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# FINAL REPORT

(Nov 1999 – Oct 2002)

The Outer Islands Bioregional Program :  
**Integrated Protected Area  
Management and Spatial Planning  
In Kalimantan and Papua**

MAIN REPORT

WWF Indonesia-NRM/USAID

November 2002



# WWF INDONESIA – NRM/USAID PROGRAM

## THE OUTER ISLANDS BIOREGIONAL PROGRAM: INTEGRATED PROTECTED AREA MANAGEMENT AND SPATIAL PLANNING IN KALIMANTAN AND PAPUA (IRIAN JAYA)

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## FOREWORD

WWF Indonesia – NRM/USAID Project entitled ‘The Outer Islands Bioregional Program – Integrated Protected Area Management and Spatial Planning in Papua (NRM Program funded by USAID based on cooperative agreement No. 497-A-00-00-00002-00)’ has closed its project since the end of October 2002. In Kalimantan, as written in the cooperative agreement and the approved workplans, the program was focused on Sebuku-Sembakung Watersheds, Nunukan District. For Papua, the program was focused on Jamursba Medi – North Tamrau, Sorong and Manokwari districts.

Results from the three years period of WWF-NRM show a very significant support from local communities, local and national governments as well as other NGOs for integrated conservation and development initiatives at an ecoregional scale. Therefore, it gives me great pleasure to present the Final Report (November 1999 - October 2002) of this project. Those activities included in the three years period of November 1999 – October 2002 are outlined in this report.

The major issue addressed in this program is how to integrate the needs of social and economic development and natural conservation. This perspective covers biodiversity resources, participatory planning and institutional capacity as key, particularly in planning and decision making process for natural conservation policies and its implementation on the management of protected areas.

It is the intention of this program to accomplish the above objectives so that bioregional and spatial planning development can be employed as a guideline policy on management of rural/regional development and natural conservation.

On the behalf of WWF Indonesia – NRM/USAID Program, I would like to convey my gratitude to all parties who have partaken in the success of this program. Highest appreciation must go to all staffs of WWF-NRM/USAID Program for their undying courage and hard work. At USAID, I wish to thank Mr. Fred Pollock, Ms Anne Patterson, Mr. Wouter Sahanaya and Mr. I Ketut Djati for their support to and their cooperation with WWF Indonesia. Without substantial support from USAID for this program, WWF Indonesia will not be able to change policies, perceptions and natural resource managements at two targeted areas.

Nevertheless, WWF Indonesia believes that to achieve such ambitious conservation objectives in both areas requires a longer commitment. Establishment of the proposed protected areas, for instance, will not be the end product. It is just a beginning for continuing the implementation of conservation activities in both areas. WWF Indonesia hence will put its best efforts to continue some existing activities, create some new programs and gain wider supports to bring about positive conservation outcomes in both areas.



**Fitriah Ardiansvah**  
Project Coordinator

## ABBREVIATIONS

AusAID	: Australian Agency for International Development
Bappeda Kabupaten	: <i>Badan Perencanaan Pembangunan Daerah Kabupaten</i> (District Development Planning Agency)
Bapedalda	: <i>Badan Pengendalian Dampak Lingkungan Daerah</i> (District Environmental Impact Agency)
BKSDA	: <i>Balai Konservasi Sumberdaya Alam</i> (Natural Resource Conservation Office)
BKTRN	: <i>Badan Koordinasi Tata Ruang Nasional</i> (Coordinating Agency for National Spatial Planning)
BPN	: <i>Badan Pertanahan Nasional</i> (National Land Agency)
CARE	: An International NGO – Non Profit Organization
CBO	: Community Based Organization
CI	: Conservation International
CIDA	: Canadian International Development Agency
CORI	: Community Outreach Initiatives ( <i>Prakarsa Pendampingan Masyarakat</i> )
Dinas	: Provincial / District Office
DPDR	: <i>Dewan Perwakilan Rakyat Daerah</i> (Local Parliament)
EPIQ	: Environmental Policy and Institutional Strengthening Indefinite Quantity
FORMACS	: Forest Management and Carbon Sinks
GIS	: Geographic Information System
GTZ	: <i>Gesellschaft für Technische Zusammenarbeit</i> (German Technical Cooperation Agency)
Inkopad	: <i>Induk Koperasi Angkatan Darat</i> (The Army Main Cooperative Organization)
JMNT	: Jamursba Medi – North Tamrau
Kanwil	: <i>Kantor Wilayah</i> (Departmental Provincial Office)
KBK	: <i>Kawasan Budidaya Kehutanan</i> (Forest Uses Land)
KBNK	: <i>Kawasan Budidaya Non Kehutanan</i> (Other Forest Uses Land)
LMA	: <i>Lembaga Masyarakat Adat</i> (Traditional Village Institute)
NGO	: Non Government Organization
NRM	: Natural Resources Management
Pemda	: <i>Pemerintah Daerah</i> (Local Government)
Perda	: <i>Peraturan Daerah</i> (District/Provincial Regulation)
PT. Inhutani I	: Name of State Forest Company
PT. Perhutani	: Name of State Forest Company
PT. SANP	: <i>PT. Sarana Antar Nusa Perekayasa</i> (consultant of Spatial Planning of Nunukan District)
RePPPProT	: Regional Physical Planning Program for Transmigration
RTRWP	: <i>Rencana Tata Ruang Wilayah Provinsi</i> (Provincial Spatial Plan)
RTRWK	: <i>Rencana Tata Ruang Wilayah Kabupaten</i> (District Spatial Plan)
RUTRK	: <i>Rencana Umum Tata Ruang Kota</i> (City Spatial Plan)
TGHK	: <i>Tata Guna Hutan Kesepakatan</i> (Consensus Forest Use Plan)
TNI	: <i>Tentara Nasional Indonesia</i> (Indonesian National Army)
Unmul	: <i>Universitas Mulawarman</i> / the University of Mulawarman
USAID	: United State Agency for International Development
WWF	: World Wide Fund for Nature

## EXECUTIVE SUMMARY

### Introduction

This final report presents activities and results that have been achieved during the three-years period (November 1999 – October 2002) by NRM program in Sebuku-Sembakung, Nunukan district, East Kalimantan province and in Jamursba Medi – North Tamrau, Sorong and Manokwari districts, Papua province.

The overall goal of the project is to strengthen institutional capacity, participatory planning and effectiveness in achieving the establishment of a conservation based on integration of conservation and development at a bioregional scale. The goals are achieved through the following four objectives:

1. Identify high priority biodiversity resources, describe how specific human activities adversely affect these resources, identify lower impact alternatives, and increase the area of protected resources where best practices are being implemented.
2. Establish biodiversity conservation as an important planning and decision-making criteria, recommending changes to the institutional and legal framework and educating government officials and private sectors.
3. Strengthen protected area management through participatory planning and facilitation of stakeholders' agreements and test innovative institutional and funding arrangement for protected area management.
4. Develop the capacity of stakeholders in protected area management and bioregional planning through training, workshops and cross-visits.

Since November 1999, WWF Indonesia has committed to accomplish the overall goal and the objectives of the project. Through some adjustment from the initial coverage of the project, which was for Kalimantan and Irian Jaya (Papua), the project has been implemented in two pilot landscapes, in Sebuku-Sembakung (Nunukan district, East Kalimantan) and Jamursba Medi – North Tamrau (Papua), to be more focused.

The approach towards the goal involves providing input to the regional development and spatial planning process at regional and local levels. This furthermore involves initiating greater participation of stakeholders in planning and decision-making, strengthening regional and local institutional capacity, and raising stakeholders' awareness and knowledge of conservation, sustainable development, and long-term environmental and economic effects on resource utilization.

### Achievements of WWF-NRM

Although the proposed protected areas in both Sebuku-Sembakung and Jamursba Medi-North Tamrau have yet to be established, WWF Indonesia believes that in general more than 80% of planned activities have been carried out and all objectives have been achieved which include major achievements such as:

#### Sebuku-Sembakung, Nunukan:

- A reliable and comprehensive tabular and spatial database has been developed and completed (e.g. population data, socio-economic data, land suitability, land use, land status, land topography, etc.). This set of data has been socialised and provided to stakeholders in Nunukan and helped the new district government in carrying its development program.
- Through the appointment of WWF-NRM by Bupati (the Head of district) as a member of technical team for Nunukan spatial planning, WWF-NRM Program has succeeded in advocating the incorporation of Sebuku-Sembakung as a conservation area into the Nunukan district spatial plan. This draft awaits to be legalized by the district parliament (DPRD). Securing Sebuku-Sembakung as protected areas will therefore act as an important starting point to promote the integration of conservation and development notions in the decentralization era.
- Strong support from local communities in accepting the proposed conservation areas in Sebuku-Sembakung. The support was quoted in local media and in various stakeholder meetings, and this proved to be a key point in increasing local community participation in pushing for the integration of conservation and development. Various surveys on socioeconomic opportunities for local livelihoods and communities' workshops on natural resource management were also carried out to increase the support from community.
- Development of strategic alliances, communication and coordination mechanism with important stakeholders (district government, DPRD, communities, NGOs and mass media).
- The strategic network established by WWF-NRM Program paved the way for CARE International to initiate a community development program in 2002. WWF-NRM Program's contribution on this was directly acknowledged by the district government and CARE. The WWF-NRM Program has also succeeded in establishing collaborative activities on conservation and development programs with other international organizations such as CORI (Community Outreach Initiatives) and GTZ.
- WWF-NRM has been able to facilitate the development of stakeholders' capacity in spatial planning and natural resource management through various workshops, trainings and cross-visits such as legal drafting training and journalist workshop. Recent visit by the Head of the District Parliament to the Philippines which was designed to expose the visit participants about the integration of conservation and spatial planning has increased the level of commitment from the Head of District Parliament such as by verbally promising to accelerate the discussion of Nunukan spatial planning and other issues (such as the issuance of district regulation on traditional/customary law with regard to natural resource management).

#### Jamursba Medi-North Tamrau, Sorong and Manokwari:

- Developed a comprehensive database to help the Sorong and Manokwari district governments in planning & carrying their development programs. Frequent data (including monthly nesting trend and numbers of clutches laid by a nesting female) collected during WWF's previous surveys (in 1984/1985) has enabled a rough estimation of the number of nesting females to be made during WWF-NRM project's period (Nov 1999 - Oct 2002). The data show that the nesting population of leatherback turtles in Jamursba Medi beach is relatively stable in the last ten years after community-based turtles monitoring took place (approximately of 2,600 to 3,300 per annum).
- The acceptance of the proposed conservation areas by district and provincial governments through the issuance of several provincial and district government decrees. Also, the incorporation of parts of the proposed protected area in the draft of Sorong district spatial plan.

- The majority of communities' members have accepted the proposed conservation area as a result of public participation. Communities also rejected the existence of a logging concession company (PT Multi Wahana Wijaya). Communities also opted for alternative model for the protected area which is *Kawasan Pelestarian Alam Masyarakat Adat Karon* (Karon Indigenous Communities Natural Conservation Area).
- WWF-NRM Program has succeeded in obtaining support from decision makers at the national level such as the Ministry of Forestry and members of the National Parliament (*Dewan Perwakilan Rakyat Republik Indonesia – DPR-RI*).
- The broad support from both governments and communities led to commitments from other organizations in conservation and development initiatives. For example, Southwest Fisheries Science Center – NOAA, National Marine Fisheries Services, supports the leatherback turtle conservation program in 2002-2003; DFID and WWF are currently developing a proposal on community development and local capacity building in the proposed protected area.
- Developed Sorong and Manokwari stakeholders' capacity in spatial planning and natural resource management through training workshops and cross-visits

Because of frequent governmental changes, which are beyond our control the proposed protected areas in both locations have not been legally established as national parks. The difficulties that have caused the delay were:

- The influx of hundred thousands of Indonesia's 'illegal workers' (TKI) from Malaysia to Nunukan that has imposed difficult situation to high-rank district government officials to even do anything beside taking care of this issue.
- The initiation of 'Trans-boundary Development Plan' by the central government that covers Nunukan as a bordering district with Malaysia has postponed the legalization of Nunukan spatial plan. All plans concerning those districts in the border areas should follow this new centralized plan, which will be issued in 2003.
- The communities' aspiration on 'indigenous community conservation area' needs to be facilitated in the conflicting regulations of Forestry Law and the Special Autonomy Lay for Papua.
- The split of Sorong district into three new districts (North Sorong, South Sorong and Raja Ampat districts) and one municipality (Sorong city) has transformed all development plans of the region and the status of many areas.

### Summary of Lessons-Learned

While carrying out activities to achieve the four objectives during three years period of the project, experience and lessons in forms of success and difficulties were faced by the program. There include:

- Decentralization has transformed many aspects of development administration and policies. What is good and acceptable in the centralized system of government may not be good and acceptable anymore in the decentralized era. This means that under this new decentralized system of government, authorities and decision-making processes mostly have shifted to district level. On the other hand, this also means that the district heads are responsible for getting local revenues to finance most of development activities in their areas. Therefore, bottom-up and participatory planning processes based on the promotion and integration of sustainable socioeconomic principles and conservation objectives have played and will play an important role to argue against the implementation of unsustainable district development policies.

- The most important issue, perhaps, whilst trying to advocate for the integration of conservation in the district spatial plan, was the question over economic benefits gained from conservation activities. It is clear that the provision of direct economic benefits from conservation activities to local stakeholders (both government and communities) is becoming more essential. In other words, support will increase if local stakeholders receive direct benefits from a particular conservation program or activity.
- WWF Indonesia realizes that to sustain conservation activities in Nunukan, the level of stakeholders' capacity in organizing and managing protected area and sustainable development need to be increased. This can be done through conducting socialization of the program to wider stakeholders, cross-visits and field studies, technical assistances for district stakeholders, trainings and workshops, and campaign activities on the importance of sustainable natural resource management.
- Conserving flagship species such as leatherback turtles requires more than a protection of the beach from direct exploitation. Although impacts of other threats (e.g. feral predation, tidal inundation, beach abrasion, fisheries by catch that disturb the sustainability of the population, sedimentation and flooding from upper stream flow) are difficult to quantify, incorporating and understanding them is as much important as direct protection of the beach. In this case, the question on a management unit/scale becomes crucial and needs to be resolved through further in-depth studies and research that lead to the formulation of science based management options for the conservation activities.
- In the case of Papua, another increasing issue that has to be taken into account in the conservation activities is increasing the roles and participations of local/indigenous people. An increase in the level of awareness of communities on the importance of conservation can be determined as an important factor contributing to the success of conservation activities. Accommodating indigenous people aspirations (e.g. land tenurial rights, traditional rights and local economic development) has often been a major reason behind their support for conservation activities.

## Conclusion and Recommendations

In summary, although the proposed protected areas have yet to be established, implementation of WWF-NRM activities was mostly in line with the work plan (80% to 90% of planned activities have been carried out). Furthermore, the program had achieved significant progress regarding securing support from the majority of stakeholders for conservation activities in Sebuku-Sembakung and Jamursba Medi – North Tamrau.

In line with this situation, it is clear that the efforts to integrate conservation and development in Nunukan and the Bird Head need to be continued. WWF Indonesia believes that a multi years or longer term commitment is needed to achieve conservation objectives in both areas. Establishment of the proposed protected areas is not the end result of our conservation works. WWF Indonesia, therefore, plans to continue working on some of these follow-up objectives:

- Ensure a legal status of the proposed protected areas of Sebuku-Sembakung and Jamursba Medi - North Tamrau at district, provincial or national level that accommodates district aspiration including community concerns such as land tenure and traditional rights.

- Facilitate and promote sustainable local economic development strategies for Nunukan and the Bird Head (especially under the new special autonomy status for Papua) in the protected areas for the district government and sustainable community based development programs (education, health, economic, etc.) for the communities living in and around the proposed protected areas.
- Formulate an appropriate model for the management of the protected area, and develop appropriate management strategies based on the framework of regional sustainable development and the inclusion of communities' land tenure and traditional rights.
- Facilitate natural resource policy reforms in Nunukan and the Bird Head based on local community aspiration, Papua special autonomy and central government policies.

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# WWF INDONESIA – NRM/USAID PROGRAM

## THE OUTER ISLANDS BIOREGIONAL PROGRAM:

Integrated Protected Area Management and  
Spatial Planning in Kalimantan and Papua (Irian Jaya)

# FINAL REPORT

NOVEMBER 1999 - OCTOBER 2002

## A. Introduction

As stated in the Cooperative Agreement, WWF Indonesia shall support the NRM's Program on bioregional and spatial planning, conservation policy as well as proposing national park development. Such support was realized through a WWF Indonesia's project entitled: 'The Outer Islands Bioregional Program: Integrated Protected Area Management and Spatial Planning in Kalimantan and Papua (Irian Jaya)'. The project period was for three years starting from November 1999 to October 2002. This document itself is the final report of the three-years period of the project (November 1999 – October 2002).

The WWF bioregional and spatial planning approach implemented in this project are the results of WWF Indonesia's experience in answering a challenging question of whether natural resource and environmental degradation can be mitigated. For more than 40 years, WWF program in Indonesia has grown significantly and shifted its emphasis, first from large mammal conservation to more recently engage a broader range of law- and policy-making process, implementation of sustainable natural resource management, private-sector best practices, and the general public interest through eco-regional programs and national campaigns. To extend and enhance the scope and impact of conservation activities, the actions to link conservation to spatial planning and natural resource management policies at a regional scale are hence necessary

WWF Indonesia also believes that to achieve sustainable biodiversity conservation, both on and off conservation area activities need to be integrated. Dealing with threats which include unsustainable natural resource use (e.g. illegal logging, large-scale conversion of forest to oil palm plantation, etc.) requires the incorporation of ecological and biodiversity parameters in regional scale planning and management. It is equally important to ensure that all stakeholders are involved with the process to own the final result and to further ensure the sustainability of the activities. These stakeholders should include all levels of government, communities, community groups (e.g. *Lembaga Masyarakat Adat* indigenous community organization), scientists, industry and other resource users.

The key role of indigenous communities should be explicitly acknowledged, with the need to raise the profile of indigenous peoples' involvement in natural resources management and bioregional planning, and recognize the importance of indigenous knowledge and practices.

The above principles have become more relevant since the issuance and the implementation of the law of decentralized systems of government. Within the decentralized government system, the district heads are responsible for getting local revenues to finance most of development activities in their areas. Therefore, WWF Indonesia needs not only to work and intervene in advocating natural resource policy reform and promoting sustainable economic initiatives at national level, but recently also more at the district levels. This occurs since a lot of decisions regarding natural resource management are being made at district level.

This final report illustrates WWF Indonesia's three-years efforts in implementing bioregional planning approach and integrating it in local development programs, with references to Kalimantan and Papua. The report will run through the history of the three years of WWF Indonesia's Bioregional Planning Project in Kalimantan and Papua and elaborate the project achievements over three years. At the end section of the report, recommendations are provided as inputs for further actions of conservation activities in the region.

## **B. A Brief History of WWF-NRM in Kalimantan and Papua**

### **B.1. In Kalimantan**

Sebuku-Sembakung watersheds were identified and highlighted in the National Conservation Plan (1982) as protected-conservation area for the following reasons:

- The areas have mostly undisturbed range of forest habitat stretching from coast to hill and are a rarely phenomenon in Borneo Island.
- They display Indonesian most threatened natural habitats: mangrove forest, lowland rainforest, forest in limestone, and wetlands, all of which under represented in the present protected area network.

However, during the development of consensus forest land-use (TGHK) in 1983 the areas were allocated as production forest and limited production forest. This happened because the completion of TGHK was using a large macro scale of information (e.g. map of 1:1,000,000).

Aiming at conserving Sebuku-Sembakung, WWF had reinvestigated the area in 1998. The result indicated that Sebuku-Sembakung still had invaluable ecological systems, which encompassed mangrove and peat swamp tropical forests. The study recommended that the area of 435.000 hectares (Sebuku-Sembakung) should be proposed as a national park.

To realize the recommendation, WWF-NRM Project has started the implementation of bioregional and spatial planning approach since November 1999 in Kalimantan, covering all areas of the province. The main activities of the project were identifying biodiversity importance and analyzing threats to biodiversity conservation and gaps that needed to be filled to ensure the sustainability of the existence of biodiversity conservation in the targeted region. Socio-cultural and economic conditions of local communities in the biodiversity conservation area and its vicinity were also analyzed as inputs for local economic development that provided alternatives of economic incentives for local communities.

Due to a wide coverage of the initial project area and to have a more realistic and focused program, a pilot landscape was chosen based on biodiversity and spatial analyses. The selected landscape was Sebuku-Sembakung in Nunukan district of East Kalimantan.

The main rationale for selecting Sebuku-Sembakung as a priority area was because in terms of nature conservation and scientific knowledge development, Sebuku-Sembakung watersheds had high strategic values. Located in Nunukan district, East Kalimantan, next to Kayan Mentarang National Park and along the border with Sabah State, Malaysia, Sebuku-Sembakung had strategic values in terms of geographical setting. Covering 360,000 hectares of rich but threatened biodiversity area, Sebuku-Sembakung consisted of a number of tropical forest ecosystems starting from mangrove, peat-land, moist, heat, semi upland and montane forests.

This unique feature, considered as one of the target locations in the Indonesia's Biodiversity Action Plan, has been generating benefits for many generations by providing economic goods such as timber, traditional medicines and food, and ecological services such as water regulation, protection from erosion, shelter for local people and flood mitigation. The area has also been functioning as an important habitat for many populations of endangered wildlife such as Elephant (*Elephants maximus*), Buffalo (*Bos javanicus*), Orangutan (*Pongo pygmeus*) and Proboscis Monkey (*Nasalis larvatus*).

Recent development of decentralization and towards trans-boundary development between Indonesia and Malaysia has led to new opportunity and responsibility as well as challenges for regional and local authorities to collaborate in managing natural resources. This collaboration is essential to establish and regulate biodiversity priority areas embedded in their regional setting. In general, three years collaboration between WWF-NRM and district governments, local NGOs, community's based organizations and communities, has resulted in the incorporation of the conservation of Sebuku-Sembakung in the draft of district spatial plan.

However, the Head of Nunukan district (Bupati) is still uncase with the idea for the proposed conservation of the area. He is still endorsing the development of oil

palm plantation and asked for support from the central government through trans-boundary development mechanism.

Through continuous socialization on conservation activities and public consultation in searching for an appropriate status and management of the proposed conservation area, WWF-NRM has secured support from local communities and the spatial planning team of Nunukan. WWF-NRM has also been able to establish strategic cooperation with international organizations in planning sustainable development activities that elevate the level of local people's livelihoods by combining conservation and local economic development in the targeted region.

### B.2. In Papua

Similar with Kalimantan, WWF-NRM Project has started the implementation of bioregional and spatial planning approach since November 1999 in Papua, covering all areas of the province. The main activities of the project were identifying biodiversity importance and analyzing threats to biodiversity conservation and gaps that needed to be filled to ensure the sustainability of the existence of biodiversity conservation in the targeted region. Socio-cultural and economic conditions of local communities in the biodiversity conservation area and its vicinity were also analyzed as inputs for local economic development that provided alternatives of economic incentives for local communities.

Due to a wide coverage of the initial project area and to have a more realistic and focused program, a pilot landscape was chosen based on biodiversity and spatial analyses. The selected landscape was Jamursba Medi – North Tamrau (JMNT) in the Bird Head region of Papua (Sorong and Manokwari districts).

The main rationale for selecting Jamursba Medi – North Tamrau as a priority area was because in terms of nature conservation and scientific knowledge development, Jamursba Medi coastal area and North Tamrau montane forest have high strategic values. The Jamursba Medi beach area is considered as the fourth largest of the world's major nesting sites for the endangered leatherback turtle (*Dermochelys coriacea*) – the world's largest sea turtle and is critically endangered. Given the drastic decline in leatherback nesting populations in Malaysia and Mexico, the largest Pacific population, Jamursba Medi may well be the last remaining large population in the Pacific with 1500 – 5000 nests reported annually (Hitipeuw and Maturbongs, 2002).

Other species of turtles also nest in the Jamursba Medi area such as Green (*Chelonia mydas*), Hawksbill (*Eretmochelys imbricata*) and Olive ridley (*Lepidochelys olivacea*) turtles. For Jamursba Medi, the area is not only an ideal place for marine biological research, in particular for conserving the endangered leatherback turtles, but also acts as a living museum for the conservation of the coastal community culture in Papua, especially of those living along the coast of the Kepala Burung Cape.

Furthermore, the health of the coastal area also depends on the preservation of the surrounding forest area, North Tamrau. The Jamursba Medi coastal area is part of the ecoregion of the North Tamrau forest area. This means that protecting the forest would also protect the turtles nesting habitat at the beach.

On December 15-16, 1999 a workshop was held in Sorong on Jamursba Medi conservation. The workshop was attended by 40 participants representing provincial and district governments, local communities and NGOs. One of the recommendations issued by the workshop is the proposal to integrate North Tamrau Nature Reserve and Jamursba Medi Wildlife Sanctuary to become Jamursba Medi - North Tamrau National Park. The size of the proposed national Park was about 465.210,45 ha, consisting of:

- o Forest conservation area (25,596.30 ha)
- o North Tamrau Nature Reserve (351,934.80 ha)
- o Jamursba Medi Wildlife Sanctuary (278,75 ha)
- o Coastal irrigation (12,515.10 ha)
- o Logging concessions of PT Multi Wahana Wijaya (74,885.50 ha)

In general, three years collaboration between WWF-NRM and district governments, local NGOs, communities' based organizations and communities, has resulted in the endorsement for the integration of the conservation of North Tamrau Nature Reserve and the recommended Jamursba Medi Wildlife Sanctuary. This action combined two geographically separated conservation areas bridged by a corridor with the existing status of partially production and protection forests.

During the project period, the issuance of the special autonomy law for Papua has led to new opportunity and responsibility as well as challenges for regional and local authorities, working collaboratively with local communities in conserving and managing JMNT. This collaboration is essential to establish and regulate biodiversity priority areas embedded in their regional setting.

However at the later stage, part of communities especially those living in the corridor areas rejected the idea for the proposed integration of the two conservation areas. They also rejected the naming of the proposed conservation area as national park. Timber exploitation in forms of HPH (logging concessionaires) and KOPERMAS (community cooperative) and the local sensitivity of traditional and tenurial rights were suspected as the main reasons behind the rejection of conservation activities in Kwoor watersheds, the corridor areas between Jamursba and Tamrau.

Through continuous socialization on conservation activities and public consultation in searching for an appropriate status and management of the proposed conservation area, WWF-NRM has secured support from the majority of communities for the establishment of the conservation area. Public also rejected the existence of a logging concession of PT. Multi Wahana Wijaya in JMNT area. In the final year of the project, WWF-NRM has been able to establish

strategic cooperation with district government and parliament of Sorong in planning sustainable development activities that elevate the level of local people's livelihoods, especially in remote Tamrau area. This proves that WWF-NRM covered and harmoniously combined conservation and local economic development in the targeted region.

### **C. Program Objectives and Adjustment Made in the Workplans**

The overall goal of this project was to strengthen institutional capacity, participatory planning and effectiveness in achieving biodiversity conservation at a bioregional scale. The goal was achieved through the following four objectives:

1. Identify high priority biodiversity resources, describe how specific human activities adversely affect these resources, identify lower impact alternatives, and increase the area of protected resources where best practices are being implemented.
2. Establish biodiversity conservation as an important planning and decision-making criteria, recommending changes to the institutional and legal framework and educating government officials and private sectors.
3. Strengthen protected area management through participatory planning and facilitation of stakeholders' agreements and test innovative institutional and funding arrangement for protected area management.
4. Develop the capacity of stakeholders in protected area management and bioregional planning through training, workshops and cross-visits.

#### **C.1. Adjustment made for Kalimantan**

In the first year of the project (November 1999 – October 2000), there had been no significant adjustment of objectives. The project focused on selecting project location, problem identification, data collection and analysis, development of networking, socialization of the program to the stakeholders including local government.

In the second year (November 2000 – October 2001), activities conducted to achieve objectives were focused on Sebuku-Sembakung as the pilot landscape of Kalimantan. The project emphasized on efforts to promote conservation and protected area of Sebuku-Sembakung, especially the catchment and peat swamp areas of approximately 120,000 hectares. Within this period, WWF-NRM had completed a number of activities, such as assessment of Sebuku-Sembakung for protected area, establishment of a network with local stakeholders, completion of draft of participatory map, socialization of WWF-NRM program to a number of villages in Sebuku-Sembakung, and up dated of GIS works particularly for the island of Sebatik requested by the Nunukan district government.

In the third year (November 2001 – October 2002), objectives and activities were revised to better match the need of development and conservation in Nunukan District. Consistent to the overall goals and four objectives mentioned above, four targets were set out.

1. Spatial plan of Nunukan District (RTRWK) should be completed by October 2002.
2. Proposal of Biodiversity Conservation Areas of Sebuku-Sembakung should be completed and submitted to the district government of Nunukan and adopted to discuss by October 2002.
3. All data/information, including social and economic valuation and GIS maps required for supporting the Proposal of Biodiversity Conservation Areas on Sebuku-Sembakung should be completed by June 2002.
4. Capacity and capability of NRM programs's partners (local government officials and local community) on natural resource management have improved by October 2002.

## **C.2. Adjustment made for Papua**

Similar with Kalimantan, in the first year of the project (November 1999 – October 2000), there had been no significant adjustment of objectives. Changes and necessary adaptations, however, were made to several activities related to the project due to conflicting time schedule with relevant stakeholders and difficult local conditions.

For the second year of the project (November 2000 – October 2001), activities conducted to achieve objectives were focused on Jamursba Medi – North Tamrau as the pilot landscape of Papua. Few adjustments, alterations and/or adaptations were considered unavoidable taking into account local conditions, such as local communities' acceptance of the project, the challenge put up by the private sector/logging company operating nearby and the weather conditions. To anticipate changes and therefore to make necessary adaptations, some of the activities were scheduled at least 6 month in advance.

In the final year of the project (November 2001 – October 2002), WWF-NRM program focused its activities on the process to strengthen support and obtain agreement on Jamursba Medi – North Tamrau (JMNT) as conservation area. This was considered important because some activities set in the third year period of the program led to the management system of a conservation area. Based on a careful evaluation on the previous two years of the program's implementation, WWF-NRM program has thought that the main obstacle the program faced in the area was the existence of dynamic and different perceptions among members of communities with regard to the legal status of the conservation area. This dynamic situation should be wisely managed and hence, this has contributed to the adjustment of targets in the third year.

Most activities related to the future management of conservation area were set aside. These activities can only be carried out if the agreement on the legal status over the proposed conservation has been reached. Different perceptions among members of communities regarding this matter have pushed the program to put more efforts on socializing and communicating the substance of the program to positively influence stakeholders. Due to this consideration, an activity like making a documentary film about leatherback turtles was still included in the plan because this was important as the basis for conservation activities in Jamursba Medi – North Tamrau.

Adjusted targets that were set in third year program are presented as follow:

1. Supports from the local government and community were obtained for conservation of Jamursba Medi – North Tamrau by October 2002.
2. All data and information, including social economic and GIS maps required to develop the conservation area proposal of Jamursba Medi – North Tamrau were completed by July 2002.
3. The proposal of JMNT as conservation area was integrated into spatial plan of Sorong district, would be accepted by relevant stakeholders (provincial and district governments, local communities and relevant agencies) and would be approved by the central government (the Ministry of Forestry) by October 2002.
4. Strengthening the capacity building of local NGOs, communities and other stakeholders was implemented by September 2002.

All activities in each year of the project period in those two locations were based on the above objectives and adjustment made in the workplans. Details of project activities for five previous semesters (November 1999 – April 2002) have already been written in previous semi annual reports. The matrices of project activities and outputs/achievements against the objectives during three years period of NRM Project (November 1999 – October 2002) can be seen in **Appendix 1**. Details of activities carried out in the last semester (May – October 2002) of the project period can be seen in **Appendix 2**. The following sections hence are three-years of deliberations of program approach, activities, achievement, constraints and future recommendations.

# FINAL REPORT - KALIMANTAN CHAPTER

NOVEMBER 1999 - OCTOBER 2002

## A. Program Approach

In achieving the targets set for this program, some approaches were adopted. In the beginning, the WWF-NRM program selected Sebuk-Sembakung Watershed in the Nunukan District and then continually exercised the area as its pilot landscape. The selection was based on biodiversity important values, imminent threats to the natural environment, trans-boundary area, previous works and available data, and possible supports from the partner-network. A landscape was defined to coincide with the administrative area of a district government.

The program developed an approach of Integrated Conservation and Development at a regional scale. The approach involved giving inputs to the regional development and spatial planning process at regional and local levels through developing database and scenario of integrated conservation and development. Furthermore, it involved initiating greater participation of stakeholders in planning and decision-making, strengthening regional and local institutional capacity, and raising stakeholders' awareness and knowledge of conservation, sustainable development, and long-term environmental and economical effects of resource utilization.

The approach towards each of the pilot landscapes was divided in three phases. First was the selection of the pilot landscape. Second was the development of a comprehensive data and information base for planning purposes. Third was the development and promotion of integrated conservation and development scenario's and appropriate resource management models.

The program was carried out with the cooperation from the local government, local communities, and private sectors as important stakeholders. It was important that stakeholders should take ownership of the results of the program.

The program responded to the changes in government's policies such as decentralization and regional autonomy, and aimed at helping the district with their new tasks and responsibilities, especially on development of spatial plan in relation to the conservation and sustainable utilization of natural resources.

The program expected to contribute on improving understanding and commitment to conservation and sustainable resource utilization by relevant stakeholders. First of all, this focused on the part of the local and regional stakeholders. This commitment would be expressed through an officially endorsed spatial plan,

which allocated lands to protected area and buffer zones within the lifetime of the project. This spatial plan should be supported by all relevant stakeholders. Subsequently, the allocated areas would be established as Conservation Area or Parks. This would be strongly pursued during the lifetime of the project. However this is usually a lengthy process.

As a first step towards the main goal, forest and resource utilization areas claimed by multiple stakeholders, would be identified and mapped together with the stakeholders. The program would facilitate conflict resolution between companies and communities over boundaries of "customary forests" (*hutan adat*). Conflict normally arises when communities claim that the land was under their ancestral land right, while companies claimed it based on formal legal grounds. Therefore, agreed boundaries needed to be formalized. In addition, the Program assisted stakeholders in defining their role and prospects in sustainable forest management and conservation management systems. If local commitment to conservation and sustainable development were solid, then the gazetting of conservation areas would be more of a formality.

## **B. Execution of Program Activities**

As described in the introduction, this document is the final report of three-year period of NRM program (November 1999 – October 2002). Many activities, which included direct conservation activities, lobbied relevant stakeholders and community based economic development, have been carried out. Only activities considered significant will be elaborated in this section. Details of project activities and outputs/achievements against the objectives during three years period of NRM Project (November 1999 – October 2002) can be seen in **Appendix 1**.

### **B.1. First year (November 1999 – October 2000)**

During the first year of the project, the program focused on three main activities as described below:

- In the beginning, WWF-NRM focused on reviewing previous and collecting new data on protected area systems in Kalimantan that could be used for identifying poorly represented ecosystem types and analyzing threats to the systems and the remaining unprotected natural ecosystems. The project then selected Sebuku-Sembakung watersheds in the Nunukan District and then continually exercised the area as its pilot landscape. The selection was based on biodiversity important values, imminent threats to the natural environment, trans-boundary area, previous works and available data, and possible supports from the partner-network.

Within this period of time, WWF-NRM had explored methodologies of biological assessment in areas with potentially high biodiversity. The results showed that three major habitats were identified in Sebuku-Sembakung such as for mammals, birds and amphibian.

Furthermore, information was compiled and analyzed to identify ecosystems and critical habitat that were under-represented in the current protected area system. This has resulted in a land suitability map, based on Repprot. The land suitability map showed that only about 20% of Nunukan district land surface was suitable for agriculture or plantations. These were the dry lowland forests of the area. The unsuitable areas were the swamp and mangrove forests, and the hill and mountainous lands.

- Second, socialization to stakeholders and partners with regards to protection priorities in East Kalimantan were also conducted through cross-visits and seminars. Through this activity, various thematic maps and preliminary outcomes of the studies and field surveys had been informally discussed with stakeholders like the Regional Planning Office (Bappeda) at every visit to Nunukan district and the provincial capital, Samarinda. A formal, broad and complete presentation was only conducted when all studies and surveys were completed and the results analysed. Based on the presentation, stakeholders regarded WWF as capable and reliable to assist them in developing district and provincial planning.
- Finally, the program facilitated community participation in the planning of protected area management and buffer zone development. WWF-NRM also provided small grants to NGOs for participatory mapping, land use planning and buffer zone development initiatives. In parallel with this activity, rapid socio-economic appraisal and introductory surveys on Sebuku-Sembakung area were conducted and had yielded significant findings on the Sebuku region. This activity was sub-contracted and carried out by the Centre for Social Forestry of the Mulawarman University.

## **B.2. Second year (November 2000 – October 2001)**

In the second year of the project, the program focused on four main activities as described below:

- First was developing closer cooperation with stakeholders. A set of presentation materials had been made for this activity. These materials presented the concept of regional planning and management based on a careful assessment of long-term development targets and a sustainable balance between conservation of environment and nature and socio-economic development. These explained the important roles of WWF in the regional development planning of Nunukan district.

Furthermore, to work closely and discuss conservation and development issues with local government and stakeholders in Nunukan district, a significant step was further taken. This was the move of WWF-NRM office from Balikpapan to Nunukan in June 2001.

- o Second main activity was to assist District Planning Agency (Bappeda) in preparing spatial plan and regional development plan. As a result, a strategic plan was developed, outlining long-term development targets based on the local government's needs, interests and potentials. Also, an action plan was developed, defining and outlining the program's needs to achieve long-term and mid-term goals of the outlined district's development.

At the end of the second year of the program, the district government had committed to appoint WWF-NRM program as a team member of the spatial planning development process. This was an opportunity as part of the strategy and program approach to persuade and advocate the importance of protecting Sebuku-Sembakung watersheds and implementing sustainable natural resource management for the district.

Following this, WWF-NRM and other relevant stakeholders conducted activities to assist the district government (Bappeda) in preparing district spatial plan and regional development plan. These activities were:

- Produced preliminary TOR of regional spatial planning of Nunukan district and submitted to the district government (Bappeda)
  - Reviewed and submitted program and planning of district (Propeda) to the district government (Bappeda)
  - Assisted the district government in reviewing the draft of City spatial plan (RUTRK) and developed land cover map for Sebatik island as part of district spatial planning development.
  - Reviewed and updated the existing land system, land status and land utilization.
  - Developed district administration map.
- o Third was to develop land utilization scenarios. To do this, several activities were carried out. This was started by determining land suitability of the region, defining land utilization types and determining biophysical and technical requirements, analyzing the present institutional and legal requirements for the land utilization types and overlapping all information to and drafting the proposal of land utilization scenarios.

The draft of land utilization scenarios aimed at illustrating the spatial arrangement of suitable and preferred land use enterprise. The suitability of a land use enterprise was assessed by the following factors: physical qualities, vegetation cover, technical limitations, local knowledge and experience, market-conditions, infrastructure and transport-conditions, management scale and intensity, and legal and institutional constraint and opportunities.

- Fourth, workshops and discussions were also conducted with communities and local government. One of these was training for villagers on participatory mapping. At the same time in the district, staff of Bappeda were assisted by WWF-NRM staff in making spatial and regional development plans. In addition, other activities conducted were the presentation on the importance of sustainable natural resource management and conservation to local communities in most villages in Sebuku-Sembakung areas.

Also, dissemination and socialization of the proposed protected area development were conducted. These included establishment of a network with 10 (ten) local NGOs that concerned on the environment and development of Nunukan district. This network has increased the level of awareness and brought about same perception on the importance of the protection of Sebuku-Sembakung watersheds.

### **B.3. Final year (November 2001 – October 2002)**

For the final year of the project, the program focused on four main activities:

1. Developing spatial plan of Nunukan District (RTRWK), both the terms of reference and draft of spatial plan;
2. Developing proposal of Biodiversity Conservation Areas of Sebuku-Sembakung based on further biodiversity assessment and other required data and information;
3. Improving capacity of NRM program's partners on natural resource management; and,
4. Conducting communication and campaign to wider stakeholders.

The elaboration of these activities are as follow:

- WWF intervention on spatial plan

To advocate the incorporation of Sebuku-Sembakung conservation in the district development plan, WWF-NRM had been focusing on initiating and facilitating the establishment of technical team of spatial planning and the development of spatial plan of Nunukan district. Through intensive approach to the district government, WWF-NRM program has been both assigned as a member of the district spatial planning team through the decree of the Head of Bappeda Nunukan No. 050/205.1/BAPP-II/X/2001 and as a member of the provincial spatial planning team of East Kalimantan through the decree of the Head of Provincial Bappeda of East Kalimantan No. 188.4/33.a/B.PSDA&PW-Bapp/2001.

The involvement of WWF-NRM program in the district spatial planning team has been essential to convince the local government to designate the Sebuku-Sembakung watersheds as protected areas and for the long-term sustainable resource management. For instance, the final TOR of spatial planning had been developed and submitted to the District Development Planning Agency

(Bappeda) and accepted by all parties involved. This proved that WWF has played an important role in the development process of RTRWK Nunukan and achieved substantial results from the process.

Furthermore, WWF-NRM program has developed a scenario of several alternatives for setting new biodiversity conservation areas in Sebuku-Sembakung. The important result to be highlighted here was that WWF scenario was adopted in the draft of spatial plan by an appointed spatial planning consultant contracted by the district government (see **Map 1 Land Allocation of Spatial Planning**). This draft, in the process to become the final draft of RTRWK, was further discussed among members of the spatial planning team and as well as at public consultation held to get inputs from relevant stakeholders regarding the spatial plan.

In this draft, Sebuku-Sembakung areas covering 220,000 ha have been allocated as protected areas. These consisted of 160,000 ha in Sebuku-Sembakung area (the southeast of the mainland of Nunukan district) and 60,000 ha in the north of Sebuku area (a transboundary area). In the final draft submitted by the consultant, two alternatives were proposed related to incorporating the conservation of Sebuku-Sembakung areas in the RTRWK. First, the allocation for protecting Sebuku-Sembakung covered about 170,000 ha, which consisted of 60,000 ha in the north of Sebuku and 110,000 ha in the Sembakung areas. Second, the protected area was only allocated in the Sembakung area. This happened because the Head of Nunukan district (Bupati) has proposed a new policy to develop oil palm plantations in the trans-boundary area. This policy was backed up by the Army and would be implemented by an Army-owned company, PT. Agrosylva Beta Kartika.

However, the final draft of spatial plan has yet to be submitted to DPRD (the district parliament). This occurred because no final decision has been made by Bupati with regard to spatial plan concepts. Verbally, Bupati has stated that spatial plan allocation would be based on balanced figures, which one-third of the areas would be allocated for non forest uses, another one-third for forest uses, and the rest for protected area uses. If this allocation is implemented, Nunukan district does not require any establishment of new protected areas because  $\pm 37\%$  of the entire Nunukan areas has been devoted for conservation and protection purposes (Kayan Mentarang National Park and protection forest). This means that the total of both is more than one-third of the total areas of Nunukan district.

Recently, new development has taken place in relation to Nunukan situation. Since the end of September 2002, all districts sharing borders with foreign countries should coordinate and communicate their development programs with the central government. Under the Coordinating Ministry for Economy, Finance and Industry, trans-boundary development plan will be prepared by Coordinating Agency for National Spatial Planning (BKTRN) which will include Nunukan district trans-boundary development plan. As a result, Nunukan's Bupati decision on spatial plan is postponed waiting for the

issuance of this trans-boundary development plan which will cover the review of Nunukan district spatial plan.

In line with this situation, WWF has been continuously lobbying and conducting consultation and discussion with national and local governments, local parliament, local communities, and other institutions regarding spatial planning development. In general, it appears that most stakeholders have agreed with WWF-NRM concepts in allocating Sebuku-Sembakung area as protected area in the spatial plan.

- o Additional assessment in ecological/biodiversity of Sebuku-Sembakung

To support the proposal of biodiversity conservation areas on Sebuku-Sembakung, both spatial and non-spatial data need to be updated and revised. Therefore, WWF-NRM program had been conducting elephant survey phase II in Sebuku-Sembakung watersheds from August 2 to 14, 2002. The survey team consisted of two persons from WWF Indonesia, two from District Land Agency (BPN), one from Bappeda and one from Bapedalda of Nunukan district. Results of the survey confirmed the presence of elephants in the Agison, Sebuda, Apan River areas, and also along the border on the Sabah side. The team found evidence of herds and solitary (male) animals through footprints and dung. This could be used as an important link and argument for these areas and habitat in both sides of the border to be conserved.

In addition, investigation on the presence of elephant in oil palm nursery of PT. Tirta Madu Sawit Jaya was carried out on September 18, 2002. This was based on the report of an agricultural extension staff to WWF. The survey team found evidence of elephants, which was the destruction of 2,406 seedlings of oil palm. This implies that if government does not allocate habitat for elephants, human-elephant conflict may arise in the future.

- o Capacity building for local stakeholders

To increase the level of stakeholders' capacity in sustainable natural resource and conservation management, WWF-NRM has worked together with local government in carrying out community workshops at village level on sustainable management and conservation. The workshops were held in Nunukan sub-district (Sebuku area, 68 participants) on April 11, 2002, and Sembakung sub-district (Sembakung area, 48 participants) on February 19, 2002.

The workshops identified sources of the problem with regard to sustainable use of natural resources such as in designing natural resource utilization, formulating changes in environmental information, finding alternative sources of income, promoting women activities, and enhancing local community institutions. The workshops nevertheless resulted in some positive outcomes such as local communities realized that environmental condition has changed and become worst resulting mainly from forest degradation. Regarding the

outcomes of the workshops, involvement of wider stakeholders, both NGOs and the government, in participatory rural development was certainly needed especially to overcome the problem of balancing the efforts to generate alternative incomes with degraded environmental condition.

Following this, a comparative field study was carried out to West and Central Java. The participants were from local communities in Sebuku-Semnbakung area and relevant sub-district officials. The aim of the study was to learn about the integration of forest and people through community forestry and agro-forestry development that resulted in the increase in the level of social welfare. From this visit, the participants learned the significant knowledge and practices of sustainable natural resource uses and their economic scale, such as rattan utilization and sustainable honeybee farming.

In August 2002, in collaboration with WWF-VIF, a legal drafting training had been organized and was participated by members of district parliament, district government officials and members of local NGOs from Nunukan. This training aimed at influencing decision makers at district level to integrate a concept of conservation into a spatial description based on sustainable development principles. In the same time, an environmental journalism workshop was also held for East Kalimantan journalists. The workshop aimed at increasing the level of awareness of local journalist on environmental and conservation issues.

WWF-NRM has also conducted a cross-visit to the Philippines involving the Head of Nunukan District Parliament (DPRD), the Secretary of District, the Head of District Land Agency (BPN), and the Head of District Agriculture Agency (*Dinas Pertanian*) from October 13 to 21, 2002. The visit aimed at learning more from neighboring country's experiences in designing and integrating conservation and regional development through spatial planning and local stakeholders' participation.

Results of the visit showed a substantial support from the Head of Nunukan District Parliament to implement the concepts of sustainable natural resource management and conservation within the district development framework. The statement of the Head of Nunukan District Parliament for supporting the conservation in Nunukan was quoted in a local newspaper (please see **Figure 1** for the quotation of the Head of Nunukan District Parliament statements and please refer to **Appendix 3** for documents of campaign on local newspapers).

- Campaign, communication and networking

In socializing conservation objectives, WWF-NRM program has promoted and supported sustainable conservation and development within the framework of regional planning. This has been carried out by developing sound understanding of stakeholders about the importance of the integration of conservation and spatial planning development.

Figure 1. The Head of district parliament statements on local newspaper on supporting conservation in Nunukan

**MUR Kaltim Post SENIN, 11 NOVEMBER 2002**

# Hutan Nunukan Kritis

## Hanya Bisa Diharapkan Sekitar 10 Persen

**NUNUKAN** - Pimpinan WWF Nunukan, Wawan Ridwan mengungkapkan saat ini kondisi hutan di Pulau Nunukan sudah sangat kritis. Dari kebutuhan minimal 30 persen untuk mendukung keberadaan pulau tersebut, ternyata hutan yang masih bisa diharapkan hanya tersisa 10 persen. "Sepuluh persen itu juga angka yang optimis," kata Wawan kepada media ini kemarin. Di sampingnya, perhitungannya itu dapat diprediksikan hanya dengan pandangan mata saja.

Namun kondisi seperti itu bukan berarti sudah menutup jalan untuk melakukan perbaikan terhadap hutan. "Hanya tinggal komitmen unsur-unsur yang terkait di dalamnya untuk menuju ke arah perbaikan itu saja," katanya.

Untuk itu, belum lama ini WWF Kabupaten Nunukan tidak segan-segan mengajak eksekutif dan legislatif Kabupaten Nunukan melakukan study banding ke Negara Kabupaten Lacustellans, Filipina. Negara yang dinilai berpengalaman membangun kembali hutannya setelah bencana gempa bumi Amerika Serikat yang pernah menimpanya.

Sebagai daerah yang hutannya pernah habis, tugas alam hutan menjadi sangat berat, namun karena didukung oleh komitmen berbagai unsur untuk menciptakan hutan yang semakin banyak, Filipina hanya butuh waktu beberapa tahun yang mampu membangun wilayah di sekitarnya.

"Tugas WWF adalah membantu memberikan informasi kepada pejabat pemerintahan Kabupaten Nunukan, para wakil rakyat, masyarakat, khususnya pejabat dan staf dari pemerintahan study banding yang dibantu oleh WWF tersebut beberapa waktu ini."

"Yang diharapkan, dalam melaksanakan perencanaan pembangunan harus ada integrasi dengan pelestarian alam. Di Negara, integrasi kedua hal itu menjadi suatu hal yang dalam pelaksanaan pembangunan, tambahannya lagi."

Sedang dalam pelaksanaannya dengan perkembangan pembangunan di Kabupaten Nunukan, WWF berharap jika bisa membantu pemerintah yang telah memiliki waktu dibelakan untuk hutan yang akan habis, hutan kritis hutan di Nunukan, sebagai contoh, bisa membantu yang bisa meningkatkan minat dalam pembangunan itu sendiri, dan bisa membantu pemerintah dalam melaksanakan pembangunan yang berkelanjutan.

Wawan juga mengatakan, WWF juga akan membantu pemerintah dalam meningkatkan komitmen pemerintah dalam melindungi hutan yang ada di Kabupaten Nunukan, dan juga akan membantu pemerintah dalam meningkatkan komitmen pemerintah dalam melindungi hutan yang ada di Kabupaten Nunukan, dan juga akan membantu pemerintah dalam meningkatkan komitmen pemerintah dalam melindungi hutan yang ada di Kabupaten Nunukan.

Ketua DPRD Kabupaten Nunukan H Mansyur Husin yang mengikuti kegiatan tersebut mengatakan, kegiatan ini sangat penting untuk meningkatkan kesadaran masyarakat di Nunukan yang akan dilindungi oleh daerah ini. Negara yang menjadi tujuan study banding dari WWF tersebut.

Setelah melalui secara langsung dan menyaksikan langsung masalah yang dihadapi dalam upaya pelestarian hutan di Provinsi Mindanao, Filipina, akan membantu pemerintah daerah ini. "Setelah melalui secara langsung dan menyaksikan langsung masalah yang dihadapi dalam upaya pelestarian hutan di Provinsi Mindanao, Filipina, akan membantu pemerintah daerah ini."

Wawan juga mengatakan, WWF juga akan membantu pemerintah dalam meningkatkan komitmen pemerintah dalam melindungi hutan yang ada di Kabupaten Nunukan, dan juga akan membantu pemerintah dalam meningkatkan komitmen pemerintah dalam melindungi hutan yang ada di Kabupaten Nunukan.



WWF-NRM has produced handouts of natural resources management, which has been presented to Sembakung and Nunukan (Sebuku area) sub-districts, local communities and local NGOs. WWF-NRM was further involved in the exhibition of Nunukan district celebration. This participation has echoed conservation and sustainable development issues in Nunukan.

To widespread conservation messages, in collaboration with a national private TV station (SCTV), a campaign about the potencies of and threats to Sebuku-Sembakung area had been aired in *Liputan 6 Siang* program in January 2002. Campaign has also been carried out throughout local and national media (newspapers and radios) including Nunukan News, Radar Tarakan, Niaga, Kaltim Post and Radio FM 68 Jakarta.

Another important matter developed during the project period was strategic networking and collaboration with other international and local NGOs in promoting and campaigning natural conservation. This included the collaboration with Yayasan CORI implementing an AusAID funded program on villages' healthcare, CARE International with a CIDA funded program on community development (FORMACS) and with AREAS on elephant habitat protection, which still in progress.

### **C. Program Achievement**

Having carried out activities during the three-year implementation of WWF-NRM Program, a lot of experience and substantial results have been achieved (please refer to **Appendix 1** for the matrix of achievements against objectives for three years period of WWF-NRM). WWF-NRM has achieved 80-90% of its objectives for three years period of the project in Kalimantan based on an independent external evaluation conducted in October 2002. These achievements compared to the realization of the Project's objectives during the period of November 1999 and October 2002 are analyzed below:

**C.1. In achieving the first objective: identify high priority biodiversity resources, describe how specific human activities adversely affect these resources, identify lower impact alternatives, and increase the area of protected resources where best practices are being implemented**

WWF-NRM program has succeeded in developing a comprehensive tabular and spatial database systems (biophysical, socioeconomic and culture) of Nunukan district. These cover:

- o Complete GIS of Nunukan district that was used as the basis for the completion of spatial analysis of the district. In many occasions, these set of data have been socialized and provided to local stakeholders in Nunukan and

- helped the new district government in planning and carrying out its development programs.
- Biodiversity database, particularly for elephants, that were compiled and updated from several workshops, surveys and studies such as reconnaissance elephant survey in Sebuku-Sembakung watersheds and elephant survey phase II in Sebuku watershed and its vicinity. Results of the survey confirmed the presence of elephants in the Agison, Sebuda, Apan River areas, and also along the border on the Sabah side. The team found evidence of herds and solitary (male) animals through footprints and dung. This could be used as an important link and argument for these areas and habitat in both sides of the border to be preserved.
  - A socioeconomic profile and development opportunities of Nunukan district and Sebuku-Sembakung watersheds completed from several analyses on existing population and socioeconomic data, and from resource and economic valuation on Sebuku-Sembakung area and its vicinity. Socioeconomic profile at villages/sub-districts levels have also been obtained from several workshops on NRM held in Sebuku and Sembakung areas. The profile has improved understanding of the current resource use practices of the local communities and potential threats to biodiversity arising therefrom.
  - A cultural and traditional profile of indigenous Dayak in Sebuku-Sembakung compiled from community workshops and while other surveys and studies conducted. This has assisted the project in understanding local people's custom especially in their natural resource use.

These complete sets of database were useful in determining priority areas of NRM Project in Kalimantan, which was in Sebuku-Sembakung. The data have enriched the level of knowledge and understanding about the selected landscape particularly in the development of Sebuku-Sembakung as a protected area, advocating the incorporation of the proposed protected area in the draft of district spatial plan and the completion of threat analysis categorizing types of threats, actual and potential threats and level of severity for the selected landscape. In general, WWF-NRM believes that 90% of the outputs of the objective 1 has been achieved.

**C.2. In achieving the second objective: establish biodiversity conservation as an important planning and decision-making criteria, recommending changes to the institutional and legal framework and educating government officials and private sectors**

Some significant outcomes towards the establishment of Sebuku-Sembakung as conservation area have been achieved by WWF-NRM program, such as:

- Through the appointment of WWF-NRM by the district government (the Head of Bappeda Nunukan decree Nr. 050/205.1/BAPP-II/X/2001) as a member of

technical team for Nunukan spatial planning, WWF-NRM Program assisted the local government to produce a draft of terms of reference of spatial plan. After several meetings and discussions, the TOR was finally accepted by all parties involved in the team.

Subsequently, WWF-NRM developed several integrated land use and development scenarios to be incorporated in the draft of the spatial plan. The first scenario of integrated conservation and development was developed in the first half of the second year of the program. The second scenario was developed based on physical, socio-economic and ecological factors, land suitability and land system analyses. Third scenario was developed by including villages as buffer zone within Sebuku-Sembakung. Those scenarios were presented to the consultant of Nunukan spatial plan (PT. SANP) to be used as the basis for developing the draft of the spatial plan.

Results of the development of these scenarios showed that the proposed conservation area of Sebuku-Sembakung that would be integrated in the draft of spatial plan was about 220,000 hectares. These consisted of about 60,000 hectares of an elephant range in the border area between Nunukan and Sabah, which is located in the Sebuku watershed, and 160,000 hectares of peat swamp areas in the southeastern area of Nunukan district (Sebuku-Sembakung areas). The border area overlaps with PT. Perhutani's concession and IPPK (*Izin Pemungutan dan Pemanfaatan Kayu* – Timber Collection and Utilization Permit) of PT. Agrosylva Beta Kartika (ABK) as can be seen in Table 2. Out of 160,000 hectares of the proposed conservation area in Sebuku-Sembakung, 110,000 hectares were already allocated for forest production and plantation activities as can be seen in Table 1 (except PT. KHL, PT. Comismar and PT. AHL).

**Table 1 . Distribution companies in Sebuku-Sembakung area**

Companies	Area (Ha)	Types of Activities
PT. Karangjoang Hijau Lestari	33,641.744	Oilpalm
PT. Comismar	10,638.628	Oilpalm
PT. Adindo Hutani Lestari	78,945.48	HTI (timber estate)
PT. Bumi Kaltim Indah	19,628.43	Oilpalm
PT. Andalan Mitra Sawit	20,563.01	Oilpalm
PT. Rapenas Bhakti Utama	18,048.34	Oilpalm
PT. Borneo Bakti Sejahtera	18,426.87	Oilpalm
PT. Bulungan Sawit Sejahtera	16,290.61	Oilpalm
PT. Perhutani	265,000	HPH (logging concession)

**Table 2 . Distribution IPPK licenses issued by the district government**

No.	Company/Nr.license	Location	Area (ha)
1	PT. Bhumi Semenggaris Indah (SK. Kakanwil Dephutbun Kaltim No. 564/Kpts-4.2/2000, tanggal 24-11-2000)	Simenggaris	12,500
2	PT. Sebuku Sawit Perkasa (SK. Kakanwil Dephutbun Kaltim No. 284/Kpts-4.2/2000, tanggal 20-11-2000)	Simenggaris	20,000
3.	PT. Nunukan Jaya Lestari (SK. Bupati Nunukan No. 521.11/40/Sosek-I/IX/	Simenggaris	20,000

	2001, tanggal 6-9-2001		
4.	Koperasi Karya Baru SK. Bupati Nunukan No 521.11/22/Soek/VI/2001 Tanggal 18-6-2001	Desa Panas	1,200
5	PT. Putra Bulungan Sakti SK. Bupati Nunukan No. 521.11/31/Sosek-I/VIII/ 2001 tanggal 1 Agustus 2001	Desa Panas	1,100
6	PT. Agrosylva Beta Kartika SK. Bupati Nunukan No. 521.11/50/Sosek-I/X/ 2001 tanggal 12 Oktober	Simenggaris	50,000
7	Koperasi Meranti Tumbuh SK. Bupati Nunukan No. 521.11/002/Proda/I/2002 Tanggal 7 Januari 2002	Desa Balatikon	9,550
8.	Inkopad SK. Bupati Nunukan No. 521.11/20/Sosek-I/VI/ 2001 tanggal 18 Juni 2001	Simenggaris	20,000
9.	Koperasi Hikmah SK. Bupati Nunukan No. 500/33/Soek-I/VII/2001 Tanggal 7 -8-2001	Sebuku	9,500

In general, WWF-NRM has succeeded in advocating the incorporation of Sebuku-Sembakung as a new conservation area into the Nunukan district spatial plan. This draft only waits to be approved and legalized by the district parliament (DPRD). Securing Sebuku-Sembakung as protected areas will therefore act as an important starting point to promote the integration of conservation and development notions in the decentralization era. The proposed land allocation in the draft of Nunukan district spatial plan can be seen in Table 3 and Map 1.

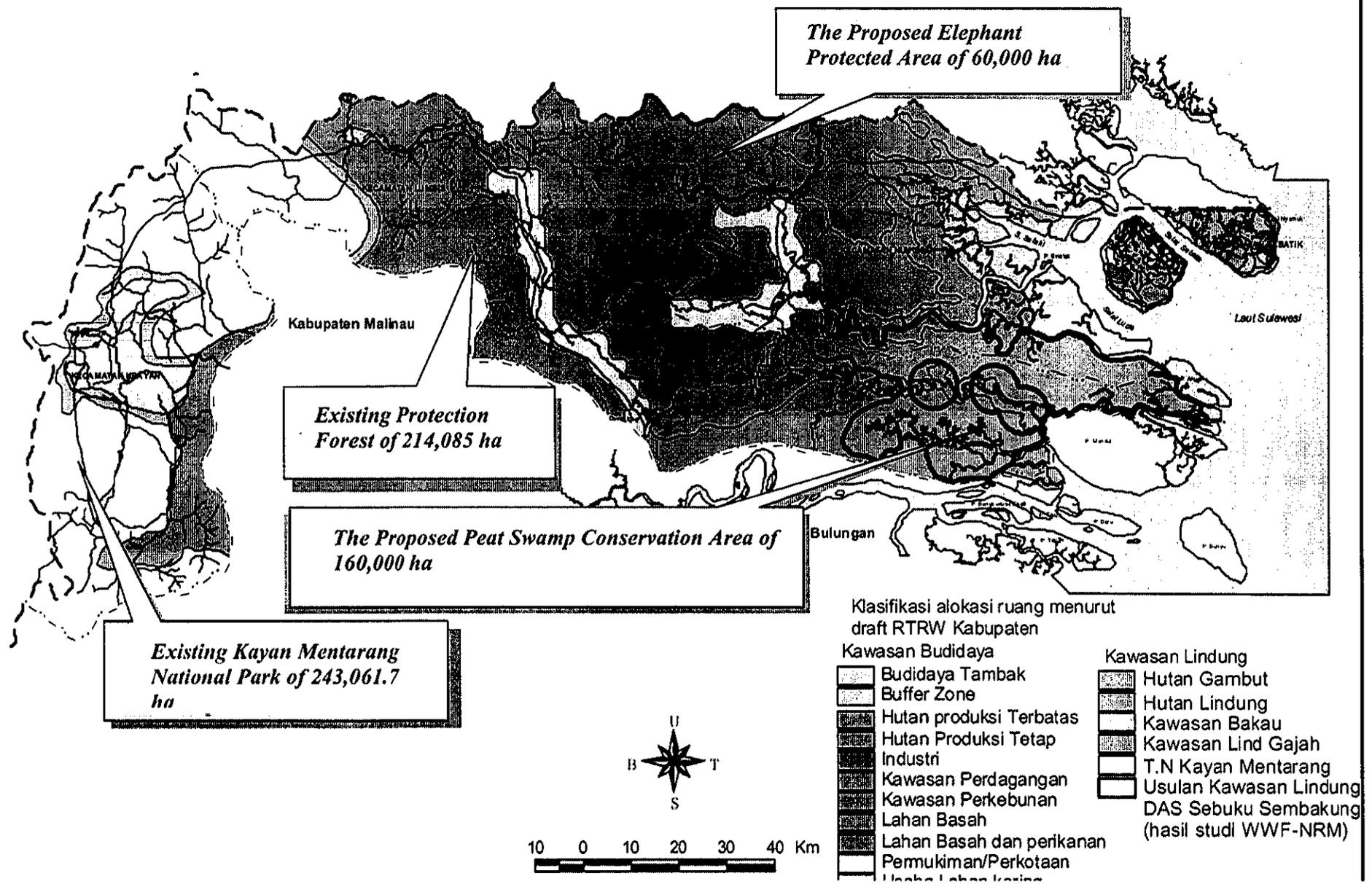
**Table 3. Land allocation of Spatial Planning based on draft of RTRWK.**

Proposed Spatial Planning	Area (Ha)	Percentage
Non forest uses /KBNK	666,887	46.70
Protected forest	214,085	14.99
Production forest	52,463	3.67
Limited Production forest	31,534	2.20
Protected area (Conservation area)	220,000	15.41
Kayan Mentarang National Park (existing)	243,061	17.03
<b>Total</b>	<b>1,428,030</b>	<b>100.00</b>

However, challenges remain high. As described in the execution of program activities, these include the endorsement from Bupati for the opening of oil palm plantation and trans-boundary development plan conducted by the central government to set an integrated economic development area (KAPET). This has postponed Nunukan Bupati's decision on spatial plan awaiting the issuance of this trans-boundary development plan which will cover the review of the draft of Nunukan district spatial plan.

Apparently, the process to lobby and conduct consultation and discussion with relevant stakeholders regarding spatial plan development and protected area establishment has to be continued. WWF Indonesia also needs to further promote the importance of biodiversity conservation in a format which is both

# Map 1. Spatial Allocation, Nunukan District Spatial Plan (Final Draft)



understandable to government (both legislative and executive) and clearly incorporates local economic development. Without this, it is relatively difficult to establish biodiversity as a key planning and decision-making criteria. In conclusion, WWF-NRM considers that 85% of the outputs of the objective 2 has been achieved in accordance with the workplans.

**C.3. In achieving the third objective: strengthen protected area management through participatory planning and facilitation of stakeholders' agreements and test innovative institutional and funding arrangement for protected area management**

Since the first year of the project WWF-NRM has carried out networking, collaboration with and socialization the program to relevant stakeholders at district level. This has produced positive outcomes in forms of:

- Strong support from local communities in accepting the proposed conservation areas in Sebuku-Sembakung. The support was quoted in local media and in various stakeholder meetings, and this proved to be a key point in increasing local community participation in pushing for the integration of conservation and development (please refer to **Appendix 3** for documents of campaign on local newspapers). Various surveys on socioeconomic opportunities for local livelihoods and communities' workshops on natural resource management were also carried out to increase the support from community.
- Development of strategic alliances, communication and coordination mechanism with important stakeholders (district government, DPRD, communities, NGOs and mass media). The established alliance with local NGOs consisted of LINGHAM, Otonomy Centre, KPPN, Kompas and Lintas Khatulistiwa aiming at promoting and campaigning sustainable natural resource management within the framework of spatial planning development
- The strategic network established by WWF-NRM Program paved the way for CARE International to initiate a community development program in 2002. WWF-NRM Program's contribution on this was directly acknowledged by the district government and CARE. The WWF-NRM Program has also succeeded in establishing collaborative activities on conservation and development programs with other international organizations such as CORI (Community Outreach Initiatives), GTZ and WWF-AREAS (particularly for elephant conservation alliance).

It is clear that the success of protected area management lies on a strong support from stakeholders and a clear status of the proposed protected area. WWF Indonesia hence is putting its efforts in searching for an appropriate model for managing the area that incorporates local stakeholders' aspiration and the needs for economic development. Although challenges remain significant in the future,

WWF-NRM regards 80% of the outcomes of the objective 3 as been obtained in accordance with the workplans.

**C.4. In achieving the fourth objective: develop the capacity of stakeholders in protected area management and bioregional planning through training, workshops and cross-visits**

Increase in the level of stakeholders' capacity in natural resource management and biodiversity conservation is important for sustaining the integration of conservation and development works. For about three years, WWF-NRM has been able to improve the level of stakeholders' capacity, which was carried out through:

- Development and distribution of maps, narratives, photos, calendars and handouts on sustainable natural resource management. These materials have been used to introduce and promote the program's concepts and conservation objectives to relevant stakeholders and partners. Campaign was also conducted in forms of the airing of a documentary movie on Sebuku-Sembakung conservation on SCTV, publication of a considerable amount of reports and articles on local newspapers and direct socialization to local communities at villages level throughout Sebuku-Sembakung. To support this, an environmental journalism workshop was also carried out for East Kalimantan journalists.
- Training in legal drafting have been organized two times for members of district parliament, government officials and members of local NGOs who would be involved in decision making processes with regard to Nunukan development programs and activities.
- GIS and landscape planning training for relevant local government offices has been carried out at district level in Nunukan.
- For the development of capacity in carrying out economic activities, seminars and workshops on sustainable natural resource management were carried out in Sebuku-Sembakung areas for local people and sub-district government officials. Field visit to Java observing the implementation of sustainable NRM was also carried out participated by representatives from local communities.
- A cross-visit to the Philippines participated by the Head of Nunukan District Parliament, the Secretary of District, the Head of District Land Agency, and the Head of District Agriculture Agency had been conducted from October 13 to 21, 2002. The visit has enabled the local policy makers aimed to learn more about and observe neighboring country's experiences in designing and integrating conservation and regional development through spatial planning and local stakeholders' participation. The visit – funded solely by WWF Indonesia counterpart budget – hopefully can influence district government's

decision to implement the concepts of sustainable natural resource management within the district development framework.

WWF-NRM realizes that capacity building for local stakeholders is a long process, especially under the new era of decentralization. The increase in the level of conservation awareness would ease the introduction and implementation of sustainable development activities in general as well as WWF Indonesia's programs. For the most part, WWF-NRM believes that 85% of the outcomes of the objective 4 has been achieved in accordance with the workplans.

## **D. Summary of Lessons-learned**

While carrying out activities to achieve the four objectives during three years period of the project, experience and lessons in forms of success and difficulties were faced by the program. WWF Indonesia believes that by sharing this, it will strengthen WWF Indonesia's capability in this area of expertise and will benefit other development and conservation actors throughout Indonesia. Some important lessons-learned are listed below:

### **D.1. Spatial planning and natural resource policies in the decentralization era**

Decentralization has transformed many aspects of development administration and policies. What is good and acceptable in the centralized system of government may not be good and acceptable anymore in the decentralized era. For instance, the fact that Nunukan district is a new district resulting from the division of Bulungan district has contributed to many difficult issues, especially in spatial planning and natural resource use. At that time, Bulungan District only had 14 per cent of its areas as conservation areas, which was represented by Kayan Mentarang National Park (*Taman Nasional Kayan Mentarang – TNKM*). Therefore, the proposal to set additional conservation areas – in this case, the Sebuku-Sembakung – was logical for Bulungan situation (the total areas were only counted about 20 percent of Bulungan district's areas).

However, the creation of three new districts of Bulungan, Malinau and Nunukan (based on the Law No. 47/1999 regarding Regional Division) has created a difficult task for anyone to successfully establish a new conservation area in Nunukan. Within the new jurisdiction, Nunukan district has occupied a large amount of conservation areas from the existing TNKM. Asking for more conservation areas is generally not a popular issue to be favored by the district government. This was worsened by the fact that in the existing provincial land use, the proposed area (Sebuku-Sembakung) watersheds were allocated for non-forest use areas (KBNK) although this appears to be contradictory with the existing landscape that is more suitable for forest area.

Fortunately, in this new decentralized system of government, authorities and decision making processes mostly have shifted to district level. Through intensive and direct lobbying and consulting with district decision makers based on a complete set of tabular and spatial data, government's perception on natural resource management has gradually changed towards implementing sustainable development principles. This has shown through the open invitation by the district government for WWF-NRM to become a member of technical advisory team of Nunukan district spatial planning. Furthermore, the involvement of WWF in the team has resulted in the acceptance of the incorporation of Sebuku-Sembakung conservation in the draft of district spatial plan.

On the other hand, decentralization also means that the district heads are responsible for getting local revenues to finance most of development activities in their areas. Unfortunately, this has led to the issuance of several policies and decisions based on Bupati's short-term interests.

What have happened until now are examples of the above statement showing inconsistency in government policies on natural resource management. The idea of a district government to quickly gain its revenues can lead to uncontrollable use of natural resources. For instance, the agreement by the spatial planning team on conserving Sebuku-Sembakung areas is no longer relevant when Bupati Nunukan verbally rejected it. Furthermore, he endorsed the opening of 230,000 ha of the areas for oil palm plantation, frequently issued the IPPK licenses and given special treatment for an army-owned timber concessionaire in the proposed conservation area of Sebuku-Sembakung.

In this case, socioeconomic surveys and studies have played an important role to argue against the implementation of unsustainable district development policies. Based on results of the studies and previous spatial analyses, one can show the benefit of environmental functions and services provided by Sebuku-Sembakung watersheds and promote sustainable environmentally-friendly types of development activities.

Moreover, this challenge is added with recent development in forms of the preparation of trans-boundary development plan by the central government. The planning activities will cover planning of districts sharing borders with foreign countries. As a result, Nunukan's Bupati decision on spatial plan is postponed awaiting the issuance of this trans-boundary development plan which will cover the review of Nunukan district spatial plan.

All of these require flexibility and capability of a project/program in influencing wider decision makers at different levels. Therefore, establishment of an interdisciplinary team consisted of members from national, provincial and district levels should be under single coordination and is one step closer towards successful advocacy for the incorporation of conservation in development plan.

## **D.2. Promoting local economic development within the framework of biodiversity conservation**

The most important issue, perhaps, whilst trying to advocate for the integration of conservation in the district spatial plan, was the question over economic benefits gained from conservation activities. It is clear that the provision of direct economic benefits from conservation activities to local stakeholders (both government and communities) is becoming more essential. In other words, support will increase if local stakeholders receive direct benefits from a particular conservation program or activity.

At the moment, many local people who live adjacent to the proposed protected area have engaged with illegal logging activities. Due to relatively high incentives provided by timber extraction, it is therefore difficult to divert their illegal logging activities into other activities which are based on sustainable principle. However, if a particular economic alternative activity is introduced, covering the linkage of supply and demand, it is highly likely that local communities will gradually adopt this sustainable type of activities.

Various workshops, cross-visits and consultations have indicated local people's enthusiasm in implementing this kind of activities. In general they are very positive in supporting WWF activities in Nunukan district. Again, however, many local stakeholders expect WWF to start implementing this alternative income generation program.

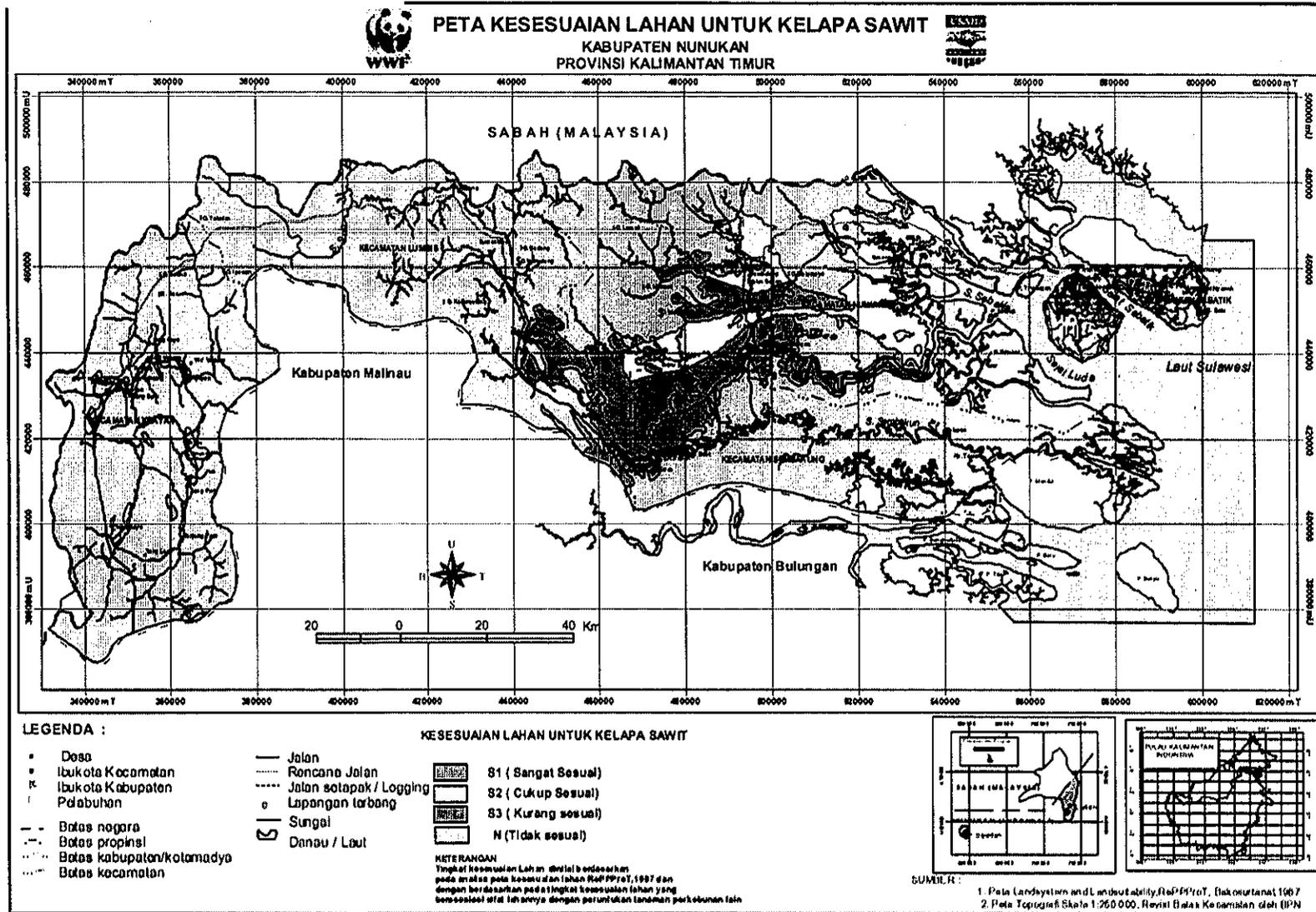
In addition, action to value ecological services and functions (watersheds functions, non-timber forest products, etc.) will also be necessary to strengthen the arguments to favor conservation programs. This type of studies can also result in local economic development opportunities that are sustainable. For instance, to argue against the opening of pristine forest areas for oil plantation, WWF-NRM has built a scenario of land suitability for this plantation plan. This has provided a clear direction for oil palm plantation development in the already opened areas of 40,385 ha that were most suitable, 134,223 ha suitable and 100,750 ha marginal suitable (see Map 2). This also shows that conservation activities are not necessarily against development activities but provide sustainable development alternatives.

## **D.3. Capacity building for local stakeholders**

WWF Indonesia realizes that to sustain conservation activities in Nunukan, the level of stakeholders' capacity in organizing and managing protected area and sustainable development need to be increased. This can be done through:

- o Active works and socialization to local communities and government officials. Experience has shown that this direct approach was much accepted by them and they are now gradually becoming major supporters for the implementation of conservation programs.

Map 2. Oil Palm Land Suitability



- Cross-visits and field studies have provided some ideas for local stakeholders on real implementation of natural resource management based on the sustainable utilization. Seeing directly the implementation of sustainable NRM has made them realized the possibility to implement such activities in Nunukan.
- Technical assistances for district government (eg. Bappeda and District Land Agency) have improved their technical capacities in dealing with development planning and program implementation. This activity also has resulted in sincere support from district government towards WWF-NRM activities.
- Campaign activities have widespread conservation issues and awareness in Nunukan, East Kalimantan and even in national terms. Effective utilization of local, provincial and national newspapers, radio and television, has proved to be a key element in influencing stakeholders perspective on conservation activities.

# FINAL REPORT - PAPUA CHAPTER

NOVEMBER 1999 - OCTOBER 2002

## A. Program Approach

In achieving the objectives set for this project, some approaches were adopted. The basic approach used by this project was based on the bioregional concept<sup>1</sup>, whereas the ecoregional<sup>2</sup> concept was ought to be used as complementary. Both concepts were used to analyze and test the biodiversity project's feasibility. In using the ecoregional approach, physical as well as biological data were collected to determine level of biodiversity of the specified area. The information obtained would be very useful as inputs for determining land utilization, both inside and outside the nature conservation area. Samples collected were that of focal species<sup>3</sup>, umbrella species<sup>4</sup>, key stone species<sup>5</sup>, indicator species<sup>6</sup>, and flagship species<sup>7</sup>.

After data collection and determining the eco-region's biodiversity, collection of socio-economic data (micro as well as macro) was performed. Macro economic research had been conducted for the Sorong and Manokwari districts. On the other hand, microeconomic research had been conducted through survey to households in villages in Kebar and Amberbaken sub-districts, Manokwari district, while for Sausapor sub-district, Sorong district, the survey was conducted in villages located within and around Jamursba Medi – North Tamrau. Data collected from the survey were used as basis for landscape planning in the management of Jamursba Medi – North Tamrau area.

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<sup>1</sup> Bioregion is a land and water territory whose limits are defined not by political boundaries, but by the geographical limits of human communities and ecological systems (Kanton Miller, 1996)

<sup>2</sup> Ecoregion is a relative large unit of land and water that contain a distinct assemblage of natural communities sharing a large majority of species, dynamic, environmental conditions (WWF-US, 1999)

<sup>3</sup> Focal species consist of umbrella species, flagship species, keystone species and indicator species.

<sup>4</sup> Umbrella species is characterized by generally require large areas of habitat in daily or seasonal movements, protecting enough habitat for an umbrella species generally also covers the needs of species with more restricted ranges e.g. - large carnivores (lions, bears), large herbivores (elephants, wildebeest), raptors

<sup>5</sup> Keystone species is characterized by enrich or structure ecosystem function in a unique or significant manner through their activities, e.g. elephants, beavers, hornbills

<sup>6</sup> Indicator species is characterized by tightly linked to specific biologic habitats, processes, or qualities, sensitive to ecological change, useful for monitoring habitat quality e.g. - sensitive bird species (spotted owl), river otters, amphibians

<sup>7</sup> Flagship species is characterized by charismatic creatures, appeal to humans (cuddly, cute, regal), form the foundation of public relations campaigns which may be critical for building popular support for conservation

In proposing a new protected area especially in Papua, approach to improve the level of community's income was chosen as a priority. The success in improving community's income would enhance the support obtained from the community for establishing a new conservation area. Apart from that, participative landscape planning in villages within and around the proposed conservation area would be the next emphasis because this would direct the long-term sustainable development at village level.

Landscape planning<sup>8</sup> of Jamursba Medi Tamrau was being performed involving all stakeholders. This kind of approach, involving all stakeholders, had been met with approval from the local governments as well as those communities and is to be highly recommended for most of WWF-Indonesia projects within this region. Such approach succeeded in securing stakeholders' commitment to nature conservation. Stakeholders to this project were the Provincial Planning Agency (Bappeda Propinsi), Bappeda of Sorong District, Provincial Environmental Planning Agency (Bapedalda Propinsi), Department of Forestry, all Districts within the Province of Papua, local communities, NGO's as well as International agencies such as USAID and Conservation International (CI).

In addition, to improve teamwork's efficiency, the WWF Bioregion Sahul and NRM-USAID program in Papua, NRM's activities and action programs (sponsored by WWF Netherlands) were to be integrated. Activities related to those programs which were to be integrated were Papua's biodiversity data collection, species monitoring, conservation awareness and education campaign, as well as improvement of conservation policy and law efforts.

## **B. Execution of Program Activities**

As written in the introduction, this document acts as the final report of three-years period of NRM Bioregional program (November 1999 – October 2002). Many activities, which include direct conservation activities, lobbies relevant stakeholders and community based economic development, have been carried out. Only activities considered significant will be elaborated in this section. Details of project activities and outputs/achievements against the objectives during three years period of NRM Project (November 1999 – October 2002) can be seen in Appendix I.

### **B.1. First year period of program activities (November 1999 – October 2000)**

During the first year of the project, the program focused on two main activities as described below:

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<sup>8</sup> *Landscape planning is approach to develop a physical regional plan that determines land allocation based on geographical performance as well as types of ecosystems.*

- Firstly, it focused on reviewing previous and collecting new data on protected area systems in Papua that could be used for identifying poorly represented ecosystem types and analyzing threats to the systems and the remaining unprotected natural ecosystems. This was carried out by analyzing and interpreting satellite images, assessing regional conservation and development systems, and reviewing macro-economic pictures of Papua, particularly based on the existing regional biodiversity, biophysical and economic data (e.g. studies on conservation by CI and Ronald Petocz/WWF).

Results of the analyses showed that the Bird Head area, especially in Jamursba Medi – North Tamrau, was important ecoregion representatives of Vogelkop montane forest, Western New-Guinea lowland forest Southern New Guinea peat and freshwater swamp forest, and Australian mangrove, and the fourth world'd largest nesting sites for leatherback turtles. This was further used to select the area as a priority landscape. Please refer to Appendix 6A for the analysis on conservation and regional development in Papua that leads to the selection of the Bird Head as a pilot landscape.

- Secondly, WWF-NRM focused on intensive socialization and consultation with relevant stakeholders with regard to the incorporation of biodiversity conservation in regional development framework. This was shown by the facilitation of the Biodiversity Survey Planning Workshop on 28-30 of August 2000. Attended by many participants including six experts from different backgrounds, the workshop aimed at developing a comprehensive understanding of which areas must be surveyed and in what priority order, and also gathering preliminary information with regard to such areas. Results of the workshop strengthened the selection of the Bird Head area as priority landscape and all participants agreed on proposing the area as national park.

Another important result from the workshop was the agreement on using and networking GIS for spatial dispersal of endemic and introduced species and their different ecosystems. The participants also urged the importance of protecting freshwater, forest and marine and coastal ecosystems as found in the certain eco-regions.

To further socialize and consult the Program with important stakeholders (both communities and the private sector), activities for communities were carried out in Saubeba and Warmandi villages of Jamursba Medi and a stakeholder meeting was held in Jayapura. The community based development activities were carried out in forms of facilitation of funding to develop small-scale production of dried deer and wild-boar meat, and sustain small-scale agriculture of black pepper and chicken farm. On the other hand, the stakeholder meeting between the representatives of the Provincial Forestry Department and PT Multi Wahana Wijaya resulted in the company's statement to release part of their concessions which included the area lying within the proposed conservation area. To date, however, this commitment has not been realized.

It was also noted that through intensive lobbies, in June 2000, the Governor of Papua province had issued a recommendation for the establishment of the status of JMNT as national park through the Letter of Governor number 522.5/1676/SET/2000. The issuance of the letter strengthened the position of WWF-NRM activities and further weakened the position of PT. Multi Wahana Wijaya and its logging activities.

## B.2. Second year period of program activities (November 2000 – October 2001)

In the second year of the project, the program focused on three main activities as described below:

- First, it focused on follow-on activities in collecting, reviewing and updating data to get a clear picture of landscape activities in Jamursba Medi and North Tamrau areas. The activities were carried out by making GIS maps that not only covered Jamursba Medi and North Tamrau, but also the Districts of Sorong and Manokwari and most parts of the Vogelkop (Bird Head) areas. Twelve mapping-portraits of the satellite data type Landsat 7 obtained from USGS (United States Geological Survey) were analyzed to prepare land cover thematic map, forest cover and vegetation types maps. WWF-NRM also facilitated the establishment of a GIS network between provincial and district governments to advance the exchange mechanism of spatial data between those parties.

Research and survey on biodiversity and socioeconomic (e.g. Rapid Biodiversity Assessment and Socioeconomic Assessment) were conducted to obtain first hand information of the biodiversity and socioeconomic conditions of the chosen project site. A survey was conducted around Saukorem (Manokwari) due to the existence of pristine tropical rain forest in the area. The survey was conducted together by *Balai Penelitian Kehutanan* (Forestry Research Office), *Lembaga Ilmu Pengetahuan Indonesia* (LIPI – Indonesia Science Institute), University of Cendrawasih (UNCEN), University of Papua (UNIPA), Bird Life, and other local NGOs. Socioeconomic research was also conducted in the wider area of Amberbaken and Kebar in Manokwari.

- Second, to increase the level of communities' and governments' acceptance of the proposal of Jamursba Medi North Tamrau as National Park, the project conducted wider consultation and socialization. Discussion and consultation were conducted at the village level with informal leaders (*Kepala Adat*) as well as village Heads (*Kepala Desa*). In addition, income generation activities were continued for two villages of Saubeba and Warmandi.

At the district level, *Bupati* (head of district) Sorong organized a meeting with members of district parliament discussing the issue of PT. Multi Wijaya Wahana's logging activities. The result was the issuance of Bupati's letter to

the Ministry of Forestry (MoF) requesting the Minister to discontinue PT. Multi Wijaya Wahana's logging activities in Jamursba Medi – North Tamrau area.

Regarding the review of Sorong district spatial plan, WWF-NRM has approached P3WK-ITB (*Pusat Penelitian Perencanaan Wilayah dan Kota-Institut Teknologi Bandung* or Research Centre for Regional and Urban Planning- Institute Technology of Bandung) as the consultant conducting the review and the Local Office of Spatial Planning of Sorong district (*Dinas Tata Ruang Kabupaten Sorong*) to incorporate the proposed conservation area in the district spatial plan.

Furthermore, based on district and provincial recommendations, the MoF reviewed the proposed designation of Jamursba Medi – North Tamrau as National Park in April 2001 and prepared a map of the proposed area. To speed this process at the national level, WWF-NRM discussed with the Director of Nature Conservation about the best way to realize the proposal.

However, it was reported that during this period a few members of the communities especially those living in the corridor areas rejected the idea for the proposed national park. They sent a letter rejecting the district and provincial recommendations on Jamursba Medi – North Tamrau as national park. As mentioned in the introduction section, direct benefits from timber exploitation were suspected as the main force for the rejection of conservation activities. Several direct consultations and socializations to communities' members were hence held. It was agreed that wider public consultation should be conducted involving all components of local/traditional communities in Jamursba Medi – North Tamrau.

- Third, WWF-NRM started to focus on strengthening stakeholders' capacity in natural resource management and biodiversity conservation. This was done through a cross-visit study to Kakadu National Park in Australia for communities' and government's representatives. The aim of the visit was to enable six landowners of Sorong and one WWF staff to learn about community aboriginal ranger services in northern Australia. The visit also aimed at learning about and exchanging ideas on the co-management model in Kakadu, National Park management practices, roles of rangers and community based tourism.

In addition, WWF has carried out training on small-scale enterprise, which covered kiosk management. The aim of the training was to share knowledge and information in managing sustainable local economic development. It was expected that from this kind of training local communities would reduce their unsustainable logging activities and support the integration of conservation and development at village level. This training was also facilitated by the Sorong Office of the Department of Cooperative.

### B.3. Final year period of program activities (November 2001 – October 2002)

For the final year of the project, the program focused on four main activities as described below:

- First of all, WWF-NRM emphasized its activities more in socialization and lobbies to obtain support from communities and local and central governments for legally establishing Jamursba Medi – North Tamrau as a conservation area. Efforts to influence traditional leaders, traditional landowners and groups of communities that rejected the establishment of this conservation area were carried through various persuasive and intensive meetings and discussions. In particular, WWF-NRM Program has facilitated several meetings between members of Karon communities from Sausapor, Kebar and Amberbaken, and Karon communities from cities together to have similar perception on the management of the proposed conservation area.

In respond to an incoming letter rejecting the proposal of Jamursba Medi – North Tamrau as national park from the small part of the communities, public consultation with Karon communities was conducted on February 26, 2002. This consultation was designed to acquire first hand information from Karon communities and find the best solution for managing conservation area in JMNT. It was attended by various types of stakeholders such a team from Jakarta consisting of representatives from the Ministry of Forestry, Members of the National Parliament, WWF Indonesia and USAID, and by local representatives from members of Karon communities (both coastal and remote areas) and local governments (including sub-districts of Sausapor, Kebar and Amberbaken). Although dynamic and often tense, the consultation was considered successful and democratic.

The outcome of the consultation was that the majority of members of Karon communities accepted the proposal of conservation area, welcomed the continuation of WWF's activities in their area and rejected the existence of a logging concession company (PT Multi Wahana Wijaya). They rejected the name of the proposed area as national park and proposed it as *Kawasan Pelestarian Alam Masyarakat Adat Karon* (Karon Indigenous Communities Natural Conservation Area). This outcome was obtained because WWF-NRM Program had gradually succeeded in changing the perception of some of only a few members of communities that rejected the idea of conservation.

Following the public consultation, the project staff carried out several socializations at village and district levels. At village level, WWF-NRM and district government of Sorong has conducted a joint program in socializing conservation and development activities in Sausapor. The support from the district government has encouraged communities to accept the notion of integrating local development and conservation activities. At district level, WWF-NRM has presented the results of socioeconomic, tenurial, eco-tourism assessment before the district parliament. This aimed at obtaining support

from members of district parliament for WWF's activities in Jamursba Medi – North Tamrau. The outcome of the activity was that the parliament urged the district government to support local sustainable development activities in the area.

Moreover, WWF-NRM continued lobbying the incorporation of the proposed conservation area of JMNT in Sorong district spatial plan (*RTRW Kabupaten Sorong*). The consultant hired by the local government was approached and technically assisted by WWF-NRM in preparing the district spatial plan.

The project also maintained its activities in developing alternative sources of income for communities, especially in Saubeba and Warmandi villages, to prevent them indirectly from utilizing protected biodiversity in the proposed conservation area. WWF-NRM realized that success in improving the level of communities' economic activities would eventually increase the level of support from communities for the continuation of conservation activities in JMNT.

- Second, to support the argument in integrating conservation and development in Jamursba Medi – North Tamrau, WWF-NRM continued in conducting important studies and surveys on socioeconomic conditions, tenurial rights, and eco-tourism opportunities of the area. Throughout this final year, results of these studies have been used for socialization, lobbies, campaign and capacity building in the proposed conservation area and in two districts of Sorong and Manokwari. Reports on each issue can be seen in Appendix 6D, 6E, 6F.
- Third, to provide adequate information received by communities in villages and cities in Sorong and Manokwari regarding WWF's activities and the ideas of conservation, the project focused on campaign activities published on print and audio-visual media (newspaper, radio and television). Campaign activities on local newspaper and radio were intensively done prior to the arrival of Jakarta verification team on February 26, to conduct public consultation (please refer to Appendix 3 for documents of campaign on local newspaper). WWF-NRM also published bilingual posters and brochures (Bahasa Indonesia and Karon language) to reach wider audience in Jamursba Medi – North Tamrau area.

In August-September 2002, in collaboration with a national private TV station (SCTV), WWF-NRM has made documentary movies about leatherback conservation and the integration of conservation and development in Jamursba Medi – North Tamrau. The movies were aired twice in August and September nationally. This program was appreciated by local stakeholders and has enhanced WWF's campaign on conservation activities in the area and increased the level of support especially from decision makers at the national, provincial and district levels.

- Finally, the project's activities focused in improving stakeholders' capacity in natural resource management and biodiversity conservation. This was done through facilitating district government officials in training on landscape planning in Jayapura. The project also facilitated the increase in the level of knowledge of district government officials, academics from UNIPA, and members of communities in participatory planning and GIS mapping. Some members of local NGOs and communities were involved directly in WWF-NRM's activities as interns for leatherback conservation, natural resource management and other activities.

In terms of the management of local economic development, WWF-NRM continued organizing trainings on kiosk/cooperative management and sustainable agriculture in Saubeba and Warmandi villages. This activity was positively supported by district government and local communities.

## C. Program Achievement

Having carried out activities during the implementation of WWF-NRM Program, a lot of experience and substantial results have been achieved (please refer to **Appendix 1** for the matrix of achievements against objectives for three years period of WWF-NRM). WWF-NRM has achieved 75-80% of its objectives for three years period of the project in Papua based on an independent external evaluation conducted in October 2002. These achievements compared to the realization of the Project's objectives during the period of November 1999 and October 2002 are analyzed below:

### **C.1. Objective 1: identify high priority biodiversity resources, describe how specific human activities adversely affect these resources, identify lower impact alternatives, and increase the area of protected resources where best practices are being implemented**

WWF-NRM program has succeeded in developing a comprehensive tabular and spatial database systems (biophysical, socioeconomic and culture) of the Bird Head area covering Sorong and Manokwari districts. These cover:

- Complete GIS of Papua province that was used as the basis for the completion of spatial analysis of sub-bioregion Bird Head. In many occasions, this was utilized to assist the Sorong and Manokwari district governments in planning & carrying their development programs. In addition, a GIS network with provincial and district governments in Papua has been established to share common understanding on the use of GIS in natural resource management.
- Biodiversity database that were compiled from several workshops, surveys and studies such as RBA conducted in the eastern part of North Tamrau and in Jamursba Medi and Biodiversity workshop that was conducted to develop a

comprehensive understanding about priority areas. Data collecting and updating are still being carried out particularly for turtle database through continuous conservation monitoring in collaboration with BKSDA (Balai Konservasi Sumberdaya Alam – Natural Resource Conservation Office) and Yayasan Alam Lestari.

- A socioeconomic profile of Sorong and Manokwari districts completed from socioeconomic studies including macroeconomic review of Sorong district, socioeconomic survey of Amberbaken and Kebar in Manokwari and Sorong's part of North Tamrau areas and eco-tourism studies. The profile has improved understanding of the current resource use practices of the local communities and potential threats to biodiversity arising therefrom.
- A cultural and traditional profile of Karon/Abun coastal and mountain communities compiled from tenurial rights survey in Jamursba Medi and North Tamrau areas. This has assisted the project in understanding local people's custom especially in natural resource use.

These complete sets of database were useful in determining priority areas of NRM Project in Papua, which was in Jamursba Medi-North Tamrau. The data have enriched the level of knowledge and understanding about the selected landscape particularly in the development of Jamursba Medi – North Tamrau as a protected area, advocating the incorporation of the proposed protected area in the draft of district spatial plan and the completion of threat analysis categorizing types of threats, actual and potential threats and level of severity for the selected landscape. In general, WWF-NRM believes that 85% of the outputs of the objective 1 has been produced according to the workplans.

**C.2. Objective 2: establish biodiversity conservation as an important planning and decision-making criteria, recommending changes to the institutional and legal framework and educating government officials and private sectors**

Some significant outcomes towards the establishment of Jamursba Medi – North Tamrau as conservation area have been achieved by WWF-NRM program, such as:

- The acceptance of the proposed conservation areas by district and provincial governments through the issuance of several provincial and district government decrees (e.g. recommendation letters No. 503/546 May 2000 from Bupati and no. 522.5/1676/SET June 2000 from the Governor). Strong political endorsement from district and provincial governments regarding the establishment of Jamursba Medi – North Tamrau as a conservation area has been obtained. Please refer to **Appendix 4** for the documentation of these letters. To keep this level of support, WWF-NRM has been maintaining close collaboration with district government offices and has been keeping up-to-date with the developments and changes that have occurred as a result of decentralization and Special Autonomy status for Papua.

- Obtaining support from decision makers at the national level such as the Ministry of Forestry and members of the National Parliament (*Dewan Perwakilan Rakyat Republik Indonesia* – DPR-RI). They verbally supported the option for the establishment of community based conservation area. However, obtaining a legal status for this option is still in process.
- The incorporation of the proposed protected area of Jamursba Medi – North Tamrau in the Sorong district spatial plan drafted by the consultant. Although the corridor areas between North Tamrau nature reserve and the recommended Jamursba Medi beach were still put as production forest, the draft has endorsed for the delineation of Jamursba Medi beach as a protected area. Please see *Map 3* for the draft of Sorong district spatial plan.

It is clear that the process for obtaining a legal status for the proposed protected area shall continue. WWF Indonesia also needs to further promote the importance of biodiversity conservation in a format which is both understandable to government (both legislative and executive) and which clearly incorporates local economic development and cultural values. Without this it is relatively difficult to establish biodiversity as a key planning and decision-making criteria. However in conclusion, WWF-NRM considers that 75% of the outputs of the objective 2 has been achieved according to the workplans.

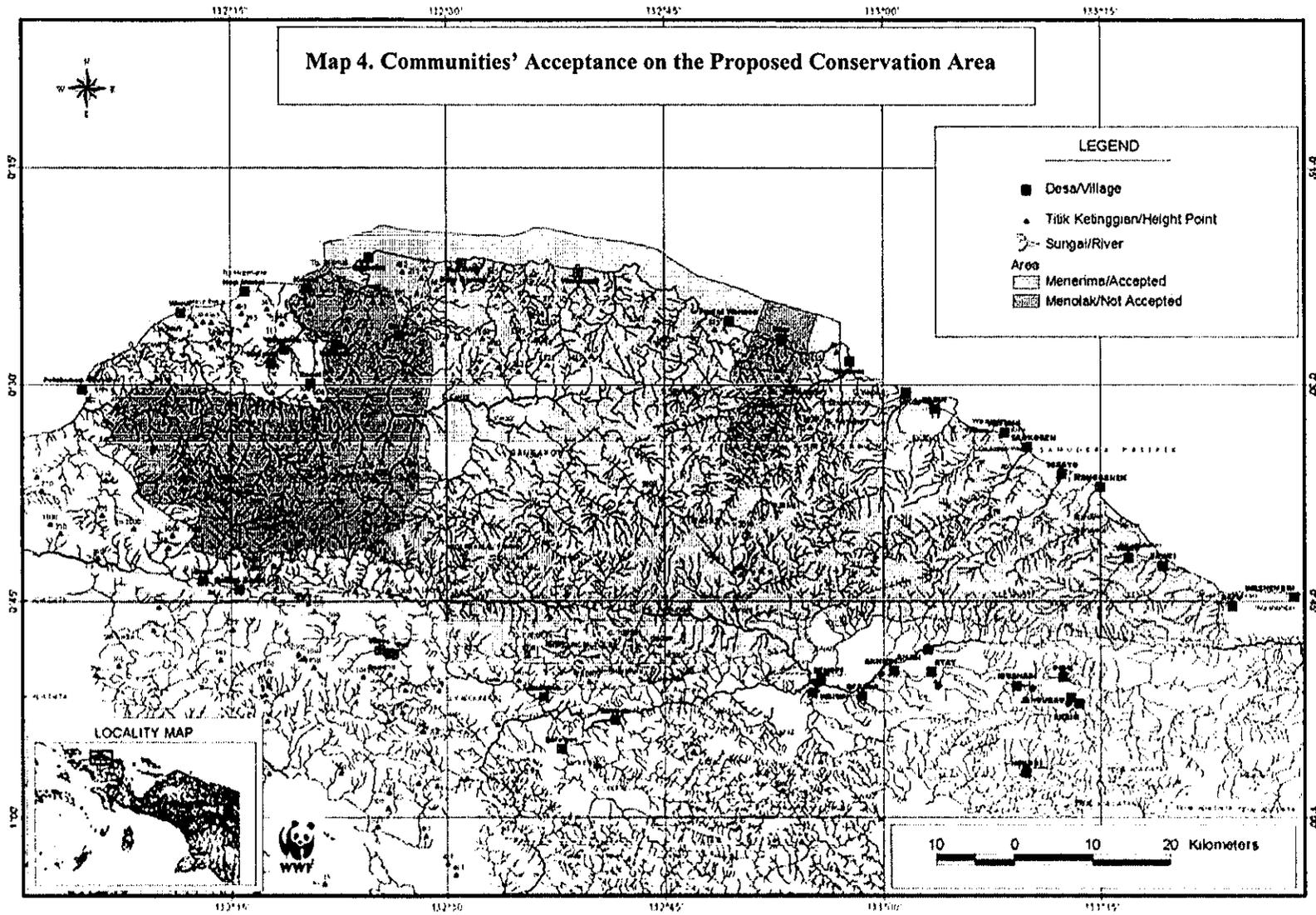
**C.3. Objective 3: strengthen protected area management through participatory planning and facilitation of stakeholders' agreements and test innovative institutional and funding arrangement for protected area management**

Since the first year of the project WWF-NRM has carried out networking, collaboration with and socialization to stakeholders at district level. This has produced positive outcomes in forms of:

- The majority of communities' members have accepted the proposed conservation area as a result of public participation (please see *Map 4* of Communities' Acceptance on the Proposed Conservation Area). WWF-NRM has succeeded in influencing some members of the communities who previously rejected the idea of conservation to later on support WWF's activities in JMNT.

The comparison of people that rejected the idea of conservation with the ones that accepted could be seen before and after the implementation of public participation in February 2002. In May 2001 when WWF, BKSDA and the Head of Sorong District held a meeting with communities, for instance, all members of communities agreed to reject the proposal of JMNT as national park. However in February 2002, when WWF, Jakarta team (members of





WWF Indonesia, the Ministry of Forestry, the National Parliament and USAID) and local government held another public consultation meeting with Karon communities from Sausapor, Kebar and Amberbaken, the majority of members of communities accepted the idea of conservation

Communities also rejected the existence of a logging concession company (PT Multi Wahana Wijaya). Furthermore, communities opted for an alternative model for the protected area which is *Kawasan Pelestarian Alam Masyarakat Adat Karon* (Karon Indigenous Communities Natural Conservation Area).

- The broad support from both governments and communities led to commitments from other organizations in conservation and development initiatives. For example, Southwest Fisheries Science Center – NOAA, National Marine Fisheries Services, supports the leatherback turtle conservation program in 2002-2003; DFID and WWF are currently developing a proposal on community development and local capacity building in the proposed protected area.
- At provincial level, WWF has helped establish the Biodiversity Trust Fund for Papua, an innovative conservation funding mechanism. This scheme is still being developed to sustainably fund conservation activities throughout Papua. At district level, after having continuous meetings and discussions with district government, the district parliament urged the government to prioritize the development in remote Jamursba Medi and North Tamrau. As a result, economic incentives schemes were provided to local communities<sup>9</sup>. In addition BKSDA have agreed to prioritize the available conservation budget for Jamursba Medi – North Tamrau, in particular for the corridor areas in Kwoor watersheds.
- In terms of institutional building for natural resource management, WWF-NRM contributed to the establishment of *Dewan Adat Sorong* (Sorong Traditional Council), in August 2002. The new council aims at preserving Sorong indigenous culture and conserving its nature. The new council hopefully can act as formal representation of Sorong indigenous tribes and culture throughout the district. Recently, the new council has stated their support and collaboration with WWF Indonesia to have a joint socialization program on development and conservation in the Bird Head areas.

Apparently, the success of protected area management lies on a clear status of the proposed protected area. WWF Indonesia hence is putting its efforts in searching for an appropriate model for managing the area that incorporates local communities' aspiration and the needs for economic development. Although challenges remain significant in the future, WWF-NRM regards 75% of the outcomes of the objective 3 as been obtained according to the workplans.

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<sup>9</sup> BAPPEDA to seek funding for introduction of shipping transport and DPRD have agreed to allocate funds to subsidise the cost of airplane tickets to the inland area in order to help improve accessibility of communities' produce to markets.

**C.4. Objective 4: develop the capacity of stakeholders in protected area management and bioregional planning through training, workshops and cross-visits**

Increase in the level of stakeholders' capacity in natural resource management and biodiversity conservation is important for sustaining the integration of conservation and development works. For about three years, WWF-NRM has been able to improve the level of stakeholders' capacity, which was carried out through:

- Training in participatory mapping/PRA has been provided to researchers, NGOs and local government staff who have then been directly involved in such activities in villages in the proposed protected area.
- GIS and landscape planning training for relevant local government offices has been carried out at provincial and district levels in Manokwari. In Sorong, BAPPEDA has expressed a willingness to fund training in GIS should this become feasible and representatives from Sorong district government have attended the provincial level training.
- For the development of capacity in carrying out economic activities, training on kiosk management and various food and non-timber forest product-processing methods has been facilitated by WWF-NRM.
- Several awareness raising activities and socialization of sustainable natural resource management concepts, vision and mission of WWF and the meaning of protected area status to villages have been carried out. These were conducted through cross-visit to Kakadu National Park in Australia, the airing of a documentary movie on leatherback turtle conservation on SCTV, and direct socialization to local communities at villages level throughout Jamursba Medi – North Tamrau.
- As previously mentioned, WWF-NRM has also been involved in discussions with local NGOs and LMAs (Lembaga Masyarakat Adat – Indigenous/Customary Community Organizations) on the establishment of *Dewan Adat* as provided for in Special Autonomy Law No. 21/2001 as an opportunity to develop a new management model that involves and respects the traditional resource use rights and culture of local communities.

WWF-NRM realizes that capacity building for local stakeholders shall not be come to an end, especially under the new era of decentralization and special autonomy. The increase in the level of conservation awareness would ease the introduction and implementation of sustainable development activities in general and WWF Indonesia's programs. For the most part, WWF-NRM believes that 75% of the outcomes of the objective 4 has been achieved according to the workplans.

## **D. Summary of Lessons-learned**

Three years of the project implementation have brought about experience and lessons that need to be learned to enrich the knowledge in the implementation of conservation activities in the targeted areas. By sharing these lessons-learned, WWF-NRM believes that this will strengthen WWF Indonesia's capability in this area of expertise and will benefit other development and conservation actors throughout Indonesia. Some lessons-learned that need to be highlighted here are:

### **D.1. Sustainable conservation of leatherback turtles**

Conserving leatherback turtles requires more than a protection of the beach from direct exploitation. Although impacts of other threats (e.g. feral predation, tidal inundation, beach abrasion, fisheries by catch that disturb the sustainability of the population, sedimentation and flooding from upper stream flow) are difficult to quantify, incorporating and understanding them is as much important as direct protection of the beach. In this case, the question on a management unit/scale becomes crucial and needs to be resolved through further in-depth studies and research that lead to the formulation of science based management options for the conservation activities.

In the field, measuring the performance or status of the nesting population required a long term population monitoring data, including nest counts and tag-recapture data due to the fact that the same population may not breed every year. Long term monitoring works (involving intensive tagging activities) in other part of the world (such as Eastern Australia) concluded that turtles breed every four years but this might be different for different population. Annual fluctuation in numbers of the breeding population which is common for sea turtles creates difficulties in understanding population performance especially after particular management intervention took place.

Controversy over tagging application in monitoring activities due to cultural perception has made the tagging program could not be carried out. This has created insufficient information and subsequently resulted in difficulties in assessing the population status of nesting leatherback turtles in Jamursba Medi. Nevertheless, frequent data (including monthly nesting trend and numbers of clutches laid by a nesting female) collected during WWF's previous surveys (in 1984/1985) has enabled a rough estimation of the number of nesting females to be made during WWF-NRM project's period (Nov 1999 - Oct 2002, as described in **Table 4**). This shows that the nesting population of leatherback turtles in Jamursba Medi beach is relatively stable in the last ten years after community-based turtles monitoring took place.

**Table 4. Leatherback turtle monitoring over time**

Periods of WWF's survey	Number of nests recorded	Adjusted numbers of nests (based on 1984/85 yearly data)	Estimated numbers of nesting females (adapted from 1984/85 data)
April – October 1984	13,360	13,360	2,303 - 3,036
April – October 1985	3,000	3,000	658 - 731
June- Sept 1993	3,247	4,091	705 - 930
June – Sept 1994	3,298	4,155	716 - 944
June- Sept 1995	3,382	4,228	729 - 961
June - Sept 1996	5,058	6,373	1,099 - 1,448
May - Aug 1997	4,001	4,481	773 - 1018
May – Sept 1999	2,983	3,251	560 - 739
April – Sept 2001	2,561	2,644	520 - 601
April – Aug 2002	2,929	3,024	521 - 688

Source: WWF Indonesia Sahul Region data

Note: The periods of WWF-NRM Project are written in bold

Protecting nesting habitat is one among several strategies to sustain a viable turtle population. Since sea turtles are a high migratory character and dependent on several different habitats, protection of a wide range of habitats (breeding habitats, migratory corridors, feeding habitats) is important. Direct prevention from human and natural induced disturbances on nesting populations and habitats is the main target of previous and existing monitoring activities in Jamursba Medi. So far, the monitoring activities conducted in close collaboration with communities in Jamursba Medi have been relatively successful in eliminating disturbances such as exploitation of eggs and female turtles (by 100%) and feral predation on eggs (by at least 50%).

Another increasing issue that has to be taken into account in the conservation of leatherback turtles is increasing the roles and participations of local people. An increase in the level of awareness of communities on the importance of turtle conservation can be determined as an important factor contributing to the success of conservation activities. To date, however, direct benefits (incentives) received by local communities (i.e. in terms of allowances) have often been a significant underlying reason behind their support for turtle conservation. This has raised a question about the future situation and the sustainability of turtle conservation if WWF Indonesia phases out from the location.

In the future, creating sustainable economic activities that generate income from the conservation activities should be the norm. A model that integrates conservation and income generating activities like eco-tourism is one among many options used as an effective conservation tool as well as successful community based development model. Creating jobs and new environmentally friendly sources of income fitted to each individual community are realistic ways of promoting the conservation not only of sea turtles, but ecosystem as a whole. A

successful community-based eco-tourism development can be a venture that satisfies both conservation and development objectives, backed with partnerships between local communities, government agencies, NGOs and the private sectors.

Lastly, considering sea turtles as a high migratory species, which are dependent on their habitats mostly located thousands of miles away from one and another, protection of a single nesting beach will not be sufficient to ensure their survival. A cross-regional/trans-boundary conservation management is needed to ensure the survival of sea turtles and their nesting and foraging habitats. Also, the diversity of threats influencing these habitats requires an integrated management strategy, which can coordinate activities of many sectors. Incorporation of biodiversity conservation into development planning process as being done by WWF Indonesia is one step ahead towards successful integration of conservation and development.

## D.2. Bioregional planning approach in conserving the habitat of leatherback turtles

### **Role of private sectors**

Bioregional planning approach includes three important aspects, which are: integration of planning and policy-making; focusing on long-term outcomes; and involving all relevant sectors of the community. Although the approach has been considered successful in advocating the incorporation of both habitat conservation and community development into formal development process, it has yet involved the private sectors in supporting biodiversity conservation objectives. Threats to conservation from large-scale development orchestrated by the private sector's economic activities (e.g. timber concessions, proposed oil palm plantation, proposed mining activities) are still prevalent.

### **Decentralization**

This hence requires an approach that covers more than just completion of spatial analyses based on biophysical and social factors within the protected area and its vicinity. The approach should have sensitivity in terms of changes in institutional and legal frameworks and government's policies such as the introduction of decentralization and special autonomy status for Papua. This should be considered because under the new Law of Special Autonomy for Papua No. 21/2001, environmental aspects are part of the authorities of the provincial government. Experience has shown that these changes have altered previous conservation and development plans and programs prepared for the targeted area. Adjustment to these changes is therefore a must for the approach to be successful.

## **Economic development and customary tenurial rights**

Other important aspects that have to be included in the approach are sustainable economic alternatives, traditional/customary rights and land tenure. It is clear that the provision of direct economic benefits from conservation activities to local stakeholders (both government and communities) is becoming more essential. This will also mitigate threats from other development activities that provide significant economic incentives for local stakeholders. In other words, support will increase if local stakeholders receive direct benefits from a particular conservation program or activity.

In particular for Papua situation, understanding about traditional/indigenous and tenurial rights becomes fundamental in achieving conservation and development objectives. Rejection of the proposed national park model for Jamursba Medi – North Tamrau actually resulted from negative responses from communities concerning the name of ‘national’ for the area. Their understanding was that the terms ‘national’ would mean that they could not claim their traditional rights and ownerships over the area and utilize natural resources in the proposed area. Bioregional approach should therefore incorporate this concern for the future success of conservation and development programs in Papua.

### **D.3. Community based development approach for natural resource management in Jamursba Medi – North Tamrau**

As elaborated in section D.2., issues on traditional/customary, indigenous and tenurial rights have become more significant in the field of development in Papua. Direct approach and socialization to local communities have brought up some factors that need to be considered for particular program to be accepted by communities and to be implemented properly. These include efforts to understand:

- **The structure of communities.**  
Karon/Abun indigenous people in Jamursba Medi have a unique custom. They are egalitarian and therefore, they claim that they can represent themselves. Initial action to approach what-so-called ‘traditional leader’ failed because there was no one that was considered as a ‘true’ representative of the Karon/Abun people. Recent socialization activities that implemented direct consultation at villages level appear to reveal an appropriate way to conduct community-based development approach in Jamursba Medi. This means that any program trying to incorporate local people should conduct direct socialization and consultation in targeted villages. Failure to do so may result in rejection of a proposed activity or program.
- **Communities based organizations.**  
Several community-based organizations, locally known as LMA (*Lembaga Masyarakat Adat* or Indigenous Community Organization), have been established after the implementation of National Law of Special Autonomy for Papua. However, local people seem not to consider most LMAs as

representatives of people and their *adat*. Cautious steps should therefore be taken in approaching these LMAs. The recent establishment of *Dewan Adat Sorong* hopefully can bridge the gap of local indigenous people to the outside world regarding their customs and traditional rights and can be a 'true' representative of these people.

- The structure of land tenure and ownerships.  
Each clan of Karon/Abun communities in Jamursba Medi – North Tamrau has a complete ownership over their land according to their customary law. This suggests that any proposed development or management over their land should communicate and deal directly with the owners of the land, the clans.

This also means if a particular clan prefers having development activities (logging concessions, etc.) in their land to conservation or sustainable development, delineation of wider conservation area cannot be feasible. Therefore, to have a successful conservation activity in wider Jamursba Medi – North Tamrau, an action should be proceeded to either approach all relevant clans or enclave the land of clans that reject the proposed protected area.

- Government policies' changes (decentralization, special autonomy) that contribute to changes in people's livelihoods.  
Euphoria of democracy, decentralization and wider autonomy has empowered local people to be more critical in any proposed development program. Unlike in the New Order era when every designation of protected areas lied on the hand of the central government, the situation now is totally different. Local people have claimed their rights within the boundary of existing protected areas. Therefore, approach to incorporate local people rights within the new proposed protected area is the best possible way to ensure the sustainability of biodiversity conservation there.
- Economic scale of conservation compared to other types of development activities (versus logging, etc.).  
As stated in the D.2. and D.3. sections, showing economic aspects derived from conservation activities to local stakeholders now becomes a priority. If a particular conservation program cannot offer direct economic benefits, other types of development such as logging or mining will be preferred by local stakeholders. Action to value ecological services and functions (watersheds functions, non-timber forest products, etc.) will also be necessity to strengthened the argument to favor conservation programs.

# FINAL REPORT -

## MANAGEMENT AND FINANCIAL ASPECTS

NOVEMBER 1999 - OCTOBER 2002

### A. Management Aspect

As stated in the Cooperative Agreement, there are three positions that are considered key to the successful completion of the project. They are project coordinator, project manager (Kalimantan) and project manager (Papua). All personnel for these positions must be approved by the cognizant USAID project officer.

For about two and a half years of the period of the program, changes in these key positions have taken place. These changes can be seen in Table 5.

**Table 5. Changes in Personnel of WWF-NRM Program**

No	Name	Title	Period
1	Paul Kimman	PM Conservation & NRM	1 May 99 – 2 Mar 00
2	Dr. Ir. Jahja Hanafie, MRP	NRM Project Coordinator	7 Feb 00 – 6 Feb 02
3	Dr. Ir. Jahja Hanafie, MRP	Deputy Director NRM / Ecoregional Conservation	7 Feb 02 – 6 Mar 02
4	Zulfira Warta	PM Conservation & NRM (Sahul)	14 Sept 99 - 30 Jun 02
5	Wawan Ridwan	PM NRM (Sundaland)	1 Jun 01 – 31 Dec 02
6	Fitrian Ardiansyah	Project Coordinator NRM	7 Mar 02 – 31 Dec 02
7	Suhandri	PM NRM / USAID Program	1 Feb 02 – 31 Dec 02

Changes in PM (Program Manager) positions both in Kalimantan and Papua have taken place due to the reason that WWF Indonesia required the positions to be based in the field which are in Nunukan for Kalimantan and Sorong for Papua. The presence of PMs in the field has enabled WWF-NRM Program to manage

and deliver its activities, based on actual situation and direct stakeholders' involvement. In accordance with this consideration, changes in PMs from Paul Kimman to Wawan Ridwan in Kalimantan and Zulfira Warta to Suhandri in Papua took place.

These changes have been followed by changes in the description of the management of WWF-NRM Program. Currently, both Project Managers (PMs) NRM in Kalimantan and Papua report directly to and are under direct supervision of the WWF Regional Directors (Kalimantan and Sahul/Papua). Each PM has the responsibility of WWF-NRM activities that are conducted in each location.

Project Coordinator (PC) NRM in Jakarta, in this case, played a supervision role in terms of overseeing the operational implementation of WWF-NRM Program in both locations; providing technical and managerial input to the Regional Directors for the region's NRM development plans; being responsible for all financial and technical periodical reports of the NRM Program; and liaising with USAID on WWF-NRM Program progresses and issues. Due to these reasons change in PC from Jahja Hanafie to Fitriani Ardiansyah in Jakarta took place.

## **B. Financial Status**

Based on Cooperative Agreement, US Agency for International Development (USAID) awards to Yayasan WWF Indonesia the sum of Indonesian Rupiah 14,739,419,062 to provide support for the implementation of the Outer Islands Bioregional Program: Integrated Protected Area Management and Spatial Planning in Kalimantan and Papua.

Up to October 2002, WWF-NRM has received Rp13,832,873,718.30 or 94 per cent of the total budget allocated from USAID. However, WWF-NRM Program has spent Rp13,863,259,967.43 for its expenditure and this has resulted in a net deficit of Rp30,386,249.13. The details of this financial status up to October 2002 can be seen in **Table 6**. The financial aspects of WWF-NRM have been audited by independent auditors twice. In 2001, the first financial audit was conducted by an accounting firm of Johan Malonda and Partners. The second audit, which is still in-process, is conducted by Paul F. Hadiwinata and partners.

Table 6. The details of WWF-NRM financial status up to October 2002

WWF INDONESIA

INCOME & EXPENDITURE REPORT

Project Name: The Outer Islands Bio-regional  
 Project ID#: ID015901  
 Donor: 3024 / USAID - US  
 Period: As of October 02  
 Currency: IDR

	YEAR TO DATE				
	Actual	3 Year Budget Original	(in%)	3 Year Budget Revision (source:Rev Budget 5)	Yearly Budget (in%)
<b>INCOME</b>					
WWF International (includes PO levy)	-	-	0%	-	-
National Organizations (one line per NO)	-	-	0%	-	-
Subtotal: from WWF sources	-	-	0%	-	-
GAA (one line per GAA)	13,832,873,718.30	14,739,416,092.00	94%	14,739,416,092.00	94%
Subtotal: from GAA sources	13,832,873,718.30	14,739,416,092.00	94%	14,739,416,092.00	94%
<b>TOTAL INCOME</b>	<b>13,832,873,718.30</b>	<b>14,739,416,092.00</b>	<b>94%</b>	<b>14,739,416,092.00</b>	<b>94%</b>
<b>EXPENDITURE</b>					
Internal Service	1,773,222,616.00	2,845,920,000	62%	1,888,057,524.43	94%
Salaries	4,573,919,022.00	3,798,225,253	120%	4,231,147,568.91	108%
Fringe Benefits	1,533,417,215.86	474,944,000	323%	1,251,584,577.34	123%
Travel & Local Transportation Costs	1,581,007,822.09	333,324,076	474%	1,636,070,543.10	97%
Communication / Awareness Campaign	497,232,246.00	1,546,773,800	32%	966,068,935.00	51%
Community Workshop	631,366,300.00	720,000,000	88%	862,416,565.00	73%
Furniture, Equipment & Infrastructures	1,022,352,375.58	2,247,040,000	45%	1,170,573,426.15	87%
Vehicles	260,744,000.00	440,820,000	59%	337,774,000.00	77%
Subgrants	66,678,350.00	490,000,000	14%	287,643,250.00	23%
Other Direct Costs	1,569,473,723.90	1,472,768,963	107%	1,564,232,938.12	100%
Evaluation & Audit	353,846,296.00	369,600,000	96%	543,846,763.96	65%
<b>TOTAL EXPENDITURE</b>	<b>13,863,259,967.43</b>	<b>14,739,416,092.00</b>	<b>94%</b>	<b>14,739,416,092.00</b>	<b>94%</b>
<b>NET SURPLUS (DEFICIT)</b>	<b>(30,386,249.13)</b>	<b>-</b>		<b>(0.00)</b>	

# FINAL REPORT -

## THE END OF PROJECT EVALUATION CHAPTER

by Ms. Lia Juliani and Dr. Helen Schneider<sup>1</sup>

NOVEMBER 1999 - OCTOBER 2002

### A. Summary from the End of Project Evaluation Report

Based on the Section 1.7 (c) of the Cooperative Agreement, USAID requested the recipient (WWF Indonesia) to arrange for an independent, external evaluation two months prior to the completion of the program. This is the legal basis for these terms of reference. Therefore, since September 18<sup>th</sup> until October 16<sup>th</sup>, 2002, an independent team consisting of two persons (Ms. Lia Juliani and Dr. Helen Schneider) had conducted evaluation on WWF-NRM Program at the national and local levels (both Nunukan/East Kalimantan and the Bird Head of Papua).

The evaluation aimed to determine the degree to which the program has achieved its objectives in biodiversity conservation, protected area management and capacity building of stakeholders, to analyze enabling and hindering factors, and to provide recommendations on future courses of action.

In general, it is concluded that, on average between the two sites chosen for the program activities, around 80% of the planned outputs have been achieved consistently across the workplans for the three years. Significant progress has been made in terms of identifying high priority biodiversity resources, increasing awareness of some of the key endangered species present, and facilitating the inclusion of the protection of these resources within draft district spatial plans.

Lessons have been learnt as to the effects of decentralization on the process of designating protected areas, and on the need for appropriate and intensive approaches to all stakeholders, including local government and communities. Good relationships have been established with decision-makers at the district level and their capacity in land use planning policy-making has been increased through provision of data, maps and advice, as well as technical training. Appropriate alternative income generation activities, which would relieve pressure on biodiversity resources from local communities, have been identified and preliminary training has taken place.

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<sup>1</sup> *The full report on the End of Project Evaluation is available as a separate document*  
WWF Indonesia-- NRM/USAID Program

However, the ultimate objective of an increase in the area of protected resources and the associated best practices in protected area management, has yet to be fully achieved due to a number of hindering factors, including some which were unforeseeable. The draft spatial plans in both districts have been compiled with input from WWF but neither has yet been presented to the parliament for discussion and ratification due to circumstances beyond the control of the program.

Given the substantial achievements so far, and the unique advantage WWF has in terms of the relationships built with local stakeholders and their image as a credible, useful, neutral agency by both local government and community members, it is recommended that the program be granted a no-cost extension in order to achieve the above outstanding objective. It is also recommended that WWF continue to build on existing achievements and relationships in both of the project sites in the medium term to further facilitate the institutionalization of biodiversity conservation and sustainable development criteria within the spatial planning process, and to support stakeholders in the development of locally appropriate protected area management models.

# FINAL REPORT -

## MAJOR ACHIEVEMENTS AND RECOMMENDATIONS

NOVEMBER 1999 - OCTOBER 2002

### A. Major Achievements

Program activities were carried out continuously with high spirits to reach the goal of promoting natural resource management through participatory spatial planning both inside and outside the proposed Sebuku-Sembakung conservation area. As a conclusion of activities done in three years period and expectation for the future, we can extract some important issues which are listed below.

For over three years, WWF-NRM believes that in general 80% and more of planned activities have been carried out and objectives have been achieved (based on evaluation conducted by an independent team, October 2002) which include:

#### A.1. Achievements under objective 1

- A reliable and comprehensive tabular and spatial database has been developed and completed (e.g. population data, socio-economic data, land suitability, land use, land status, land topography, etc.). This set of data has been socialised and provided to stakeholders in Nunukan and helped the new district government in carrying its development program.
- Developed a comprehensive database to help the Sorong and Manokwari district governments in planning & carrying their development programs. Frequent data (including monthly nesting trend and numbers of clutches laid by a nesting female) collected during WWF's previous surveys (in 1984/1985) has enabled a rough estimation of the number of nesting females to be made during WWF-NRM project's period (Nov 1999 - Oct 2002). The data show that the nesting population of leatherback turtles in Jamursba Medi beach is relatively stable in the last ten years after community-based turtles monitoring took place (approximately of 2,600 to 3,300 per annum).

#### A.2. Achievements under objective 2

- Through the appointment of WWF-NRM by Bupati (the Head of district) as a member of technical team for Nunukan spatial planning, WWF-NRM

Program has succeeded in advocating the incorporation of Sebuku-Sembakung as a conservation area into the Nunukan district spatial plan. This draft only waits to be legalised by the district parliament (DPRD). Securing Sebuku-Sembakung as protected areas will therefore act as an important starting point to promote the integration of conservation and development notions in the decentralization era.

- The acceptance of the proposed conservation areas by district and provincial governments through the issuance of several provincial and district government decrees. Also, the incorporation of parts of the proposed protected area in the draft of Sorong district spatial plan.
- WWF-NRM Program has succeeded in obtaining support from decision makers at the national level such as the Ministry of Forestry and MPs (Dewan Perwakilan Rakyat Republik Indonesia – DPR-RI).

### **A.3. Achievements under objective 3**

- Strong support from local communities in accepting the proposed conservation areas in Sebuku-Sembakung. The support was quoted in local media and in various stakeholder meetings, and this proved to be a key point in increasing local community participation in pushing for the integration of conservation and development. Various surveys on socioeconomic opportunities for local livelihoods and communities' workshops on natural resource management were also carried out to increase the support from community.
- Development of strategic alliances, communication and coordination mechanism with important stakeholders (district government, DPRD, communities, NGOs and mass media).
- The strategic network established by WWF-NRM Program paved the way for CARE International to initiate a community development program in 2002. WWF-NRM Program's contribution on this was directly acknowledged by the district government and CARE. The WWF-NRM Program has also succeeded in establishing collaborative activities on conservation and development programs with other international organizations such as CORI (Community Outreach Initiatives) and GTZ.
- The majority of communities' members have accepted the proposed conservation area as a result of public participation. Communities also rejected the existence of a logging concession company (PT Multi Wahana Wijaya). However, communities opted for alternative model for the protected area which is Kawasan Pelestarian Alam Masyarakat Adat Karon (Karon Indigenous Communities Natural Conservation Area).

- The broad support from both governments and communities led to commitments from other organizations in conservation and development initiatives. For example, Southwest Fisheries Science Center – NOAA, National Marine Fisheries Services, supports the leatherback turtle conservation program in 2002-2003; DFID and WWF are currently developing a proposal on community development and local capacity building in the proposed protected area.

#### A.4. Achievements under objective 4

- WWF-NRM has been able to facilitate the development of stakeholders' capacity in spatial planning and natural resource management through various workshops, trainings and cross-visits such as legal drafting training and journalist workshop. Recent visit to the Philippines in seeing the integration of conservation and spatial planning has made the Head of District Parliament to verbally promise to accelerate the discussion of Nunukan spatial planning and other issues (such as the issuance of district regulation on traditional/customary law with regard to natural resource management).
- Developed Sorong and Manokwari stakeholders' capacity in spatial planning and natural resource management through training workshops and cross-visits

Again, although facing some constraints in conducting activities in the three years-period of Bioregional Planning Project, implementation of WWF-NRM activities was mostly in line with the work plan. Furthermore, the program had achieved significant progress regarding securing support from the majority of local community for conservation activities in Sebuku-Sembakung in Nunukan district.

#### **B. Recommendations for future program**

In line with this situation, it is clear that to achieve such ambitious conservation objectives in both areas requires a longer commitment. Establishment of the proposed protected areas will not be the end product. It is just a beginning for continuing the implementation of conservation activities in both areas. This means that the efforts to integrate conservation and development in Nunukan and the Bird Head need to be continued.

Following this, WWF Indonesia thinks that some existing activities still need to be continued and some new programs need to be carried out which are:

- Ensure a legal status of the proposed protected areas of Sebuku-Sembakung and Jamursba Medi - North Tamrau at district, provincial or national level that

accommodates district aspiration including community concerns such as land tenure and traditional rights.

- Facilitate and promote sustainable local economic development strategies for Nunukan and the Bird Head (especially under the new special autonomy status for Papua) in the protected areas for the district government and sustainable community based development programs (education, health, economic, etc.) for the communities living in and around the proposed protected areas.
- Formulate an appropriate model for the management of the protected area, and develop appropriate management strategies based on the framework of regional sustainable development and the inclusion of communities' land tenure and traditional rights.
- Facilitate natural resource policy reforms in Nunukan and the Bird Head based on local community aspiration, Papua special autonomy and central government policies.