whereas changes and damage of the ecosystem basic structure will be an interference for the continuity of human life within the area. Therefore, various policies and efforts have been implemented to avoid and resolve damage of the ecosystem and environment that have already occurred as a result of excessive natural resource exploitation.

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CHAPTER V

CONCLUTION AND SUGGESTIONS

CHAPTER V
CONCLUSION AND SUGGESTIONS

1. Conclusion

The following paragraphs summarize the conclusion arising from the study:

- a. The total of natural resource conservation area in Indonesia until 1992/93 amounts to 364 area units with an area of approximately 22.45 million hectares. The role of the national park has reached 34.70 per cent of the total number of natural resource conservation areas in Indonesia, in other words it has an expanse of 7.9 million hectares consisting of 31 national parks.

- b. In order to conserve biological natural resource a planned, well-oriented and integrated management is required so that negative effects of development can be minimized. These negative effects might be the destruction of part of the rare flora and fauna and "gene pool" as a result of development which does not heed an environmental oriented management concept.

- c. The management of a national park should not only be exploited for national profit while disregarding natural conservation which may result in a larger chance of ecosystem damage and disturbances in the form of area use.
- d. The management of national parks in Indonesia is based on the 1990 Legislations No. 5. The objective of managing a national park is to conserve biological natural resources and its ecosystem and to function as a protector for life supporting systems, optimal conservation of flora and fauna variety and its ecosystem so that it can be utilized for research, education, cultivation support, tourism and recreation.
- e. At the present recuperation phase of both national parks, routine management is still conducted by the Natural Resource Conservation Sub-Agency (SBKSDA) until the establishment of a National Park Office with the following duties:
- To prepare information on the value, potential and attraction of a national park and the regulations in force within them.
 - To develop the structure and infrastructure within the national park: information boards, working huts and outposts as well as an information centre.

- To prepare a management plan for the national park including determining zoning areas.
 - To create and implement informational program for the society and private sectors conducting business within the national park.
 - To monitor habitats located within the national park and to coordinate researches.
- f. Considering the duties in managing a national park and the issues which might occur, it is necessary to compile a national park management plan keeping in mind all aspects of interest of various parties, sectoral as well as regional so as to create an integrated plan.
- g. The lack of understanding coordination of activities in the existence of a national park, often results in sectoral selfishness as well as the lack of comprehension for nature conservation as a top priority concept.
- h. Both national parks possess a uniqueness which should be considered, maintained and developed immediately to avoid neglect and damage of temperature balance with nature.

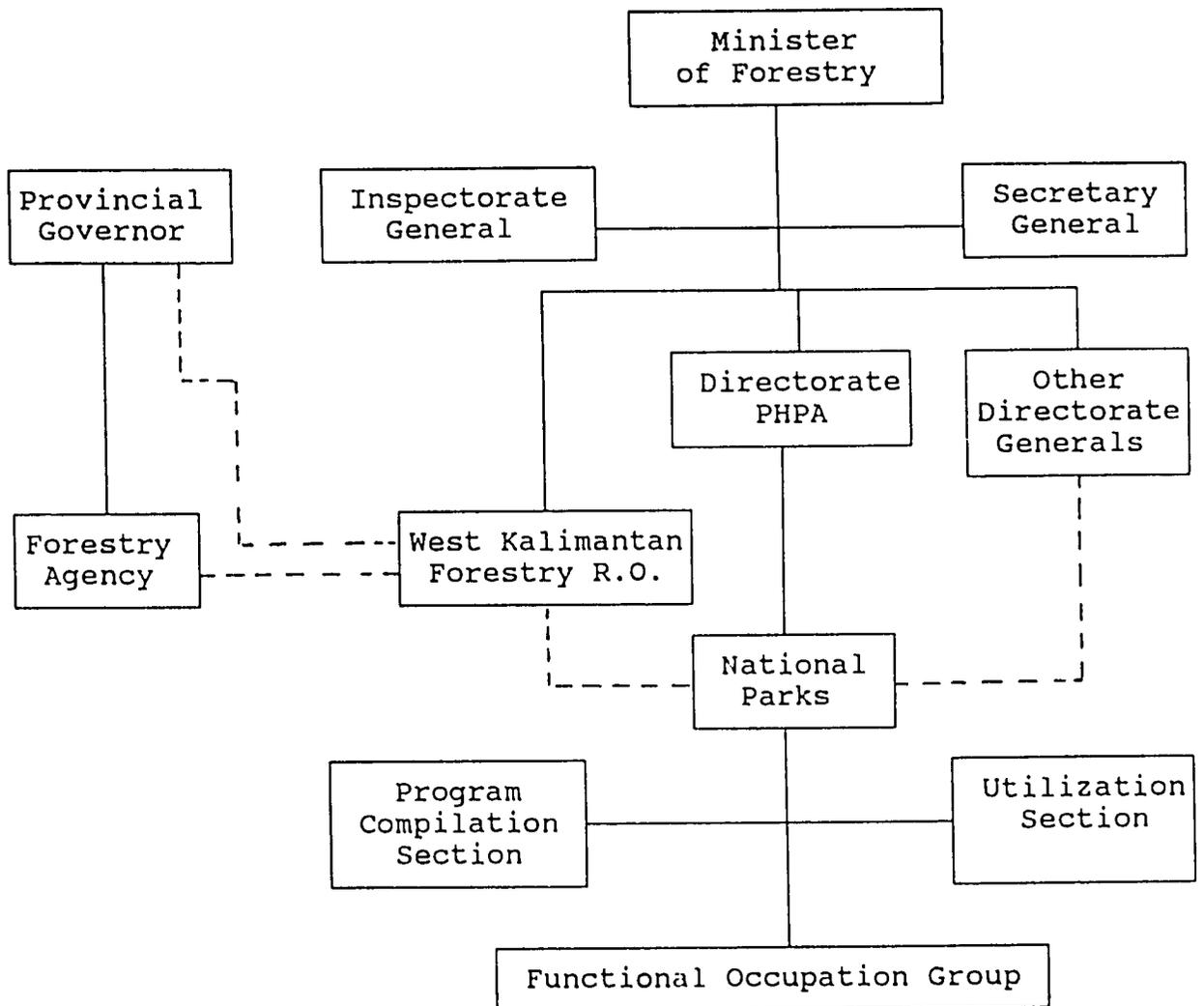
- i. Funding resources for the development of a national park is still very minimal in comparison to the expanse of the national park to be managed and the difficult terrain.
- j. Various existing legislations cannot yet be fully implemented, besides there is a lack of comprehension from other institutions and the society, while the Department of Forestry itself does not yet possess a complete implementation instruction.
- k. Organizational structure and development of national parks agency does not yet exist so that management does not meet hopes; therefore, cooperation with other related parties such as the regional government, other institutions, the people and private sectors does not yet exist.

2. Suggestions

- a. It is necessary to popularize national park appointments according to the Decree of the Minister of Forestry and all its existent legislations, so that the

- stability of a national park status, legally formally and physically, will be in accordance with forest planning based on its function.
- b. Management plan of all national parks should immediately be created so that all field activities will be in accordance with area zoning.
 - c. To coordinate planning activities with the related institutions, at central as well as regional level, so that no conflict of interest occurs which may cause disharmony in field management.
 - d. Immediately prepare institutional development to create a national park technical implementation unit, so that implementation planning and control becomes more effective and efficient (see diagram).
 - e. Immediately establish a coordination team with the Regional Government and other related institutions so that the national park planning will develop in line with the interests of various parties.

Diagram V-1
Proposed Structural Organization
of a National Park



Legend:

- = Line of Command
 - - - - - = Line of Coordination