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## **NATURAL RESOURCES MANAGEMENT PROJECT**

BAPPENAS – Ministry of Forestry  
Assisted by  
USAID

## **ENVIRONMENTAL EDUCATION AND AWARENESS STRATEGY FOR BUKIT BAKA – BUKIT RAYA NATIONAL PARK**

Volume 1

Associates in Rural Development  
for  
Office of Agro–Enterprise and Environment  
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**REPORT NO. 17**

## RINGKASAN UMUM

Tujuan utama konsultansi ini adalah untuk mengembangkan strategi untuk meningkatkan kesadaran akan pelestarian alam dan kawasan konservasi berikut strategi pendidikan (kerap dikenal sebagai strategi komunikasi, informasi, dan pendidikan [KIP], atau *communications, information, and education [CIE] strategy*) untuk kawasan Taman Nasional Bukit Baka - Bukit Raya. Termasuk di dalamnya adalah mengembangkan strategi itu sendiri (menganalisa kebutuhan, pemirsa, keadaan, serta sumberdaya, dan kemudian menentukan sasaran, metodologi, dan media yang relevan) dan mengumpulkan bahan-bahan contoh yang dapat langsung dimanfaatkan atau sebagai contoh untuk suatu pelatihan.

Konsultansi diselenggarakan dari tanggal 17 Februari hingga 29 Maret 1993. Penelitian awal mengenai proyek-proyek kawasan konservasi dan kegiatan-kegiatan penyadaran masyarakat, bahan-bahan, dan sumberdaya yang ada dilakukan di Jakarta dan Pontianak. Lembaga-lembaga pemerintah, swadaya masyarakat (LSM), dan donor telah dihubungi, dan contoh bahan-bahan dari mereka telah pula dipelajari. Lembaga-lembaga internasional dan lembaga-lembaga lainnya telah pula dihubungi melalui surat untuk mendapatkan informasi dan contoh bahan-bahan mengenai pembangunan, lingkungan hidup, dan kawasan-kawasan konservasi yang mungkin dapat dimanfaatkan dalam kegiatan-kegiatan proyek NRM. Pelatihan mengenai pengumpulan data dasar pengetahuan tentang kawasan konservasi dan lingkungan hidup, mengenai sikap dan kelakuan, serta mengenai pengembangan strategi KIP untuk 14 LSM telah diselenggarakan di Bukit Baka dari tanggal 8 hingga 15 Maret. Tujuannya adalah mengumpulkan data untuk strategi, selain untuk memperkenalkan Bukit Baka dan proyek ini kepada LSM, guna mengantisipasi kelanjutan dari peran serta mereka.

Volume pertama laporan ini berfokus pada usulan strategi penyadaran pelestarian Taman Nasional Bukit Baka - Bukit Raya; Volume kedua melingkupi kegiatan pelatihan lembaga swadaya masyarakat dan hasil-hasilnya secara khusus. Informasi tambahan mengenai konsultansi, acuan, bahan-bahan pendukung dari pelatihan lapangan lembaga swadaya masyarakat, foto dan dokumentasi lain dari kerja lapangan lembaga swadaya masyarakat, serta daftar pustaka dari bahan-bahan KIP yang dikumpulkan selama konsultasi dan yang terdapat di perpustakaan NRMP dapat dilihat pada appendix.

### Strategi

Strategi dikembangkan berdasarkan pengamatan konsultan dan LSM pada tiga dusun dalam wilayah fokus NRMP di Bukit Baka. Informasi mengenai: ekonomi, sosial, budaya, dan situasi politik; keadaan kesehatan, pertanian, dan pendidikan; persepsi masyarakat mengenai kawasan konservasi tersebut serta perkiraan hubungan jangka panjang di antara keduanya telah dianalisa sesuai dengan tujuan, kegiatan, dan sumberdaya proyek ini, selain sesuai pula dengan kemampuan dan kepentingan pemerintah daerah dan LSM. Tiga masalah pokok yang

berhasil diidentifikasi untuk wilayah ini : Pelestarian sumberdaya alam, pembangunan jatidiri taman nasional tersebut, serta peningkatan pembangunan masyarakat lokal.

Strategi dibagi menjadi tiga tahap atau sasaran:

- Mengembangkan pengertian dasar mengenai kawasan konservasi ini, program-programnya, keuntungan-keuntungannya, dan fungsi-fungsi konservasinya untuk mendorong pengertian, penerimaan, serta dukungan dari kelompok-kelompok sasaran, khususnya masyarakat setempat, yang secara langsung mempengaruhi dan dipengaruhi oleh kawasan konservasi ini.
- Menekankan kembali arti penting kawasan konservasi ini dan hubungannya dengan hutan dan pelestarian dengan mengintegrasikannya ke dalam kegiatan-kegiatan kawasan konservasi yang relevan dengan kepentingan dan kebutuhan kelompok-kelompok sasaran.
- Menginformasikan kepada pihak luar mengenai kawasan konservasi ini, program-programnya, keuntungan-keuntungannya, serta arti penting pelestarian untuk mendorong terbentuknya dukungan untuk kawasan pelestarian ini, upaya-upaya pelestarian, dan dimilikinya perilaku yang "bersahabat dengan pelestarian."

Termasuk dalam strategi ini adalah usulan untuk mencapai tahapan-tahapan tujuan sebagaimana tersebut di atas melalui pemirsa, kegiatan, dan media pendukung tertentu. Berdasarkan arti penting yang relatif untuk mengatasi kebutuhan-kebutuhan prioritas setempat di atas atau berdasarkan pada urutan sasaran KIP, maka kelompok-kelompok yang akan dicapai dengan strategi ini dibagi menjadi kelompok-kelompok sasaran primer, sekunder, dan tertier.

Pendekatan pada tahap pertama dari program KIP ini adalah dengan menggunakan media massa untuk menyampaikan informasi dan untuk menekankan kembali masalah ini bersama perorangan atau kelompok diskusi yang lebih kecil dengan media yang menarik. Anak-anak merupakan saluran yang sangat berperan dalam menyampaikan informasi di desa-desa, oleh sebab itu mereka adalah kelompok sasaran yang penting. Guna membangun pengakuan masyarakat pada kawasan konservasi sebagai landasan bagi peran serta masyarakat yang murni, kegiatan-kegiatan dilakukan secara partisipatif dan dirancang untuk membangun kepercayaan masyarakat setempat, bahwa peran serta mereka pada program-program kawasan konservasi ini sangat berarti. Dengan melihat sumberdaya proyek yang ada dan kebutuhan yang mendesak untuk menjelaskan kawasan konservasi ini, pendekatan media massa adalah yang paling layak. Bila pekerja lapangan purna-waktu telah tersedia, metoda-metoda yang lebih berfokus pada perorangan dan kelompok yang lebih kecil dapat dimanfaatkan.

Strategi sangat bergantung pada bahan-bahan visual, karena lebih komunikatif, dapat menyediakan contoh-contoh konkret, dan juga dapat menjembatani kesenjangan bahasa dan aksara pada bermacam-macam kelompok etnis di wilayah proyek. Pada beberapa kasus, untuk

kelompok pemirsa ataupun penyampaian pesan yang berbeda-beda digunakan media yang sama, misalnya seperti lambang kawasan pelestarian atau maskot kartun, guna menjaga konsistensi, menegaskan pesan-pesannya, serta menghubungkan tema-temanya.

#### **Tindak Lanjut yang Diusulkan**

1. Memastikan informasi mengenai pengetahuan, sikap, serta perilaku kelompok-kelompok sasaran mengenai dan terhadap kawasan konservasi ini, pelestarian, serta lingkungan hidup.
2. Mengkaji kembali tujuan, kelompok pemirsa, kegiatan, dan media di dalam strategi, untuk memastikan bahwa informasi dapat disampaikan dengan tepat dan efektif.
3. Membuat, menguji, memperbaiki, serta menggandakan media komunikasi di dalam strategi, khususnya logo kawasan konservasi.
4. Melaksanakan strategi, diawali oleh penasehat-penasehat NRMP dan pada akhirnya oleh pekerja lapangan setempat.
5. Memilih dan menyebarkan bahan-bahan yang terkumpul untuk pendidikan mengenai kawasan konservasi, pelestarian, dan pengembangan masyarakat, dan menyediakan perlengkapan tambahan untuk memfasilitasi pengembangan media dan pelaksanaan strategi.
6. Menyelidiki lebih jauh hubungan kerja dan kerjasama dalam KIP yang mungkin dengan organisasi lain dan lembaga-lembaga pemerintah.

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## PREFACE

This report is one of a number of reports produced under the Government of Indonesia's Natural Resources Management Project (NRM) that is assisted by the United States Agency for International Development (USAID).

The NRM Project, working with the Indonesian National Planning Board (Bappenas) and the Department of Forestry (Departemen Kehutanan), provides through a specially established project Policy Secretariat advice to Bappenas on natural resource issues relating to long term and short-term national planning. In addition, working with the Department of Forestry the NRM project carries out field activities in two pilot project areas one in West/Central Kalimantan and one in North Sulawesi including the preparation of management plans for the Bukit Baka - Bukit Raya National Park in Kalimantan and the Bunaken National Park in North Sulawesi. Each report addresses an aspect of the planned NRM project activities that are agreed on and laid out in an annual NRM Implementation Plan and each report aims at providing specific recommendations for future work in the area addressed.

This report proposes a strategy for developing an environmental awareness and education campaign in the Bukit Baka - Bukit Raya National Park area working particularly with the local people living in the areas surrounding the park. It also looks at the proposed strategy involving GOI counterparts and NGOs.

## ACKNOWLEDGEMENTS

I wish to acknowledge the facilities and other support provided by the NRMP staff in Jakarta, without whom this report could not have been completed. I thank project colleagues at USAID, ITTO, and Departemen Kehutanan as well for their feedback on this report.

I wish to express my appreciation to the officials of Kantor Sumber Daya Alam, Kanwil Penerangan, Kanwil Pariwisata, Kanwil Pendidikan Masyarakat, and Kanwil Pembangunan Desa in Pontianak for the information and other assistance they provided. Similarly, I appreciate the time which individuals of the Ford Foundation, CARE, the Nature Conservancy, WALHI, GTZ, the Worldwide Fund for Nature, Bina Swadaya, UNICEF, EMDI, World Education, and MAF gave to me. Other organizations too numerous to mention have also made valuable contributions of conservation education materials.

I extend thanks as well to the NGO activists of Yayasan Darjuanti, the Institute for Dayakology Research and Development, Yayasan Agromitra, and Yayasan Madu Hutan for their participation and feedback. I wish in particular to express my gratitude to the people of Nanga Juwai, Belaban Ella, and Sungkup for their participation in the field survey, particularly their gracious hosting of the NGO participants.



## EXECUTIVE SUMMARY

The primary purpose of this consultancy was to develop a park and environmental / conservation awareness and education strategy (also known as a communications, information and education [CIE] strategy) for the Bukit Baka Bukit Raya National Park. This included both developing the strategy (analyzing needs, audiences, conditions and resources, and then determining relevant targets, methodology and media) and gathering sample materials which could be used directly or as examples for training.

The consultancy took place from February 17 to March 29th, 1993. Preliminary research about existing park and awareness projects, materials and other resources was done in Jakarta and Pontianak. Governmental, non-governmental and donor organizations were contacted and examples of their materials (print, photographic, video, etc.) and information about their experiences collected. Natural resources Management (NRMP) reports and documents were also reviewed. International and other organizations were contacted by mail for information and samples of their materials on development, environment and parks which might be applicable to NRMP activities.

A training for 14 participants from Pontianak non-governmental organizations (NGOs) about gathering baseline data concerning local park and environmental knowledge, attitudes and practices and developing strategies was conducted at Bukit Baka from March 8 through 15th. The purpose was to gather data for the strategy, as well as to orient NGOs to the project and Bukit Baka in anticipation of their continued involvement.

The first volume of this report focuses on the recommended conservation awareness strategy for Bukit Baka - Bukit Raya National Park; The second covers the NGO training activities and results specifically. Supplementary information about the consultancy, reference and support materials for the NGO field training, documentation of the NGO field work, and a bibliography of CIE materials gathered during the consultancy and available in the NRMP library are found in the two volumes' appendices.

### The Strategy

The strategy was developed based upon the consultant's and NGOs' observations in three hamlets in NRMP's focus area in Bukit Baka. Information about the economic, social, cultural and political situation; health, agricultural, educational conditions; and people's perceptions of the park and projected long-term relationship with it were then analyzed in light of project goals, activities and resources, as well as the capabilities and interests of local government institutions and NGOs. Three priority issues

for the area were thus identified: conserving natural resources, establishing the park's identity, and promoting local community development.

The strategy is divided into three phases or aims:

- Developing a basic understanding about the park, its programs, benefits and its conservation function to encourage understanding, acceptance and support by target groups immediately affecting and affected by the Park, particularly local communities.
- Reinforcing the importance of the park and its link to the forests and conservation by integrating into park activities messages relevant to target groups' interests and needs.
- Informing outsiders about the park, its programs, benefits, and conservation importance to encourage support for the Park, conservation measures and adopting "conservation friendly" practices.

The strategy includes suggestions for meeting the above sequences of goals through specific target audiences, activities, and supporting media. Based upon their relative importance to address the local priority needs above as well as upon the above sequence of CIE aims, the various groups whom the strategy seeks to reach are divided into primary, secondary, and tertiary target audiences.

The approach for the first phase of the CIE program is to use mass media to deliver information and reinforce this with smaller group or individual discussions with reinforcing media. Children are important channels for reinforcing messages in the village, and thus they are an important target audience. To build the communities' self-esteem as a foundation for their genuine participation in the park, activities are participative and designed to build local people's confidence that their participation in the park's program and management is meaningful. Given the current project resources and urgent need to clarify the park, a mass media approach is the most feasible. When fulltime field workers become available, more focused individual or small group methods could be used.

The strategy relies heavily on visual materials because they are communicative, provide concrete examples, and bridge literacy and language gaps among the variety of ethnic groups in the project area. In many cases the same media, such as the park logo or a cartoon mascot, are used for different target audiences and to deliver different messages as a means of maintaining consistency, reinforcing messages, and linking themes.

## Recommended Follow-up

1. Confirm available information on target group's knowledge, attitudes and practices about the Park, conservation, and the environment.
2. Review the strategy's aims, target audiences, activities, and media to ensure that information is communicated appropriately and effectively.
3. Produce, test, revise, and replicate the strategy communication media, particularly the park logo.
4. Implement the strategy, initially through NRMP advisors and ultimately through local field workers.
5. Sort and distribute to the field the collected materials for park, conservation, and community development education, and procure supplemental equipment to facilitate developing media and implementing the strategy.
6. further investigate possible working relationships and joint CIE efforts with other organizations and government offices.

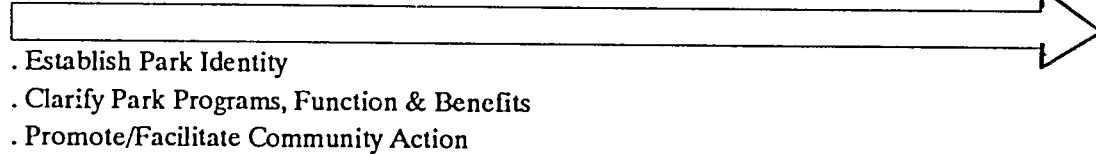
## CONSERVATION AWARENESS STRATEGY

TARGET AUDIENCES	RATIONALE	AIMS
<p><b>IMMEDIATE</b>            General village audience (in project focus area)            School children (grades 4,5,6, in focus area)            Logging concession staff            National Park advisory team            Bina Desa staff            SBKSDA (Pontianak)</p>	<ul style="list-style-type: none"> <li>• Most affected by the park</li> <li>• Participation and support essential</li> <li>• Unaware of how to participate</li> <li>• Unaware of their own impact on the Park's environment /conservation</li> <li>• Knowledge about parks and their purpose limited</li> <li>• Confused about park and project</li> </ul>	<p>To develop a basic understanding about what a park is and its conservation function</p>
<p><b>SECONDARY</b>            General village audience (in focus area)            School children (in focus area)            Women home gardeners            Farmers            Logging concession staff</p>	<ul style="list-style-type: none"> <li>• Agriculture and logging practices directly impact habitats/ecology /conservation</li> <li>• Other actions / behavior impact on habitats</li> <li>• Not always aware of impact of their behavior / practice</li> </ul>	<p>To reinforce the importance of the park by linking it to the forest's ecological/conservation function</p>
<p><b>TERTIARY</b>            Pontianak general public            Park visitors</p>	<ul style="list-style-type: none"> <li>• Potential direct impact on Park/environment /conservation</li> <li>• Influence on provincial policy and legislation</li> </ul>	<p>To inform other groups about the park and its conservation importance</p>

# CONSERVATION AWARENESS STRATEGY

- TARGET GROUPS**  
**IMMEDIATE TARGETS**
- . Local Communities
  - . Park Agencies
  - . Concession Staff

**PROCESS**

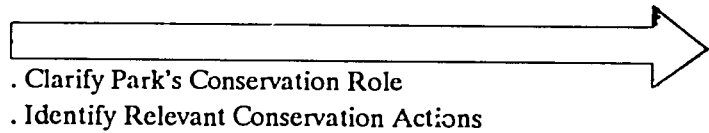


- . Establish Park Identity
- . Clarify Park Programs, Function & Benefits
- . Promote/Facilitate Community Action

**AIMS/OUTCOME**

- Develop basic understanding about Park and its conservation function
- . Acceptance of Park
- . Support of Park's function and programs

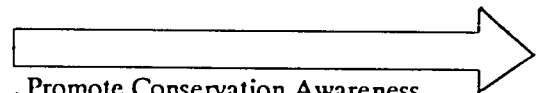
- SECONDARY TARGETS**
- . Local Communities/Special Groups
  - . Adjacent Communities
  - . Concession Staff



- . Clarify Park's Conservation Role
- . Identify Relevant Conservation Actions

- Reinforce importance of Parks and link to forests and conservation
- . Initiation of conservation friendly practices
- . Development of conservation friendly attitudes

- TERTIARY TARGETS**
- . Park Visitors
  - . General Public



- . Promote Conservation Awareness
- . Promote Park Awareness
- . Promote Park Etiquette

- Inform other groups about Park and its conservation importance
- . Support for conservation measures
- . Support for Park
- . Establishment of conservation friendly practices

CIE STRATEGY BUKIT BAKA – BUKIT RAYA NATIONAL PARK

		WEEKS																													
COMPONENT MATERIALS	TARGET AUDIENCE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1.1.1.	Slide Program to introduce basic information about the park, its function and programs																														
1.1.2.	Video/film/slides about other parks and their aims																														
1.1.3.	Photo album/flip book of other parks for small group/individual discussions																														
1.1.4.	Photographic display of park/project activities for offices in Bukit Baka and Pontianak																														
1.1.5.	Pictorial display of park management plan and programs																														
1.2.1.	Slide program with photos of actual programs or examples of possible programs																														
1.2.2.	Large poster illustrating the park programs for discussions																														
1.2.3.	Launch park logo by placing signs at park program sites																														
1.2.4.	Work hats with park logo for program participants																														
1.2.5.	Calendar with pictures of park areas and environmental messages for program participants or general audience																														
1.3.1.	Flip book/album for small group discussion about ways to participate/ programs																														
1.3.2.	Park bulletin board for each settlement to display information about park programs, messages, etc.																														
1.4.1.	Pictorial display at office or poster illustrating the zones and their uses																														
1.4.2.	Flipbook (based on 1.4.1.) for use in small group discussion																														
1.4.3.	Poster kit for demonstrating the use / function of different zones (possible use in village mapping) includes map and illustrations of animals, plants and/or activities																														
1.5.1.	Pictorial time line to monitor development of the park management displayed on the park bulletin boards																														
1.5.2.	Video showings of park advisory meetings in Pontianak and results																														
2.1.1.	Slide program (adapted from 1.1.1.)																														
2.1.2.	Posters to be colored by students which they must then explain how it relates to the park's function and importance																														

COMPONENT MATERIALS	TARGET AUDIENCE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
2.1.3. Asyik issues on forests																																	
2.1.4. Photo album/display on zoning (1.1.3. / 1.1.4.)																																	
2.2.1. Game about importance of each habitat																																	
2.2.2. Cartoon to color about function of each habitat																																	
2.2.3. Slide program on disturbances to habitats possibly developed by students																																	
2.2.4. Cartoon story about disturbances to the habitats																																	
2.2.5. Habitats and endangered species card game																																	
2.3.1. Poster kits for zoning (1.4.3.) to create a park																																	
2.3.2. Question guide for students to discuss activities allowed in the different zones																																	
2.4.1. Story about a group of children who live near a park and what they did to help the park for discussion																																	
2.5.1. Cartoon reinforcing messages about conserving the park's resources with section to be completed by the student about what he can do to help the park																																	
3.1.1. Slide program (based on 1.1.1.) about the park, conservation and the role of each person	Concession Staff																																
3.1.2. Videos/films/slides about other parks and their aims																																	
3.1.3. Calendar about park areas and environment (1.2.5.)																																	
3.2.1. Slide program about disturbances to habitats and the problems that result (based on 2.2.3.)																																	
3.2.2. Cartoon story about disturbances to habitats (2.2.4.)																																	
3.3.1. Cartoon posters reinforcing positive behavior based on cartoons used in 3.2.2 / 2.2.4																																	
3.3.2. Decals of cartoons from 3.3.1.																																	
3.4.1. Posters to reinforce messages and illustrating positive behaviors with cartoons from 3.3.1. and 3.3.2.																																	
4.1.1. Slide program (1.1.1.) adapted to emphasize conservation and how management plan can impact on it	National Park Advisory Team																																
4.2.1. Films/videos/slides about other parks (possibly interviews with people about what they've done)																																	
4.2.2. Synopsis of reports/plans from other parks and projects																																	
4.3.1. Slide program																																	
4.3.2. Planning cards with options and pros & cons																																	







## 1. PROJECT BACKGROUND

Begun in 1991 the Natural Resources Management Project (NRMP) has two basic components :

- analysis of policy issues for sustainable economic development of natural resources, and
- the field testing of improved policies and approaches for managing natural production forests and protected areas.

The overall goal is sustainable management of natural resources to ensure their continued viability while meeting Indonesia's development and economic needs.

The NRMP long-term goal in the Bukit Baka - Bukit Raya National Park project area is to improve management of the natural production forests now being logged, and the protected areas within and adjacent to Bukit Baka - Bukit Raya National Park (National Park). The project activities include :

- cooperating with concessionaires to improve production forest management and techniques so they are more economically and ecologically sound and sustainable.
- developing sustainable National Park management based on concepts integrating conservation and community development and multiple use (zoning) of protected areas. This includes :
  - working with local communities and the concessionaires' HPH Bina Desa Hutan Program (Bina Desa) on agroforestry and other relevant activities, and
  - supporting development and implementation of a National Park management plan which fosters community participation to sustain the park and its programs.

### 1.1 Bukit Baka Bukit Raya National Park

The 181,090 ha area of the Bukit Baka - Bukit Raya National Park was designated in 1992. Previously, the area had been gazetted as a nature reserve (1985). Parts of the Kurnia Kapuas Plywood (KKP) concession and remnants of the nature reserve will eventually revert to the National Park. The National Park overlaps West and Central Kalimantan including Mount (Bukit) Baka and Kalimantan's highest peak, Mount (Bukit) Raya and the Melawi and Katingan Rivers' catchment area. This mountainous area contains :

- vast areas of primary forest with relatively undisturbed habitats, rich and endemic biodiversity, and commercially important trees, as well as secondary forest which has been effected by both commercial and local activities,
- rolling hill areas covered with some scrub but dominated by *alang alang* (*imperata cylindrica*) grass, mostly in West Kalimantan, which has become entrenched and expands yearly because of frequent fires,
- concession areas (9 different companies) in production (being surveyed, logged, rehabilitated, etc.), and
- isolated communities still dependent upon shifting / swidden agriculture and secondary forest products for domestic use and sale (in varying degrees and combinations.)

## 1.2 NRMP Interventions and Resources

The NRMP activities focus mostly on the area west and northwest of the National Park which are part of the Sari Bumi Kusuma (SBK) concession and communities adjacent to it ( approximately at Km 28.) The villages (*desa*) / hamlets (*dusun*) include Nanga Siyai, Sungkup, Belaban Ella, Belaban Ella Dalam, Nanga Nuak, Nanga Juwoi, Landang Mumbung and Nanga Apat. This area was chosen because it is in transition, with increasing pressures from the advancing grasslands and concession operations. Both have had a significant impact on the local communities' livelihood strategies by limiting access to or availability of traditional resources and / or degrading their quality. The establishment of the National Park has not yet had any influence but there are potential impacts from regulations which will govern use and access to the park areas / zones and their resources. Another reason for focusing on this area is SBK's excellent reputation as a progressive concessionaire, their active Bina Desa program, and the accessibility provided by their road system.

NRMP has a team of 4 advisors in Kalimantan with 2 field assistants and 3 drivers, and 2 administrative staff providing support in their Pontianak office. The advisors include :

- Research Advisor / Team Coordinator (1992)
- Nature Conservation Advisor (1991)
- Natural Forest Management Advisor (1992)
- Social Forestry Advisor (1991)

They are housed and have an office at SBK's camp km 54. New accommodations and the Research Station are now under construction. When finished they will also include offices, laboratory and training facilities. Equipment which could be used for extension or awareness campaigns includes :

2 small generators	1 photocopier machine
2 386 desktop computers	2 desktop printers
1 super VGA monitor	3 laptop/notebook computers
3 portable printers	1 SLR 35 mm camera & telephoto lense
3 viewfinders 35 mm camera	1 video camera/camcorder
1 slide projector	4 audiocassette recorders

Project activities have included field/extension work with communities, such as :

- establishment of a National Park Advisory Board which convenes regularly to provide input for finalizing the park management plan and is comprised of village leaders, government representatives, non government organizations (NGOs) and others,
- development of a seedling nursery for perennial crops such as rubber,
- farmer training in sloping land agriculture, grassland management, women's home gardening, composting, soil conservation, etc.,
- community awareness fire campaign and groundwork for fire control through the revitalized traditional (adat) council.
- conservation and environmental education for school children,
- preliminary orientation to accelerated natural regeneration, and
- studies including an environmental assessment of the project area, community water systems, cruiser tree identification, local community livelihood strategies, research and research station protocol, selective cutting and replanting systems, and a draft management plan for the National Park.

Planned activities include continuation of the above and :

- development of a potable water system for 5 settlements and relevant health and sanitation extension,

- development of a community-based fire control program,
- mapping of villages and land use to create village and area maps,
- socio economic studies of communities,
- biodiversity survey,
- formal recognition and establishment of traditional forest areas from which villagers extract various forest products,
- development of agricultural and handicraft skills and income-generating activities, such as improved swidden management and enrichment, butterfly or orchid cultivation, grassland rehabilitation and forest regeneration, fallow enrichment, etc.
- cooperation with Sari Bumi Kusuma (SBK) concession's Bina Desa to improve their program implementation,
- revision and finalization of the park management plan,
- demarcation of park boundaries and identification of zones,
- research on effective management of production forests, and
- training of local people as park rangers.

## 2. SITUATION

Conservation awareness strategies, and indeed any communications, education, and information strategy, must be appropriate to its environment in order to be successful. The strategy must therefore be grounded in a comprehensive picture of the local physical, economic, social, and institutional environment, and must be responsive to the knowledge, attitudes, and practices of the people it seeks to reach. The following description of the Bukit Baka - Bukit Raya area is the foundation of this strategy.<sup>1</sup>

As mentioned previously, the current project activities are in a transitional area experiencing great change. Much of this began in 1980 when the SBK logging concession established operations. Previously, local communities were quite isolated and could only travel to other communities or towns by river or foot paths. Travel between villages could take several hours and few outsiders visited the area. Now the concessionaires' roads provide more accessibility and sometimes local people can hitch rides on concession vehicles as there is still no public transport. Siltation due to soil disturbance / erosion from logging, roads, and swidden fields on fragile slopes, and logging waste has affected river levels and made river access more difficult. After rains the rivers often flood and subside only slowly, disturbing water quality for several days. Women then need to travel far to smaller streams for suitable drinking water. The roads have also made nearby villages more susceptible to illness because increased traffic introduces more disease to the area. Villagers report a greater frequency of diarrhea (*muntah-ber*) and livestock disease since 1980.

### 2.1 The Forest and Livelihoods

Traditionally, there was no ownership of the forest, although certain areas were set aside for *adat* and exclusive use by a village / settlement. This area was mainly for harvesting ironwood used for building houses or boats. Others could ask permission to harvest, but fines were levied if wood taken without permission. There were also sacred or taboo areas where accidents or deaths have occurred or where graves are located. The traditional leader (*kepala adat*) also granted permission to open new shifting cultivation sites / swidden (*ladang*) areas. Rice was the main crop, but cassava, vegetables, and fruit trees were also cultivated, again with fines imposed for failing to get permission to harvest. Farmers who in the process of clearing *ladang* by fire allowed the fire to damage other people's *ladangs*, homes, or orchards were also fined.

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<sup>1</sup> Please see Appendix 4 for further detail.

Clearing *ladang* gave ownership rights. Planting perennial crops (rattan, palm, oil palm, illipe nuts, coffee, cocoa, etc.) in swidden or in fallow swidden also indicated ownership of an area, but good sites were left open for repeat cropping after an appropriate fallow period. In general, swidden was farmed for 1-3 years and then left fallow for 7-10 years. Sites near rivers or other water sources were preferred. Most people preferred flatter swidden sites, but a few seem to believe that sloping land was more fertile. Many of the traditional guidelines / practices are no longer applied. Land pressures, such as the closing of access to areas being logged, disappearing suitable secondary forest for swidden, encroaching grasslands and expanding land degradation due to wildfires, and increasing population are affecting agricultural practices. Land may not be left fallow long enough. Sloping sites previously avoided are now farmed. Crop yields are smaller and don't meet rice security needs. People have to travel further for suitable land and have to invest more labor for less yield.

The authority of the *kepala adat*, elders and other village leaders, and adat law enforcement has eroded, and government structures have not filled the void. NRMP has used the hamlet, village, or *adat* leaders on the assumption that information will then spread to others, but there are indications that this is not effective and messages may mutate or not be passed along to those outside the group.

## 2.2 The HPH Bina Desa Hutan Program

Since 1982 the SBK concession has operated a Bina Desa program and based upon a diagnostic approach similar to rapid rural appraisal. The program focusses on training farmers in sedentary rice farming and encouraging them to cease swidden. While many local people have expressed preference for sedentary agriculture rather than distant swidden that are very vulnerable to predators (wild pigs, monkeys, birds, etc.) unless guarded, it is just too difficult to achieve the change. Sedentary agriculture requires more labor to prepare a smaller area, using a hoe is a new skill which farmers find awkward and difficult, and the current sites have not proved sufficient for family rice security. One inadvertent result from the increased labor needed for the sedentary fields is a stratification of the village socially and economically, whereby traditional mutual labor exchange is being replaced with wage labor.

The concessionaire, NRMP, and some village leaders are also concerned about the dependency created by the free inputs of land clearing by tractors, seeds, fertilizers, and pesticide. The introduction of chemical fertilizers and pesticides and their misuse is a potential problem.

Other development issues and needs, such as health, sanitation, and alternative income generation have not been addressed, but Bina Desa appears open to new ideas. However, NRMP cooperation with Bina Desa has caused some confusion about the project's purpose and alliances / connections.

### 2.3 Non-timber Forest Products

Gathering forest products generally took place after planting but, before harvest and included rattan, *gaharu* (a fragrant resin), illipe nuts, honey, and the like for both private use and as a source of extra income. Hunting and fishing were major sources of protein. In the project's focus area, however, decreased *ladang* yields have made these supplemental activities more important. More money is needed to buy rice, while forest resource supplies are diminishing as well. People report that since logging began not only do they have to travel further, but that resources are diminishing in abundance. Habitat disturbance has caused game to migrate, so that they are fewer in number and harder to find. Construction and logging disturb other vegetation. River siltation and ponding have decreased the number, quality and variety of fish. In addition concession staff gather forest products to supplement their income, though the impact of this is unclear. Local people's access to or passage through logging areas is banned. The end result is that the forests' ecological balance is disturbed and local livelihoods adversely effected. People are well aware that they need to develop other options to meet their basic needs, and express great interest in home gardens with marketable products and in rubber plantations.

### 2.4. Communities

Ethnic groups in the project focus area include : Limbai, Kenyilu, and Ransa Dayak who are predominantly swidden farmers. Although they are Christian, traditional beliefs and ceremonies predominate. The Melayu Nyadam located more to the south also have cattle and rubber trees. Each group has its own language. Previously, families lived in permanent settlements in longhouses. The government had encouraged single-family dwellings and many now live in them although a few longhouses are still in use. Small, temporary houses (*pondok*) are built near swidden and people often stay there because their fields are too far from the main settlement. If people return to the village it is usually late afternoon. Some still use the evenings for traditional craftwork, such as basket weaving, but younger people are less interested, and some elders fear that the crafts will be lost. Settlements and *pondok* are usually located on a river or stream to ensure access to clean water, but undamaged water supplies are difficult to find. Small gardens and perennial tree crops may also be planted nearby.



In many settlements there are very small kiosks in homes selling soap, shampoo, toothpaste, permanent lotions, cooking oil, matches and other items. There is one larger shop with a more complete inventory of things villagers might need. The 2 nearby concessions also maintain stores. In one there were homemade cakes, *tempe* (fermented soybean cake) and other foods produced by concession staffs' families. Villagers have sometimes brought produce to sell at the concession shop, but prices were too low or there was a glut of the same produce. Marketing to larger towns is unpredictable and payment is not consistent with the real value of an item, while distance, travel cost, and spoilage increase the risk of loss.

In many ways these communities are like others which have experienced a sudden influx of new ideas, or products that are assumed to be 'better'. Shifting cultivation (*ladang berpindah*) has taken on the negative connotation 'wild / uncivilized cultivation' (*ladang liar*). People express dismay and a feeling of powerlessness when decisions about land use (i.e. granting concessions, establishing a nature reserve, etc.) which can restrict access to areas and resources traditionally available to them are made without their input / consultation. They are grateful to concessionaires for their assistance with education, the Bina Desa program, employment and occasional transport, but it hardly compensates for their loss of livelihood potential. Although there is a tradition of sharing, and even now most people claim there is still enough for everyone, they often feel insulted by outsiders' lack of respect for their authority and rights over the area and the local tradition of generosity. They are particularly upset at disrespectful attitudes and unfulfilled promises made by some concession staff, and express grievances about uncompensated losses or infractions of traditional law re: relationships with unmarried girls.

## 2.5 Government Infrastructures

Except for the village (*kepala desa*) and hamlet (*kepala dusun*) leaders there is little government structure or services. The village consultation board (LKMD) does not appear to be functioning. Although the *adat* council has been revived it is still in the beginning stage. Little government infrastructure has reached the area, except for schools in each village which are also supported by SBK. There are no health facilities in the immediate area (there is supposed to be a doctor at SBK, but no one knew if there is one), no agriculture extension, forestry or other programs, and no telecommunication or electricity except by generator at the logging camps. When asked about extension or other government visits in the last few years villagers only remembered a family planning show with singers. The pop songs were enthusiastically received, but family planning songs were deemed boring and the messages forgotten. According to offices in Pontianak there should be volunteers for non-formal education,

village development, and the like, but only the family planning cadre and non-formal education cadre were encountered in the field. Another report mentions that women were eager to use suitable family planning methods, but do not know how to get assistance. There did not appear to be any adult learning groups, in spite of the fact that many villagers are illiterate, and few were fluent in Bahasa Indonesia. There are plans to assign staff from the Sub Office of Natural Resource Conservation (SBKSDA) to the area but, his tasks are unclear. The Department of Tourism (Dinas Pariwisata) is planning a training of cadre and small groups known as Pokdarwis. The village development agency has programs available and equipment such as generators and parabola, but the LKMD must take the initiative to obtain them.

Television is only available through a parabola, of which there are none in any of the project focus area settlements. The blaring radio so common to an Indonesian village were not heard. Some people own audio cassette players, but these are often broken or without batteries. There were no posters, calendars or other pictures in most houses. Magazines were very rare and usually restricted to women's magazines owned by teenagers. No newspapers were seen as they can be purchased only in the district capital.

## 2.6 Forest and Park Knowledge

The local communities have lived in the Bukit Baka area for at least 5 generations. They claim that until the intrusion of the logging companies their quality of life was better - fertile swidden was closer, animals and other forest products more plentiful, and the water cleaner. The ability of more isolated communities (further from concession areas and nearer to good primary and secondary forest areas) to more successfully meet their rice security needs supports this. They still have access to relatively undisturbed forest products, lands and rivers or streams. While local people clearly see the relationship between logging and habitat disturbance, this seems more a general observation than the suggestion that specific activities cause specific problems. Their focus is more on their immediate livelihood needs and dealing with the situation / conditions now. They know that certain conditions such as insufficient fallow time or planting on steep slopes will not yield good results, but poor, immediate results are preferable to none. Unfortunately, there is not enough existing information to tell how detailed or scientific traditional knowledge about soil conservation is. What is clear is that people are ignoring traditional guidelines more and more as options become fewer.

There also seems to be a difference in competency and knowledge among farmers, for instance regarding the fertility of sloping land. Another point made in a report on tree identification by logging cruisers, who are mostly local people, notes the high

frequency of species misidentification. And yet most can tell at a glance how long a field has been left fallow or where to find certain resources which they need. It is possible that each person's knowledge is focused on his immediate need. One point emerging from field work is that certain forest knowledge, such as that pertaining to medicinal plants, is sacred and can only be passed on with the proper ceremony and offerings. It is not clear how these traditional beliefs affect lines of communication and knowledge sharing

There do not seem to be any traditional prohibitions on hunting. Many are aware that some species are protected but, their priorities are protecting crops from predators and feeding their families. Species such as the gibbon are not hunted but, although they may be if there is need or opportunity. Aside from meat, many animals are profitable to sell as pets. One group recounted the tale of a Frenchman who appeared from nowhere many years ago and told them that no animals, not even leeches, should be killed in the Nature Reserve. They thought this thoroughly hilarious, not to mention impractical, especially if someone encountered a bear or hefty orangutan.

Local people are also aware that the recurrent fires affect the regrowth of forest areas. The missing link is acceptance or acknowledgement of how they each contribute to the problem. One frequent attitude is that it is always caused by others, another that it is just an uncontrollable and unavoidable fact of life. People know the signs of a regenerating forest but, measures to promote this are considered too difficult and the benefits chancy. The benefits of the forest's regeneration other than its potential exploitive use is an abstraction that has little meaning in day to day life.

Some people have heard of the National Park but, surprisingly, some have not. Those with more contact with NRMP advisors are better informed but, the word '*taman nasional*' (national park) does not have any meaning other than some abstract and totally alien concept. They have never seen a park and most have only just heard the term. Even the terms Bukit Baka Bukit Raya are meaningless as many only know the areas by their local names. For those who know about the park it represents an area that will be off limits to them and further restrict their livelihood options. The park may aim to conserve flora, fauna and habitats but, even though one or two people can state this the idea is abstract with no clear concrete meanings or benefits to for them. Participation in sustaining the National Park and developing a management plan are equally obscure to most as information does or doesn't trickle down through the village grapevine and between the different village factions.

There are also confusion and misunderstandings about the NRMP advisors' purpose and the relationship of current activities to the National Park and Bina Desa. Neither the fact that some of the activities will be ongoing National Park programs nor the idea that the National Park is not just a place but a dynamic entity with ongoing programs is clear. Like the concession areas, the park is a creation of some unknown source in Jakarta over which local people have no control.

### 3. THE MEANING & PURPOSE OF A STRATEGY

#### 3.1 Identifying the Problem

The purpose of a strategy is to detail how a communication, information or education (CIE) problem can be solved by clearly explaining what needs to be done, why, to and by whom, and how. It identifies and clarifies :

- The problem and factors which will influence its resolution.
- The rationale for solving the problem. *Why is it important? With what is it related? What would happen if there was no resolution ?*
- The target audience. *Who is involved? Who needs to take action, change, or learn? What are their characteristics? Should the group be broken down into sub groups or segments?*
- The needs and priorities. *What needs to be changed or to be learned? Which are most important or critical? What are the barriers and limitations? How are these related to the target audience?*
- What needs to be accomplished. *What is the goal or overall purpose? What are the specific objectives? What outputs are needed to achieve this?*
- Actions and interventions needed to accomplish the objective and attain the goal. *What steps are needed? What resources are needed?*
- A plan or scheme for implementation. *How should the actions or interventions be organized? In what sequence of steps or discrete bits, and through what media, methods, and communication channels should it be implemented? What is the schedule?*

The strategy provides a framework, context and guide for implementing CIE efforts; this does not imply imposing a rigid set of rules. Although a strategy tries to weigh all the factors and influences, it is a tool which can be modified during implementation as conditions or factors change or new information develops. The basic strategy remains a guide.

#### 3.2 Context

The problems which a CIE strategy seeks to address typically occur on 3 different levels : knowledge, attitude and practices. The first level is knowledge about a problem, its causes, effects, what

changes are needed, how to change and what role people have. Problems are created or unresolved because people do not have knowledge that would improve or resolve a problem. The second level, attitude, is concerned with the motivation and beliefs people have about a problem. They may believe that it is not a problem, that it is not serious or does not affect them, or that they do not need to be a part of the resolution. These attitudes then influence their behavior or practices. What they chose to do may also depend on knowledge, but other options feasible, available, and attractive to them may be more significant.

### 3.3 Approaches

Over the years much has been written about how to improve CIE strategies and their ability to support and facilitate work such as the present conservation education program. The standard approach has been to use a given medium to inform, explain or motivate. However, a single medium or effort usually has limited or only short term impact. Especially in environmental education and conservation awareness there is a need for a more lasting results.

Social Marketing is an approach that builds on advertising techniques to 'sell' development ideas and information, and influence attitudes and behavior. It is based upon developing messages relevant to a target group's existing knowledge, attitudes and practices, and providing them with realistic, attainable and suitable options. It strives to make messages, peoples' existing capabilities and options, and the desired outcomes compatible. Social marketing is also based upon the idea that different methods and media achieve different purposes, so that messages are provided through various "channels" (essentially, media and methods). A social marketing plan would use several channels that reinforce each other and present ideas in a sequence which facilitates acceptance or change. Finding the proper place to 'fit' messages (where, when and for whom) and their timing and sequence are also important.

Learner - centered or focused education is another approach which centers on the perceptions, needs and capabilities of the learner or target of CIE efforts. It emphasizes seeing things from the point of view of the learner -- his or her needs, perceptions and capability or skills, in contrast with the more common content-focussed education which is organized and determined by the topic or communicator's priorities rather than the targets'. Andragogy is an approach popular in training. It is based on the idea that adults learn best by doing, will pay attention to what is important or useful to them, and will learn at their own pace and that their current knowledge needs to be respected and acknowledged.

All of these approaches reflect a very common sense approach and provide clues to some important criteria to be remembered when developing and implementing a strategy :

- people learn bit by bit and not all at once; thus a strategy needs to build gradually.
- people learn or change when they feel a need; thus a strategy must focus upon people's needs and priorities.
- people pay attention to what is important to them; thus a strategy needs to consider people's priorities and making them aware of why the strategy's aims are important to them.
- people don't learn from one experience or change because of one message; thus a strategy must reinforce its messages or information through a variety of channels.
- people pay attention when they are aware of how something will effect them; thus a strategy needs to link its focus with benefits or impacts important to its target audience.
- people pay attention to information they can use and adopt new behaviors that bring benefit and are not difficult; thus a strategy should only promote changes that are practical, feasible, and beneficial.
- a single medium or activity has limited impact or effect, thus a strategy needs to utilize a variety of methods to build and reinforce understanding, awareness, and behavior or attitude changes.

Communication, education and developing awareness are ongoing processes. Media can facilitate these and make the process both more efficient and effective by providing real examples, showing how to do something, or explaining something and visualizing abstract ideas.

#### 3.4 Strategy from the NGO Field Training

Local NGOs (non-governmental organizations) in West Kalimantan were invited to participate in a CIE strategy seminar in Pontianak. They then stayed in the Bukit Baka area for a three-day field survey of the local people's knowledge, attitudes, and practices regarding forest resources and the Park.<sup>2</sup>

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<sup>2</sup> Please see Volume 2 of this report for further discussion of the NGO training and activities.

The NGOs were asked for their input for a park awareness and conservation and environmental education strategy. They produced a framework listing 5 steps, only one of which focused on the conservation awareness and education strategy.<sup>3</sup> The others focus on standard development issues in a familiar sequence beginning with agriculture. The framework lists activities, goals, target groups, content, method, location and resources. Its major weakness is its simplicity and generality, which prevent it from serving any practical use as a document to guide implementation.

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<sup>3</sup> Please see Appendix 4 for the strategy proposed by NGOs.



## 4. STRATEGY

There is considerable diversity among the communities near and within the Bukit Baka Bukit Raya National Park with regards to cultural groups, languages, rice security level / status, access to and dependence upon non-timber forest products, and degree of disruption to their wellbeing by outside influences. For these reasons the following analysis and strategy will focus on the conditions and needs in the current project activity area.

### 4.1 Priority Issues

There are three principle issues in the Bukit Baka - Bukit Raya area which any strategy must address: conservation, understanding about the park, and the local communities' development. Distinctions among them are often blurred as they are interrelated and overlap.

The major conservation issues are :

#### FACTORS

- encroaching grassland is eroding forest edge
- soil erosion is affecting soil fertility, riversystems and water quality
- habitats are disturbed
- escape fires
- intentional fires
- inappropriate farming sites
- poor logging techniques
- road building and other construction
- poor logging techniques

The major park issues are :

- most local people don't know what a park is
- people who 'know' what a park is perceive it only as an area with controlled access
- the respective roles and distinctions among the project, park and Bina Desa activities are confused
- most people are neither aware of nor understand a park's function
- most people are not aware of a park's long and short-term benefits
- no examples of what a park is
- no frame of reference for parks
- neither wide nor clear publicization of park programs subprograms
- preconceived ideas about parks
- lack of identity for park
- unclear definition of to what or whom activities are tied to
- no experience with parks on the part of local people
- preconceived idea of parks as recreational areas only on the part of some local people
- insufficient information about benefits
- no real examples of parks or their benefits

**The major community issues are :**

- resources are being degraded
- Agricultural yields are low and/or decreasing
- The land available for agriculture is being reduced
- Traditional values and authorities are eroding
- Dependence on outside input is increasing
- river sedimentation & pollution affecting drinking water, causing health problems
- fewer animals, fish and other valuable resources
- reduced fallow periods
- limited suitable land
- farming on inappropriate sites
- more dependence on supplemental income from forest products
- limited suitable pasture and fodder
- encroaching grassland and loss of secondary forest
- access to land limited b/c of concession activities
- increasing population
- development of wage labor (replacing traditional mutual help exchanges)
- neglect of traditional agricultural proscriptions
- lack of community institutions
- Local unavailability or unaffordable expense of seeds, pesticides, and fertilizers required for conversion to sedentary cultivation

**4.2 Rationale**

Bukit Baka Bukit Raya National Park's viability as an agent for conservation, sustaining habitats and biodiversity critically depends upon those who live in and around the park and whose lives are directly tied to or rely upon its resources. Other groups who also exploit resources, politically control their utilization, and may use or benefit indirectly from them can have even greater impact. While these national and regional level groups also have a vested interest, it is the local communities who will feel the greatest immediate impact if the environment is degraded. Conversely, on the local level it is the park's communities and residents in the park who have the potential for the greatest immediate impact on the park. Their knowledge, attitudes and

behavior will determine the effectiveness of the park's programs and how well they achieve its conservation and development goals.

Although upgraded from a Nature Reserve to a National Park in 1992, the Park remains a very nebulous idea. Some people's only knowledge of it are the frequently ignored prohibitions brought by the nature reserve status. Many haven't even heard the park's name or don't know what it means as they have different names for the mountains. People are intensely aware of how the environment has been degraded in the past few years and the impact on their well-being. Many opportunities have been offered through the Bina Desa Program and more recently through NRM activities, but their context and relevance or links to the park is confusing.

If the National Park is to develop both the support and participation of locals and those directly involved in resource exploitation, it must begin to establish its identity. The park programs and their relevance to different needs must to be clarified. While developing conservation/ecological awareness and understanding are important, the context of the park's role in providing benefits needs to be proven. Media can then be used as tools to support trainings and conservation activities and provide information about the park and conservation so that people :

- Become more aware of the impact of their own actions and the choices they make upon the environment and thus its future benefits,
- Better understand the park's programs and how they could benefit from them in the meeting short-term livelihood needs and in the long-term sustainability of their environment, and
- Become better able to participate in the parks management or support the park's functioning / operation.

#### 4.3 Target Audience

There are many different groups who will effect and be affected by the Park. Based upon their relative importance to achieving the true priority issues of conservation, understanding of the park, and local community development, as well as upon the sequence of the strategy, these groups may be divided into primary, secondary, and tertiary target audiences as follows:

##### Primary Target Audiences:

- local communities adjacent to or within the park who remain very dependent upon the resources in the park for their daily needs

- concession logging staff who exploit local timber resources and are responsible for providing community development support and reforesting logged areas
- government organizations who are responsible for park management, park and logging regulation enforcement, and conservation

#### Secondary Target Audiences

- voluntary / community development organizations.<sup>4</sup>
- concession managerial staff and decision-makers.
- policy-makers and bureaucrats at the provincial and national levels.

#### Tertiary Target Audiences

- the general public outside of the immediate park area
- tourists and organizations promoting tourism
- other government agencies other than those specified above

The following table lists the target groups in more detail. Each of these groups has their own unique characteristics and needs which determine the appropriate strategy messages, media and methods. Each of the groups also contain subgroups. The table is intended to be a general reference for developing an overall strategy. Specific activities or media may require different groupings based on special needs or other unique factors and a more detailed analysis of the groups' characteristics.

Although information has been gathered about the different groups and their knowledge, attitudes, and practices, (refer to Appendix ) the information's generality will necessitate gathering more information. So much of the project's needs do not focus on mere information but, developing awareness and motivating new attitudes. These require careful development of appropriate messages which are acceptable to the target messages which have meaning and credibility. Without a comprehensive picture of their knowledge, attitudes, and practices there is the risk that messages will be content-focussed and thus not relevant to the target groups.

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<sup>4</sup> If this group were to be involved in implementing any of the Park activities then they would need to be primary target.

## TARGET GROUPS

### PRIMARY TARGET AUDIENCES

TARGET GROUP	RELEVANCE	CHARACTERISTICS
<b>Local Communities</b>		
<ul style="list-style-type: none"> <li>• Adult Male Villagers</li> </ul>	Determine new swidden / <u>ladang</u> sites Clear new <u>ladang</u> sites Burn <u>ladang</u> areas Choose crops and plant <u>ladang</u> Harvest <u>ladang</u> Harvest forest products -wood -rattan, fruits, etc. -honey, gaharu -fishing & hunting Market forest & other products to outside areas Contract their labor for concessions	Except for community leaders, limited Indonesian language capability, many with none Low literacy rates, if any schooling usually only to grade 3 elementary. Nominally Christian with older beliefs prevailing Younger men less concerned with traditional hierarchies & regulations re: agriculture, etc. very concerned about reduced access to Forests, degradation of habitats & resource scarcity Want to develop alternative crops to compensate for decreasing yields & access to viable resources Unfamiliar with concept of park, and its function Limited information about conservation
<ul style="list-style-type: none"> <li>• Adult Female Villagers</li> </ul>	Assist opening new <u>ladang</u> , clearing underbrush Assist burning Assist planting Assist harvesting Organize post harvest processing Maintain <u>ladang</u> (weeding, etc.) Assist gathering fruits and other forest products, mostly not in deep forest Process forest products, i.e. honey Plant, maintain & harvest small home gardens Cook, wash, for children & fulfill other domestic chores Collect water	Lower Indonesian language capabilities and education in comparison with the men. Traditionally not decision makers but do have influence Concerned about water pollution & turbidity Eager to develop gardens for supplementing incomes Interested in other income generating activities Unfamiliar with concept of park and its function Unfamiliar with conservation
<ul style="list-style-type: none"> <li>• Primary School Children</li> </ul>	Assist parents with opening new <u>ladang</u> , burning, planting, harvest & post harvest processing Boys trap small animals or catch fish Girls assist with domestic chores and child care	Grades 4, 5 & 6 relatively fluent in Indonesian Enthusiastic about nature activities and learning about conservation Have been introduced to the idea of a park but have no clear understanding about what it is Have some knowledge about conservation

**BEST AVAILABLE DOCUMENT**

• Children out of school	Similar to above	Limited or non-fluent Indonesian Limited literacy or illiterate Unfamiliar with concept and function of park
<b>Concession Staff</b>		
• Administrative staff	Implement and enforce company policy Manage field operations Supervise all local staff Serve as company's direct link with villagers Sometimes collects forest products to supplement income or for recreation	Primary concern is meeting production targets Familiar with the basic ideas about a park but have limited knowledge about its conservation function
• Field / logging staff	Carry out logging activities: - Cruisers determine which trees to be felled - Felling/skidding harvest trees - Transport staff bring to log pond - Unloading, other heavy equipment operators disturb land areas - Mechanics, shop staff dispose of refuse, especially oil - Nursery staff are responsible for replanting - Support staff (maintenance, cooking, etc.) dispose of refuse Sometimes collect forest products to supplement income or for recreation	Limited knowledge & awareness of conservation and how their job / practices effect surrounding habitats / ecology Limited training and education Limited income; when production stops because of mechanical breakdowns or bad weather their incomes are affected May or may not know what a park is or its conservation function
• Bina Desa Staff	Implement Bina Desa Programs with villagers : - encourage people to quit <u>ladang</u> system and try sedentary farming - provide basic instruction about farming - distribute fertilizers, pesticides, seeds, etc. Determine focus for their extension activities within scope provided by management Operate demonstration plot	Limited knowledge of local conditions and relevant / successful farming methods Technical school graduates with narrow point of view re: appropriate agriculture strategies Support chemical inputs (fertilizers, pesticides) without realizing the potential hazards Limited view of their job as only focussed on other community development needs Limited extension skills or planning for extension services Know what parks are but have no detailed knowledge of their conservation function

BEST AVAILABLE DOCUMENT

**Government Organizations  
/ Groups**

• Sub-office of Natural Resource Conservation (SBKSDA)

Manage protected areas & species  
Promote conservation awareness

Limited conservation education  
Limited extension education / experience  
Limited media production, planning or awareness about targeting audiences & messages  
Limited community development / extension other than formal methods / traditional approaches  
Limited knowledge about different uses & purposes for park areas / zoning  
Limited understanding about meaning & dynamics of community participation

**BEST AVAILABLE DOCUMENT**

## SECONDARY TARGET AUDIENCES

TARGET GROUP	RELEVANCE	CHARACTERISTICS
<b>Non-Government Organizations</b>		
<ul style="list-style-type: none"> <li>Pontianak based NGOs</li> </ul>	Implement conservation and community development advocacy Implement conservation and community development activities Sometimes involved in social and conservation research	Limited fulltime staff Community development skills very traditional and academic bound Conservation / ecological knowledge very academic without field knowledge Field experience limited to short-term visits as 'experts' Research capabilities limited to quantitative, structured interviews Focus, scope and views limited to key 'hot' issues reflecting personal priorities not a balance evaluation of conditions / needs Traditional perception of park and its uses / conservation function Limited experience in developing community participation & its dynamics
<b>Concession Management</b>		
<ul style="list-style-type: none"> <li>Directors</li> </ul>	Set company policy Determine production changes Set employment policy	Primary concern is efficient production and benefit Knowledge about sustainable forest management relevant to their immediate needs Aware of ecological concerns but need viable alternatives Project benefits not clear Limited knowledge about project activities Know about traditional parks but limited knowledge of zoning concepts, local participation, etc.
<b>Government Policy Makers</b>		
<ul style="list-style-type: none"> <li>Regional Governor's Staff (Pemda) Departments (Dinas) and Regional Offices (Kanwil)</li> </ul>	(Role to be identified with SBKSDA)	Limited awareness about project activities, accomplishments & goals Traditional perceptions about parks & unfamiliar with zones, multiple use & community participation Unaware of park's benefits for the region
<ul style="list-style-type: none"> <li>National</li> </ul>	(Role to be identified)	To be researched



## TERTIARY TARGET AUDIENCES

TARGET GROUP	RELEVANCE	CHARACTERISTICS
<b>General Public (within the province)</b>		
• Grade School Children (SD)	May become park users / visitors	To be researched
• Junior High Students (SMP)	May become park users/visitors	To be researched
• High School Students (SMA)	May become park users/visitors May choose careers related to park use	To be researched
• University Nature Lover's Groups (Pencinta Alam)	May become park users/visitors	To be researched
• Scouts (Pramuka)	May become park users/visitors Involve in conservation through scout activities	To be researched
• University Research Groups	May become park users/visitors May become park research assistants	To be researched
• General Adult public	May become park users/visitors	To be researched
<b>Tourists</b>		
• International Nature Tourist	May become park visitors Impact park through behaviors and actions Have interest in nature	Limited information about the park - what to see, where it is, what to do, facilities, etc. Limited information about tropical forests, flora & fauna, ecology More interested in general information about flora, fauna, folklore, culture, history, etc. Most able to understand some English Better educated with some knowledge about ecology
• International Scientific Tourist	May become research assistants May impact park through improper or careless behavior	Limited information about the park - what to see, where it is, what is scientifically important about the area, etc. Interested in more scientific information, possible scientific activities / programs Usually proficient in English Specialized education
• Domestic Nature Tourist	May become park visitors May impact park through improper or careless behavior	Interested in nature but, limited ecological knowledge Often member of a nature club Limited information about the park - what to see, what to do, facilities, unique features, etc. Limited understanding about the benefits & function of a park Often high school or university educated

• Domestic Recreational Tourist	May become park users May impact on facilities through improper or careless behavior	More interested in recreational facilities, i.e. trails, swimming, general sight-seeing, etc. Limited interest in park's ecology and awareness about a park's function & benefit Education varies from minimal to better educated
• Domestic Scientific Tourist	May become research / program assistants	
<b>Other Government Organizations</b>		
• Department of Tourism	Implement tourism training for villagers Prepare promotional brochures to encourage training	To be researched
• Directorate General Village Development	Train development cadre Operate village development competition Provide assistance / equipment, such as parabola or TV	To be researched
• Provincial government		To be researched
• Bappeda (Regional Development Planning Board)	Determine proposed development priorities Coordinate with other government departments	To be researched
Other targets to be developed as information becomes available		To be researched

#### 4.4 Priorities

The immediate priority of the conservation awareness strategy is to develop the primary target groups' understanding about the Park and its functions. Even though the management plan is still evolving the basic programs and their purpose is sufficiently clear to begin promoting. There is a need to provide information about the park's programs and their benefits to local communities, concession staff and government counterparts, and immediately develop an overall understanding about the park's function. This needs to focus on the primary target audiences in the Bukit Baka - Bukit Raya area, and gradually expanded to secondary and tertiary target audiences. Concurrent with this is the urgent need to develop the park's identity and clarify which of the ongoing activities are park programs and not NRMP project or Bina Desa activities. There needs to be a sense that the park will continue these programs and develop other programs more relevant to local needs. There needs to be a sense of progress and continuity so that people have a sense of moving forward. The local communities are the main target, but the information needs to begin reaching other primary and secondary groups.

The third priority is to support ongoing development activities by NRMP and Bina Desa with information linking the activities to the park and conservation. While current activities are succeeding, their impact could be strengthened through using media to introduce topics or skills and then to later reinforce the information. This would focus on the primary target group, especially local farmers and Bina Desa staff.

Other priorities include :

- clarifying the park, its functions and benefits to secondary and tertiary targets. This needs to be tied to developing their environmental awareness and conservation knowledge.
- developing consensus and support for community participation in park management with concession staff and management as well as government targets.
- informing tertiary targets about the park, its programs, what there is to do and see in the park, how to get there, and the like, and reinforcing understanding about its conservation function.

#### 4.5 Aims

The strategy is to present new information through mass media to ensure its dissemination to a wide group and then to follow-up and reinforce this with other activities such as individual or small group discussions either informally or during training. There should be heavy reliance on visual media, such as, slides, video, films and illustrated print media. The overall plan is :

##### IMMEDIATE AIMS

Develop a basic understanding about what a park is and its conservation function

- Introduce examples of parks, their purpose and benefits
- Define park in terms of area, conservation function and community development
- Establish the park's identity and clarify current activities which are part of its programs
- Explain the purpose and content of park programs and benefits to local communities and how to participate
- Explain how communities can participate in developing the park and its management

##### SECONDARY AIMS

Reinforce the importance of the park by linking it to the forest's ecological / conservation function

- Integrate information about the park's conservation function to trainings
- Explain parallel between conservation as it applies to agriculture and the forest
- Reinforce the park's link to forest conservation and the ecological wellbeing of local communities
- Reinforce the role of local communities in maintaining the park's conservation function

## TERTIARY AIMS

Inform other groups about the park and its conservation importance

- Inform potential park visitors about where the park is, its facilities and ecological importance
- Inform the general public about the park and its ecological and conservation importance
- Inform other government agencies about the park - its location, facilities, ecological importance and management

#### 4.6. General Strategy Plan

The purpose of this section is to describe the sequence and breakdown/steps to achieving the strategy's aims. The goals for each step are listed after a general introduction for each target. The project's proposed activities/trainings have been incorporated into the strategy:

- a. In general the overall concept is to integrate conservation, park and development messages and information to show how they are connected.
- b. Another important concept is to relate messages to impacts on a target's life, making theory, abstraction or seemingly unrelated information relevant. By connecting it to the target's needs or interests, there is a greater possibility that messages will be remembered and acted upon.
- c. Informing other groups about park and its conservation importance.

#### IMMEDIATE AIM: Developing Understanding of the Park

##### 1. General Village Audience

For people to people to accept the park and become motivated to participate in its development they need to first understand what a park is in terms of area / location, conservation purpose, and most importantly, its programs which will benefit them. Given that no one has ever seen a park, the message needs to be repeated and reinforced through other media and project activities as well.

1.1. Develop a basic understanding that a park is merely an area set aside to allow forest habitats to grow and similar in concept to an adat forest. Briefly introduce information about zoning and park programs.

1.2. Develop an understanding about the park's programs and people's role in determining them and park identity.

1.3. Clarify specifically what local people can do to participate in the park's programs, establishment and management.

1.4. Develop general understanding about the need for different use areas in the park and how this influences zoning. Emphasize the benefits of a better environment to villagers.

1.5. Develop understanding about the status of the park's management and program development and reinforce participation.

## 2. Grade School Children (grades 4,5,6)

The future of the park will eventually be up to the children as they mature and interact with it and its programs. Thus they too need to be aware of the park's function and aims in conservation. More immediately, they are a very receptive audience for new ideas and concept, and act as a conduit for bringing the new ideas to their parents' attention in an indirect and less threatening manner which reinforces important messages.

2.1. Develop understanding about parks, their conservation function, and their importance to children.

2.2. Develop understanding of how different habitats in the forest are important and linked to the park, environment / ecology and zoning / use.

2.3. Develop awareness about what communities can do to support the park, how this effects the ability of the park to conserve the environment, and more specifically what they can do.

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2.4. Reinforce importance of participation in park development and management.

2.5. Reinforce importance of individual actions in supporting the park and its conservation purpose.

## 3. Concession Staff

Many of the concession staff because of their field duties and off job access to forest products need to be more aware of how their actions can effect the forest, its habitats and their ecology. They need to begin to develop an understanding about how the park aims to work with them to improve conservation and minimize disturbances to the environment.

3.1. Develop general understanding about park's conservation function and the different people who can affect it.

3.2. Develop understanding about the impact of habitat disturbance and what other problems could develop.

3.3. Develop understanding about what people can do to minimize the negative effects of their actions on the job.

3.4. Reinforce conservation messages and develop understanding about off-the-job actions that cause negative impacts and the effects.

#### 4. National Park Advisory Team

The Advisory team includes local village leaders, representatives from non government organizations, the Sub-office for Nature Conservation (SBKSDA) and Universities. There is a need for them to have a clear vision of the park and its mission, not just as a vehicle for traditional conservation methods but, an opportunity to develop more effective sustainable use supported by community participation. The first level in developing the teamwork this will require is developing common knowledge about the park, and integrated conservation and community development.

4.1. Develop understanding about how parks conserve habitats.

4.2. Develop understanding about what has been done in other parks.

4.3. Develop understanding about different ways to accomplish conservation aims and their pros and cons.

#### 5. Bina Desa Staff

There is a need to develop Bina Desa staff awareness about the park's conservation function and integrated conservation and community development projects. More information about their current understanding and attitudes needs to be researched before developing materials or a general strategy for them. Ideally, this would then be integrated into existing training plans.

#### 6. Sub-Office for nature Conservation Staff(SBKSDA)

The proposed park management is very different from the usual government approach to protected areas through zoning to community participation and development. There is a need to acquaint staff, especially the proposed field staff, with these ideas and convince them of their feasibility and relevance. More information needs to be gathered before a suitable approach can be designed.



## **SECONDARY AIMS: Reinforcing Importance of the Park**

### **7. General Village Audience**

The building of a water system for the villages provide an opportunity to discuss the park's watershed function as well as to begin demonstrating some concrete benefits from the park's programs.

7.1 Develop a basic understanding about the forest's effect on the water supply system.

7.2. Reinforce the importance of the park in maintaining the forest's watershed function.

### **8. School Children**

The installation of the water system can also be used to develop the children's understanding about the forest / park's watershed function. Again, they can be an indirect reinforcing agent for messages to the general village audience.

8.1. Develop a basic understanding about how forests protect watersheds and how the park area is crucial to West and Central Kalimantan.

8.2. Reinforce the importance of the forest / park for the local water supply.

### **9. Women (In conjunction with home gardening training)**

Unless they have a meaningful tie to issues or activities important to the target group, environmental messages can seem to be irrelevant. Since the women have expressed great interest in gardening this offers a unique opportunity to develop their ecological understanding of their gardens and to drawing parallels with the park's function.

9.1. Develop awareness about how plants react with the soil and how trees in a forest have a similar function re: preventing erosion and increasing fertility thru organic materials.

9.2. Develop awareness of forest and its function re: water conservation and effect on agriculture.

9.3. Reinforce park's links to soil fertility, soil conservation, and the watershed.

## 10. Farmers (In conjunction with SALT training)

Erosion is a serious concern as farmers resort to steep slopes because more suitable land is unavailable. This issue is also important to the park. The course on sloping agriculture land technology (SALT) offers opportunities similar to the home gardening training. Conservation messages tied to SALT will have more meaning and be better tied to reality.

10.1. Develop understanding about different causes of erosion, how it effects crop yields and how actions can be taken to prevent and / or overcome it, and compare this to how forests effect soil conservation.

10.2. Develop understanding about how to prevent erosion and the possible options and their benefits, and compare this to how forests react.

10.3. Reinforce the function of trees and others plants in preventing erosion and the role of the park and forest zones. Compare similarity of composting for agriculture to the natural process that occurs in a rainforest as plant matter decays.

10.4. Develop understanding about the importance of organic matter to forests fertility and how this idea can be applied to agriculture.

10.5. Develop understanding about how compost is formed naturally and in gardens.

10.6. Reinforce the need to leave forest habitats in protected areas undisturbed.

## 11. General Village Audience

The original fire campaign brought the issue of fire to peoples attention. The messages need to be reinforced and tied to the park's conservation purpose / function.

11.1. Develop greater awareness about the impact fires have on forests and conservation and how this relates to the park.

11.2. Promote community action to prevent fires.

11.3. Reinforce benefits from fire prevention.

## 12. School Children

The fire campaign was also an introduction to the forest's importance. These messages need to be expanded and linked to the park.

12.1. Reinforce messages about fire's impact on forests, the need to take action and how these are linked to the park.

12.2. Introduce forest habitats, and their interdependence, and reinforce the importance of preventing fire.

12.3. Develop understanding about how fire damage effects the environment, conservation, habitats and the park.

### 13. Adjacent Villages

Implement the original fire campaign in villages which exploit grasslands for cattle grazing, adapting to local conditions and priorities. Ideally this would be in coordination with grassland management activities. More information is needed to determine what changes are needed

### 14. Concession Staff

Fire is also a hazard for the concessionaire (equipment fires, careless smashing, etc.), also staff often hunt or harvest forest products when not working opening possibilities for fire damage. It would be good to develop an awareness / education campaign with the concessionaire that would support their needs while promoting the park's interests. More information is needed, especially regarding "on the job safety needs".

14.1. Develop understanding about fire's impact on forest and actions needed to avoid or minimize.

14.2. Reinforce positive actions for fire prevention.

### TERTIARY AIM : Informing Outsiders about the Park

#### 15. Pontianak General Public

There is a need to develop awareness about the National Park and its vital conservation importance in the province. This also implies a need to develop general understanding of conservation. The Pontianak Sub-Office for Nature Conservation (SBKSDA) currently presents a radio question and answer program. The programming does not appear to be based on a well-defined strategy of for developing knowledge and selecting messages relevant to specific audiences, but rather responds to random questions. While this is a very valid approach for generating interest, its weakness is its lack of direction and focus. The audience may or may not develop sufficient understanding of or active support for conservation and the park, partly because randomness of the information may be difficult for the average person to process. SBKSDA also has a

plan to place slides with conservation messages in movie theaters. Again, there is the potential for confusion, or at best memorizing catch phrases that don't have any meaning. (i.e. 'Save the Forest' does not really say why, for what purpose, or how - the point is to save the forest but, how will this be accomplished from the message- what is the message's purpose ? ) Developing a plan / coordinated strategy with specific goals/ messages / audiences / markers that build understanding and support in steps could have more lasting effect. Messages which indicate what people can do or which speak to their interests would have more impact. Developing a plan should be done in collaboration with SBKSDA. More information is needed.

Possible specialized targets for the future could include also :

- General Public
- School children (elementary, intermediate and high school)
- University students
- Forestry and agriculture students
- Nature club members
- Young adults
- Religious groups / organizations

#### 16. Park Visitors

It would be premature at this point to begin planning materials but, there should be coordination between communication, information and education efforts and the Pontianak-based information center about the park. There is a need to develop a message theme and design theme to both interest the targets and create a park identity. The conservation importance of the park must be emphasized. Practical information on how to ensure its sustainability, especially appropriate park use and etiquette is also needed. Practical information on how to get there, what to see, etc. will needed. How to do this will depend upon the target groups' knowledge, attitudes and practices / behavior and available resources. This will be determined later when more information becomes available.

Possible specialized targets might include :

- International nature tourists
- Local nature tourists
- School recreation groups
- Scientific or research visitors

#### 4.7 Actions

The purpose of this section is to outline possible actions to fulfill the strategy's aims. For each of the steps identified in 4.6 specific actions are listed to attain the goals. In general large group presentations are utilized to disseminate general interest information. Small group or individual discussions would then help clarify messages. It is best to exploit festivals and other group gatherings as gathering groups at other times may be difficult. Displays are utilized to reinforce messages and keep them in the public eye. They also help to build and reinforce a positive park image. Supplemental materials which people can take home are also intended to do this and providing them allows targets to deal with the issues personally.

At present manpower to implement the actions is limited. While mass presentations do not require a lot of people, small group and individual activities are labor intensive and require many staff. This and the need for bonding and credibility with villagers emphasizes the importance of developing full-time village-based cadre, from respected NGOs, government programs or local villagers. Other park projects have experimented with staff who routinely implement education and awareness activities and prepare materials. The present strategy does not make suggestions about implementors as a consultancy evaluating NGO participation has just made recommendations.<sup>5</sup> Evaluation is also not indicated here, but it is suggested that a system be devised for reviewing actions and determining if additional actions are needed before progressing to the next step. Information and feedback about the media or strategy also needs to be processed so that materials can be revised.

This section also details possible media to achieve the aims/goals of each step identified in the strategy described in 4.6 and to support and facilitate the suggested actions in 4.7. Many of the materials are duplicates or adaptations of materials used in other steps. The aim is to reinforce messages, ideas, and continuity by repetition. For this same reason some information and visuals are repeated in various materials. The information and purpose of the media has been kept simple to avoid confusion or overload. It is suggested that there be heavy reliance on visuals for all the target groups as these quickly convey ideas, and do not require literacy skills (though some members of the target audience may need to learn how to read pictures), and can be used for all of the language groups in the project areas. This is why slides, video

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<sup>5</sup> Please refer to NRMP Consultancy report no.19: The Role of NGOs In Supporting the NRMP Project in Bukit Baka - Bukit Raya National Park.

and photographs have been recommended in many cases. Materials could be prepared by advisors, consultants or cadre.<sup>6</sup>

## IMMEDIATE TARGETS

### 1. General Village Audience

For people to people to accept the park and become motivated to participate in its development they need to first understand what a park is in terms of area / location, conservation purpose, and most importantly, its programs which will benefit them. Given that no one has ever seen a park, the message needs to be repeated and reinforced not only through the following activities, however, but also through other media and project activities.

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<sup>6</sup> Suggestions for existing materials from other resources are also included and more information about them can be found in Appendix 5 of this report.

1.1. Develop a basic understanding that a park is merely an area set aside to allow forest habitats to grow and is similar in concept to an adat forest. Briefly introduce information about zoning and park programs.

- Slide and video presentations to large groups to develop general understanding and discussions

- Small group/individual discussions to clarify meaning of park

- Displays to clarify park definition

1.1.1. Slide program to introduce basic information about the park, its function and programs

\*1.1.2. Video / film / slides about other parks and their aims

1.1.3. Photo album / flip book of other parks for small group / individual discussions

1.1.4. Photographic display of park / project activities for offices in Bukit Baka and Pontianak

1.1.5. Pictorial display of park management plan and programs

(Note: Pictorial graphics are needed for explaining the park programs)

1.2. Develop an understanding about the park's programs and people's role in determining them and park identity.

- Slide presentation to large groups to inform them about park programs

- Displays to clarify & reinforce park programs

- Displays to reinforce park image/identity

1.2.1. Slide program with photos of actual programs or examples of possible programs

1.2.2. Large poster illustrating the park programs for discussions

1.2.3. Signs using park logo for park program sites

1.2.4. Work hats with park logo for program participants

1.2.5. Calendar with pictures of park areas and environmental messages for program participants or general audience

1.3. Clarify specifically what local people can do to participate in the park's programs, establishment, and management.

- Small group discussions to promote participation

- Public displays to reinforce project image and progress and inform people about activities

1.3.1. Flipbook / album for small group discussion about ways to participate / programs

1.3.2. Park bulletin board for each settlement to display information about park programs, messages, etc.

1.4. Develop general understanding about the need for different use areas in the park and how this influences zoning. Emphasize the benefits of a better environment to villagers.

. Office displays to reinforce messages & park identity/image

. Small group discussions to develop understanding about zoning

. Small working group activity to generate zoning input & reinforce participation

1.4.1. Pictorial display at office or poster illustrating the zones and their uses

1.4.2. Flipbook (based on 1.4.1.) for use in small group discussion

1.4.3. Poster kit for demonstrating the use / function of different zones (possible use in village mapping) including map and illustrations of animals, plants and/or activities

1.5 Develop understanding about the status of the park's management and program development and reinforce participation.

. Public display to inform about progress of park plans & programs

. Group presentations of results from advisory meetings & discussions

1.5.1. Pictorial time line to monitor development of the park management displayed on the park bulletin boards

1.5.2. Video showings of park advisory meetings in Pontianak and results

Note: The different activities need to be spaced / paced to avoid information overload. They would be more effected if combined with activities / displays / presentations by students.

Final presentation of the Park's Management Plan and Zoning needs to emphasize where villages input has been incorporated and its importance. There is a need to establish a regular channel for general messages to a wide audience. Presentations at local ceremonies or festivals or to mark important holidays are option. Another possibility is to utilize small groups involved in programs or develop *arisans* (regular social gatherings which move from household to household). The feasibility of these types of activities will depend on advisor availability and the involvement of development workers or NGOs.



## 2. Grade School Children (grades 4,5,6)

The future of the park will eventually be up to the children as they mature and interact with it and its programs. Thus, they need to be aware of the park's function and aims in conservation. More immediately, they are a very receptive audience for new ideas and concept, and act as a conduit for bringing the new ideas to their parents' attention in an indirect and less threatening manner which reinforces important messages.

2.1. Develop understanding about parks, their conservation function, and their importance to the children.

- Presentation to inform them about parks and activity to reinforce message
- Display to introduce zoning & discussion
- Distribution of supplemental reading materials to reinforce messages

2.1.1. Slide program (1.1.1.)

2.1.2. Posters to be colored by students which they use to explain the park's function and importance.

\*2.1.3. 'ASYIK' issue on forests

2.1.4. Photo album / display on zoning (1.1.3. / 1.1.4.)

2.2. Develop understanding of how different habitats in the forest are important and linked to the park, environment / ecology and zoning / use.

- Activity to develop understanding about habitat functions
- Presentations to develop understanding about habitat destruction/activity
- Distribution of supplemental materials to reinforce messages

2.2.1. Game about the importance of each habitat

2.2.2. Cartoon to color about function of each habitat

2.2.3. Slide program on disturbances to habitats

2.2.4. Cartoon story about disturbances to the habitats

Note: Cartoons to be based on development of gibbon character as seen in fire campaign and repeated in different media

2.3. Develop awareness about what communities can do to support the park, how this effects the ability of the park to conserve the environment, and more specifically what they can do.

- Activity to stimulate zoning & discussions

2.3.1. Poster kits for zoning (1.4.3.) to create a park

2.3.2. Question guide for students to discuss activities allowed in the different zones

2.4. Reinforce importance of participation in park development and management.

. Supply reading material with reinforcing messages to school

2.4.1. Story about a group of children who live near a park and what they did to help the park.

2.5. Reinforce importance of individual actions in supporting the park and its conservation purpose.

. Distribution of supplemental reading materials to reinforce messages

2.5.1. Cartoon reinforcing messages about conserving the park's resources with section for the student to describe what he can do to help the park

**Note:**

The student's work could be displayed on the park bulletin boards and the stories / cartoons translated into dramas and presented to parents as part of a slide presentation program. A slide program for school children elsewhere could be created by the students also, to promote conservation and the park and build self-esteem. The development of a standard cartoon format and characters could be developed later into a series of comics focused on conservation and distributed to a wider audience. *Asyik* magazine, produced by CARE, could be provided on a regular basis if funding were available. CARE has also expressed an interest in input from NRMP for future issues. While initial activities would focus on all school children it would be advisable to develop a Nature Lover's Club or Nature/Park Support group within Pramuka for regular activities that would keep issues in the public eye. This group could then develop materials and activities for others. Another possibility is a student exchange program which focuses on the Park and conservation.

**3. Concession Staff**

Many of the concession staff because of their field duties and off job access to forest products need to be more aware of how their actions can effect the forest, its habitats and their ecology. They need to begin to develop an understanding about how the park aims to work with them to improve conservation and minimize disturbances to the environment.

3.1. Develop general understanding about park's conservation function and the different people who can affect it.

- large group presentations to inform and reinforce importance of conservation function
- Display to reinforce messages

3.1.1. Slide program about the park, conservation and the role of each person (from 1.1.1)

\*3.1.2. Videos / films / slides about other parks and their aims (from 1.1.2)

3.1.3. Calendar about park areas and environment (1.2.5.)

3.4. Reinforce conservation messages and develop understanding about off-the-job actions that cause negative impacts and the effects.

- Display to reinforce conservation messages

3.4.1. Posters to reinforce messages and illustrating positive behaviors with cartoons from 3.3.1 and 3.3.2.

3.2. Develop understanding about the impact of habitat disturbance and what other problems could develop.

- Large group presentations to inform them about habitats & problems
- Distribution of individual reading material to reinforce

3.2.1. Slide program about disturbances to habitats and the problems that result (based on 2.2.3.)

3.2.2. Cartoon story about disturbances to habitats (2.2.4.)

3.3. Develop understanding about what people can do to minimize the negative effects of their actions on the job.

- Displays to reinforce positive behaviors/actions
- Distribution of individual reminders to reinforce messages

3.3.1. Cartoon posters reinforcing positive behavior (based on 3.2.2./2.2.4)

3.3.2. Decals of cartoons (from 3.3.1.)

Note:

Holidays and regular celebrations can be utilized to present and reinforce messages. It would be best to do these activities under the concession's auspices and to connect them with rewards for appropriate behavior connected with their jobs.

#### 4. National Park Advisory Team

The Advisory team includes local village leaders, representatives from non government organizations, the Sub-office for Nature Conservation (SBKSDA) and Universities. There is a need for them to have a clear vision of the park and its mission, not just as a vehicle for traditional conservation methods, but an opportunity to develop more effective sustainable use supported by community participation. The first level in developing the teamwork this will require is developing common knowledge about the park and integrated conservation and community development.

4.1. Develop understanding about how parks conserve habitats.

- Presentations to inform them about conservation and habitats

4.1.1. Slide program adapted to emphasize conservation and how management plan can impact upon it (1.1.1.)

4.2. Develop understanding about what has been done in other parks.

- presentations to inform them about other parks
- Provision of supplemental information to increase understanding and awareness of other options

\*4.2.1. Films / videos / slides about other parks

\*4.2.2. Synopsis of reports/plans from other park and projects

4.3. Develop understanding about different ways to accomplish conservation aims and their pro's and con's.

- Presentations to inform

- Group planning activity based on presentation's information

4.3.1. Slide program

4.3.2. Planning cards with options and pros & cons

#### Note:

There is a need for visuals to explain the park management and issues and add reality to the abstraction that reports often create. Visuals and slides could then be used in other media to reinforce the ideas. It might also be useful to develop working packets, almost like games, to assist in planning and better focus group discussions.

#### 5. Bina Desa Staff

There is a need to develop Bina Desa staff awareness about the park's conservation function and integrated conservation and community development projects. More information about their current understanding and attitudes needs to be researched before developing materials or a general strategy for them. Ideally, this would then be integrated into existing training plans.

Possible actions might include:

- Participation in group presentations and discussions with the general village audience, school children and concession staff.
- Organizing processing and review discussions after presentations to identify needs and future actions.
- Distribution of supplemental materials for individual study

Useful materials for them include the following classic publications on rural development and the relationship between local communities and conservation areas:

- *Two Ears of Corn* (Indonesian translation from World Neighbors)
- *People and Parks* by Brandon Wells
- *The Poorest of the Poor* by Robert Chambers

Note:

There is a need for Bina Desa staff to observe practical, real-life examples of community development activities and methods. If there are study tours or exchanges it would be good to videotape commentary to present on return and share with others.

#### 6. Sub-Office for Nature Conservation Staff (SBKSDA)

The proposed park management is very different from the usual government approach to protected areas from the idea of zoning to community participation and development. There is a need to acquaint staff, especially the proposed field staff, with these ideas and convince them of their feasibility and relevance. More information needs to be gathered before a suitable approach can be designed.

Selected SBKSDA staff could be assigned to work with NRM staff in Bukit Baka as an on-the-job training experience to develop a more comprehensive understanding of integrated conservation and community development.

Possible actions might include:

- Provision of supplemental information about parks
- Working with staff to develop CIE activities for Pontianak-based target groups

Support media could include :

- \* *Two Ears of Corn* (World Neighbors)
- \* *People and Parks* (by Brandon Wells)
- \* Mini case studies for solving problems
- \* Selected reports from similar projects (Lore Lindu, Takabone Rate, etc.)
- \* *Media Pembangunan* (by Nancy Bergau)
- \* *Latihan Penyegaran Penyuluhan Kehutanan Taman Nasional Ujung Kulon* (by Deschamps)

## SECONDARY TARGETS

### 7. General Village Audience

The building of a water system for the villages provide an opportunity to discuss the park's watershed function as well as to begin demonstrating some concrete benefits from the park's programs.

7.1 Develop a basic understanding about the forest's effect on the water supply system.

- Small group discussions to inform about forests and water supplies
- Reinforcing messages through a video document of building the water supply with interviews
- Reinforce park image and tie water system through promotional materials

7.1.1. Flipbook / posters about the forest and water for those constructing the water system

7.1.2. Video, slide or photographic documentation of the construction

7.1.3. Work hats with park logos (1.2.4.)

7.2. Reinforce the importance of the park in maintaining the forest's watershed function.

- Implement dedication program to reinforce importance of water system
  - Involvement of VIPs to reinforce importance of event
  - Displays to reinforce key messages
  - Group presentation about the water system
- Posting of signs to reinforce link to park

7.2.1. Photo display (at the dedication ceremony and then traveling) of building of the water system with illustrations reinforcing the forest / park's link to it and posters created by the students

7.2.2. Slide or video program on building the water supply (based on 7.2.1)

7.2.3. Signs for the water system recognizing it as part of the park's program

**Note:**

UNICEF and CARE both have water and sanitation booklets and posters which could be used for extension connected to installation of the water supply. Posters could be displayed at the distribution site. If the PKK (family welfare education program for village women) could be activated it would be a good forum for regular presentations on water and sanitation.

## 8. School Children

The installation of the water system can also be used to develop the children's understanding about the forest / park's watershed function. Again, they can be an indirect reinforcing agent for messages to the general village audience.

8.1. Develop a basic understanding about how forests protect watersheds and how the park area is crucial to West and Central Kalimantan.

- Presentation to inform them about water and forests
- Provision of information to reinforce messages

8.1.1. Presentation about the forest and water using cartoon poster with a demonstration.

8.1.2. Cartoons to color about the forest and water.

8.2. Reinforce the importance of the forest / park to the local water supply.

- Provision of supplemental reading materials to reinforce effects of forest destruction and water
- Student involvement in developing posters to be displayed during water supply dedication
- Student involvement in developing play/presentation based on supplemental readings

8.2.1. Story about the death of the forest

8.2.2. Poster design packet about the importance of the forest and park to water supplies

Note : 'ASYIK' magazine has several issues about health and sanitation which could be ordered from CARE. Illustrations from UNICEF materials could be adapted for display

## 9. Women (In conjunction with home gardening training)

Unless they have a meaningful tie to issues or activities important to the target group, environmental messages can seem irrelevant. Since the women have expressed great interest in gardening this offers a unique opportunity to develop their ecological understanding of their gardens and to draw parallels with the park's function.



9.1. Develop awareness about how plants react with the soil and how trees in a forest have a similar function re: preventing erosion and increasing fertility thru organic materials.

- Small group presentations during home gardening demonstrations

9.1.1. Flipbook illustrating the forest and gardens' relationships to soil conservation

9.1.2. Demonstration kit for soil conservation using laminated illustrations

9.2. Develop awareness of forest and its function re: water conservation and effect on agriculture.

- Information display to reinforce messages & build group self-esteem

9.2.1. Posters for bulletin board with photos of participants and posters from flip book (9.1.1.)

9.3. Reinforce tie of park to soil fertility, soil conservation and watershed.

- Display to reinforce information about trees and soils

- Signs to reinforce links to park

9.3.1. Signs for gardens with park logo and message similar to other designs

9.3.2. display based on flip book (9.1.1.)

Note:

FAO and Women's Tribunal materials could also be adapted for use

## 10. Farmers (in conjunction with SALT training)

Erosion is a serious concern as farmers resort to steep slopes because more suitable land is unavailable. This issue is also important to the park. The course on sloping agriculture land technology (SALT) offers opportunities similar to the home gardening training. Conservation messages tied to SALT will have more meaning and be better tied to reality.

10.1. Develop understanding about different causes of erosion, how it effects crop yields and how actions can be taken to prevent and / or overcome it, and compare this to how forests effect soil conservation.

- Small group presentations of information and demonstrations about erosion problems

10.1.1. Instructional posters on SALT and the forest

10.1.2. Photos of soil conservation problems

10.1.3. Flip book for individual discussions (based on 10.1.1. and 10.1.2.)

10.2. Develop understanding about how to prevent erosion and the possible options and their benefits, and compare this to how forests react.

- Small group discussions

10.2.1. Demonstration kit for soil conservation (9.1.2.)

10.3. Reinforce the function of trees and others plants in preventing erosion and the role of the park and forest zones. Compare similarity of composting for agriculture to the natural process that occurs in a rainforest as plant matter decays.

- Small group presentations and discussions

10.3.1. Signs for SALT sights

\*10.3.2. FAO Materials for composting

\*10.3.3. 'ASYIK' issue on composting

10.4. Develop understanding about the importance of organic matter to forests fertility and how this idea can be applied to agriculture.

. Large group presentation on basic information

. Small group discussions

. Provision of supplemental information for individual study

\*10.4.1. Video on pesticides from World Education

\*10.4.2. FAO booklets

10.5. Develop understanding about how compost is formed naturally and in gardens.

. Small group presentation & discussion

10.5.1. Posters (9.2.1.)

10.5.2. Discussion posters comparing chemicals vs natural methods for composting and pest control

10.5.3. Flip book illustrating forest & garden relationship to soil conservation (9.1.1.)

10.6. Reinforce the need to leave forest habitats in protected areas undisturbed.

. Display to reinforce messages

10.6.1. Poster and photo display on bulletin board showing disturbed vs undisturbed areas (9.2.1.)

## 11. General Village Audience

The original fire campaign brought the issue of fire to peoples attention. The messages need to be reinforced and tied to the park's conservation purpose / function.

11.1. Develop greater awareness about the impact fires have on forests and conservation and how this relates to the park.

- Small group discussions

11.1.1. Display of photos from areas damaged in last year's fires

11.2. Promote community action to prevent fires.

- Group activity discussion to reinforce fire prevention messages

11.2.1. Discussion posters based on last year's booklet "Can Fires be Prevented ?"

11.3. Reinforce benefits from fire prevention.

- Presentation to large group to reinforce messages and motivate action

11.3.1. Presentation by students

Note: It would be good to tie activities to adat meetings/other village functions

## 12. School Children

The fire campaign was also an introduction to the forest's importance. These messages need to be expanded and linked to the park.

12.1. Reinforce messages about fire's impact on forests, the need to take action, and how these are linked to the park.

- Field trip to fire-damaged area & discussion to inform & build awareness
- Provision of supplemental materials to reinforce messages

12.1.1. Cartoon about fire and forests

12.1.2. Display of photos from areas damaged in last year's fires (11.1.1.)

12.2. Introduce the forest habitats and their interdependence and reinforce the importance of preventing fire.

- Game to develop understanding about habitats and fire

12.2.1. Habitats and fire game

12.3. Develop understanding about how fire's damage effects the environment / conservation / habitats and the park.

- Provision of supplemental information linking fire, forests & conservation
- Activity and discussion to reinforce understanding
- Presentation by students to inform village and develop awareness

12.3.1. Story about the park and fires

12.3.2. Poster design activity about importance of preventing fire and protecting the environment

12.3.3. Presentation or drama for parents

### 13. Adjacent Villages

Implement the original fire campaign in villages which exploit grasslands for cattle grazing, adapting to local conditions and priorities. Ideally this would be in coordination with grassland management activities. More information is needed to determine what changes are needed.

### 14. Concession Staff

Fire is also a hazard for the concessionaire (equipment fires, careless smashing, etc.) also staff often hunt or harvest forest products when not working opening possibilities for fire damage. It would be good to develop an awareness / education campaign with the concessionaire that would support their needs while promoting the park's interests. More information is needed, especially regarding "on the job safety needs."

14.1. Develop understanding about fire's impact on forest and actions needed to avoid or minimize.

- presentation to inform them & training to develop fire fighting skills

14.1.1. Slide presentation about fire and forests

14.2. Reinforce positive actions for fire prevention.

- Displays to reinforce prevention messages

14.2.1. Photo display of fire damage and cartoons about how to prevent fire

### TERTIARY TARGET

#### 15. Pontianak General Public

There is a need to develop awareness about the National Park and its vital conservation importance in the province. This also implies a need to develop general understanding of conservation. The Pontianak Sub-Office for Nature Conservation (SBKSDA) currently presents a radio question and answer program. The programming does not appear to be based on a well-defined strategy for developing knowledge and selecting messages relevant to specific audiences, but rather responds to random questions. While this is a very valid approach for generating interest, its weakness is in its limited direction and focus to accomplish more specific objectives as opposed to overall general awareness. The audience may or may not develop sufficient understanding of or active support for conservation and the park, partly because randomness of the

information may be difficult for the average person to process. SBKSDA also has a plan to place slides with conservation messages in movie theaters. Again, there is the potential for confusion, or at best memorizing catch phrases that don't have any meaning. (i.e. 'Save the Forest' does not really say why, for what purpose, or how - the point is to save the forest but, how will this be accomplished from the message - what is the message's purpose? Why should the target pay attention? Why is it important?) Developing a plan / coordinated strategy with specific goals/ messages / audiences / markers that build understanding and support in steps could have more lasting effect. Messages which indicate what people can do or which speak to their interests would have more impact. Developing a plan should be done in collaboration with SBKSDA and must be viewed as a long term, continuing effort. More information is needed and groundwork to develop SBKSDA awareness about the need and benefits from better planning.

Possible specialized targets for the future could include also :

- General Public
- School children (elementary, intermediate and high school)
- University students
- Forestry and agriculture students
- Nature club members
- Young adults
- Religious groups / organizations

Possible actions might include:

- Presentations to school or other groups to inform them about the park and conservation
- Presentations and activities at the information center to inform the general public, particularly visitors, about the park and conservation
- Student exchange programs to motivate interest in the park and conservation
- Village-run conservation programs for visitors to inform them about the park, motivate their interest, and build village self-esteem

The media used could be a combination of posters, slides, and booklets designed especially for the area and the slide programs and displays made by people and students at Bukit Baka, such as:

- Cartoons using the characters developed in 2,3,9, and 12 printed in booklet form to supplement curriculum or give away at exhibitions.

- Video interviews with people and children about the area and conservation
- Information packets about the area for group exchanges, visitors, etc.
- Reader of conservation stories to supplement school reading programs, possibly illustrated by Bukit Baka students.
- Experiments for school children about conservation

## 16. Park Visitors

It would be premature at this point to begin planning materials, but there should be coordination between communication, information and education efforts and the Pontianak-based NRMP information center about park. There is a need to develop a message theme and design theme to both interest the targets and create a park identity. The conservation importance of the park must be emphasized. Practical information on how to ensure its sustainability, especially appropriate park use and etiquette is also needed. Practical information on how to get there, what to see, etc. will be needed. How to do this will depend upon the target groups' knowledge, attitudes and practices / behavior and available resources. This will be determined later when more information becomes available.

Possible specialized targets might include :

- International nature tourists
- Local nature tourists
- School recreation groups
- Scientific or research visitors

Possible actions might include:

- Presentations by school children to inform park visitors about the park and conservation
- Nature walks led by villagers to inform visitors about the park and conservation

The media might include posters, small folders or brochures, displays, slide and video programs, news releases, postcards, games, etc. There is a need for standard information for publishers and the tourist industry similar in design to a press package. An English language training comic could also reinforce conservation messages.

## 5. IMPLEMENTATION SUGGESTIONS

There is a need to gather more data about current knowledge, attitudes, and practices for each topic or focus of the proposed strategy, as this will allow the materials and methods to be more relevant and effective. Time and other factors have limited the information gathered and there is a need for more in-depth information that is best gathered by those with established relationships with the villages. Existing documentation does provide some insights, but their focus and purpose are different and thus not always relevant.

At the present the immediate aim of the strategy could be implemented by the advisors, since it is of high priority and employs mainly mass media methods which can communicate information to large groups relatively simply. The advisors could initiate the the smaller group and individual activities as well, particularly those designed to supplement their ongoing activities. Practically, however, the range of project activities and numbers of participants will also necessitate involving more field workers, especially those who would facilitate sustained community development. Ideally these fieldworkers would live in the villages full-time. They might need some initial training on how to use media, particularly on how to employ it for productive and interactive discussions, not merely for instruction. They should also be trained to continue collection of data about knowledge, attitudes and practices.

Ideally field staff would be from the area as there is great language and cultural diversity in the area. Cultural sensitivity and knowledge about local conditions is another advantage to using local people, such as youths who have returned from school and need employment. Involving some senior members of the community or model farmers who are respected would lend credibility, but their livelihood needs might limit their participation. SBKSDA and Bina Desa participation is important. As SBKSDA has no staff permanently posted Bukit Baka, their involvement in these teams would help establish the good relationship with the communities that is so essential. Bina Desa's participation is also important to minimize conflicting perceptions among various parties involved in the park management and project.

Utilizing outside groups such as Pontianak-based NGOs has also been suggested, but their limitations include lack of appropriate skills, experience, and attitudes, the absence of full-time field staff, their minimal knowledge of the local languages and cultures, and their limited other resources.<sup>7</sup> A more complete evaluation of

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<sup>7</sup> Please refer to Volume 2 of this report for further information about the NGO training.



the NGOs has been prepared by NRMP.<sup>8</sup> National-level NGOs could perhaps be utilized for training field workers both in a general trainings and in following workshops and activities in the field. Government volunteer groups sponsored by the Department of Manpower (Depnaker) or the Directorate General for Rural Development (Bangdes), university student rural internship programs (KKN), and church organizations are also options. The long-term advisors need to determine which alternative best suits the existing conditions.

Other park projects have used a special communications team effectively, whereby a team of four people makes routine visits to villages monthly. In Bukit Baka - Bukit Raya, this team could consist of field workers, Bina Desa staff and SBKSDA staff, perhaps as well as a teacher, as in other park projects. Training could be both in the field or at the Pusat Pendidikan Lingkungan Hidup (PPLH), Trawas, East Java which has experience with extension, community programs and media production. This facility also has very good appropriate technology facilities. Video could be used to record training activities to share with other field staff during a small workshop or seminar on materials and media. Alternatively, the two Catholic media centers in Pontianak and Sintang could assist with media production.

Through project-supported activities, school children can also be involved, especially presenting plays, making displays, video or slide programs about the forest, conservation and the park for local and Pontianak targets. In addition to adding a unique human face to the media, this would build the students' self esteem and enhance the Park's image locally.

The strategy gives a very general indication of the media and their intent. Before developing media, specific and measurable objectives need to be developed, based upon the goals of each step. Rough drafts for the materials need to be developed for the first phase of the strategy and a system for trying out, evaluating, and if necessary revising media developed. Finally, the long-term advisors need to review the CIE example media and materials collected and obtain the relevant materials.

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<sup>8</sup> Please see The Role of NGOs in the Bukit Baka - Bukit Raya National Park, NRMP Report No. 19.

**APPENDIX 1: TERMS OF REFERENCE  
ENVIRONMENTAL EDUCATION & AWARENESS CONSULTANT  
BUKIT BAKA-BUKIT RAYA NATIONAL PARK**

**1. BACKGROUND**

Under the USAID-supported Natural Resource Management Project (NRMP) a team of advisors is assigned to work in the Bukit Baka area carrying out activities under the NRMP Implementation Plan. This team includes a Forest Research Advisor/Team Leader, a Nature Conservation Advisor, a Social Forestry Advisor, and an Agroforestry/Forest Management Advisor. As the project moves forward with the implementation of field activities in Bukit Baka-Bukit Raya there is an urgent need for technical assistance in the area of environmental education and awareness that will include the training of members of local government agencies, NGOs, schools, Universities, local communities and private interest groups to provide them with the skills necessary to continue training with emphasis on Conservation Education and Awareness.

The NRMP Bukit Baka campaign developing and linking fire prevention and conservation awareness carried out in July 1992 demonstrated the effectiveness and benefit of Communication, Information and Education (CIE) efforts but also the time and manpower needed to implement these. It also demonstrated the need for follow up and coordinating project activities and goals with local needs and interests. Thus the earlier experience emphasized the need to develop an overall strategy for communication, information and education efforts focussing on environmental education and awareness for the Bukit Baka-Bukit Raya National Park. Within this strategy future campaigns would be organized, coordinated and sequenced along with materials and messages. This strategy for environmental education and awareness will be closely incorporated into the integrated conservation and development strategy which is being developed for all the activities in the Bukit Baka-Bukit Raya National Park.

Both the preparation of the strategy and the implementation of campaigns once the strategy is designed will require technical assistance at various stages. This first consultancy focusses on the initial need to develop an overall strategy and will be followed by later consultancies to help those involved (NGOs/PHPA) to implement individual campaigns.

## 2. TASKS

The consultant will carry out the following tasks.

- a. Review and collect in Jakarta and Pontianak available materials from other groups involved in environmental education and awareness campaigns to see how these might be adapted for use in Bukit Baka-Bukit Raya.
- b. Work with GOI counterparts and identified NGOs in Jakarta (Bina Swadaya) and in Pontianak (Agromitra) able to assist in developing and implementing the strategy.
- c. Run a short training course in Pontianak with the selected NGOs on how to develop and implement the strategy also a field trial in Nanga Siyai of the proposed strategy.
- d. Finalize the proposed strategy with an implementation schedule and recommendations of follow up work to be undertaken with NGOs/local community groups.

## 3. OUTPUTS

- a. A long-term communication and information strategy for environmental awareness and education to be used in Bukit Baka with an implementation schedule of activities, messages and proposed campaigns. Proposed trainers and participants should also, if possible, be identified.
- b. Collection of sample materials to be used to support the strategy and campaigns in Bukit Baka.
- c. Initial training of NGOs in developing and implementing the proposed strategy along with recommendations for further assistance needed to support NGO involvement.
- d. A final report at the end of the consultancy summarizing (a), (b), and (c).

## 4. REPORTING

The consultant will liaise with GOI counterparts, NGO participants, local communities, NRM/ARD advisors and other relevant parties and review draft outputs with them. The final report will be given to the NRM/ARD Chief of Party for forwarding to the GOI and to USAID.

**5. DURATION**

Up to 36 working days from mid February 1993.

**6. QUALIFICATIONS**

- a. Diploma/degree in Social Science/Communication/Education.
- b. Minimum of five years' experience in environmental awareness field in developing countries. Experience in preparing environmental awareness materials and carrying out training programs in environmental awareness in SE ASIA/Indonesia.
- c. Speaking and writing knowledge of Indonesia language.

## APPENDIX 2: CONSULTANT'S SCHEDULE

### FEBRUARY 1993

- 17 Arrived in Jakarta
- 18 Reported to NRMP, organized appointments and administrative details  
Conferred with Eric Scarsborough regarding policy inputs  
Met with Bianti Djiwandono, Ford Foundation, regarding forestry/ecology project referrals and background  
Met with Suzanne Siskel, Ford Foundation, regarding background information about Ford Foundation social forestry activities and referrals  
Checked reference materials at the British Council library  
Spoke by phone with Jerry Bisson, USAID, regarding contact and reference suggestions
- 19 Began drafting ideas for NGO training and gathering data regarding target audiences for CIE  
Conferred with Colin MacAndrews, NRMP  
Researched and reviewed reports in NRMP library  
Met with Victor Panjaitan, USAID, regarding NGOs and parks or forestry projects and obtained list of NGOs  
Met with Jerry Bisson, USAID, regarding my terms of reference  
Organized appointments  
Spoke by phone with Russ Betts, WWF, regarding materials and referrals
- 20 Reviewed strategy information needs, field work organization, priorities, reports and reference materials  
Drafted letter requesting awareness and educational materials and began list of possible sources
- 22 Organized appointments  
Picked up social marketing materials from Tjep Marku, AED  
Met with Catherine Haryono, CARE, regarding community development training materials  
Met with Glenn Gibney, CARE, regarding water and forestry projects  
Meet with Hanna Tobing, CARE, regarding materials  
Met with Gerda Wulandari, CARE, regarding *Asyik*, their magazine on health, sanitation, water and environment, and discussed their future topic and distribution plans  
Met with Marty Fujita, The Nature Conservancy, regarding the recent CIE strategy for Sulawesi parks  
Met with Margaret Mogler, consultant, regarding referrals and materials
- 23 Met with Sandra Moniaga, WALHI, regarding projects, materials and NGOs  
Met with Zukri Saad, WALHI, regarding projects and materials

Met with Greg Rooney, GTZ, regarding NGOs  
Met with Rudi, WWF, regarding materials  
Met with Katerina, WWF, regarding materials  
Met with Vince Deschamps, WWF, regarding community awareness  
and participation in park management<sup>9</sup>

- 24 Reviewed documents, reports, etc.  
Checked administrative papers and finances  
Met with Sih Yuniati and Yosef Arihadi, Bina Swadaya,  
regarding training and development of NGOs  
Met with Drajat, UNICEF, regarding media and materials  
resource  
Met with Mathur, UNICEF, regarding water and sanitation  
materials
- 25 Met with Jackie Alder, EMDI, regarding parks, community  
participation and materials  
Met with Dr. Reg Watson, EMDI, regarding parks, community  
development and materials  
Met with Arief Wicaksono, EMDI, regarding materials, NGOs and  
conservation  
Reviewed reference materials at USAID  
Spoke by phone with Paul Musante, World Education, regarding  
NGOs, community development, pesticide control and materials
- 26 Traveled to Pontianak  
Met with Sukarman, NRMP, regarding my plans  
Met with Roy Voss, Fernando Potess, and Mering Ngo, all of  
NRMP, regarding my plans  
Reviewed documents
- 27 Met with Tonny Soehartono, KSDA, regarding consultancy plans  
Met with Erwin, KSDA, regarding purpose of interviews  
Reviewed documents  
Met with Tommy Yansens, MAF, regarding contacting expatriates  
and NGOs working in West Kalimantan
- 28 Met with Fernando Potess and Mering Ngo, both of NRMP,  
regarding plans for NGO training and CIE strategy  
Reviewed Documents

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<sup>9</sup> The consultant had also met with Ian Craven, Rili Johani, Tim Jessup and Gillian Diaz, all of WWF, on February 23 regarding community participation in parks, awareness campaigns, educational materials and other resources.

## MARCH 1993

- 1 Met with Saenan M. Yunus, Kanwil Penerangan, regarding media, equipment and access to them  
Met with M. Zeet Hamdy, Kanwil Penerangan, regarding current programs, facilities, staff, etc.  
Met with Sri Ratnaningsih, Kanwil Pariwisata, regarding program and resources  
Met with Uray Ali Umran, Bappeda, regarding current development plans and projects  
Meet with R. Prawoto, Kanwil Pendidikan Masyarakat, regarding program and resources  
Attended evening workshop regarding national park management
- 2 Reviewed documents  
Met with Fernando Potess and Mering Ngo, both of NRMP, regarding field work plans  
Arranged hotel conference room, etc. for NGO meeting  
Began preparations for NGO meeting
- 3 Met with Erwin, KSDA, regarding questionnaire and research  
Met with Soegeng Wirjono, Kanwil Bangdes, regarding program and resources  
Prepared for NGO meeting
- 4 Organized NGO meeting materials, agenda, photocopies, etc.  
Attended NGO meeting  
Held follow-up meeting with Roy Voss, Fernando Potess, and Mering Ngo, all of NRMP
- 5 Met with Roy Voss, NRMP, regarding fax and field training finances  
Met with Mering Ngo, NRMP, regarding field training  
Organized and copied materials for field work  
Distributed field training advance to NGOs and reviewed conditions  
Developed questionnaires and guides for field training  
Prepared letter for Elmo Drilling, NRMP  
Contacted NRMP-Jakarta for clarification regarding finances
- 6 Distributed advances to NGOs for field training and reviewed conditions  
Continued preparing for field trip (materials, photocopies, supplies, etc)
- 7 Continued preparing for field trip (materials, supplies)
- 8 Departed for Bukit Baka  
Organized supplies, food, etc.  
Organized transport to log pond  
Conducted orientation to field training and distributed materials to NGO participants

- 9 Continued orientation and distributed equipment and supplies  
Escorted participants to their host villages/*dusuns*  
Reviewed participant information reforms
- 10 Organized finances  
Reviewed participant information forms  
Prepared guidelines for park/forest attitudes  
Visited the three field training sites and reviewed experiences with the NGO participants
- 11 Organized agenda and references for review meeting  
Visited the three field training sites and reviewed experiences with the NGO participants
- 12 Organized materials  
Organized finances  
Organized NGO participants' return to Pontianak  
Met with NGO participants to review experiences
- 13 Met with NGO participants to review experiences and develop strategy suggestions  
Distributed funds for return to Pontianak  
Retrieved equipment and supplies, reports and feedback forms
- 14 Escorted NGO participants to log pond and organized their return transport  
Met informally with village leaders  
Paid villages for accommodation of NGO participants  
Organized field training materials  
Reviewed documents  
Met with Roy Voss, Mering Ngo, Ali Hayat and Zephri, all of NRMP, to review experiences and follow-up
- 15 Returned to Pontianak  
Reviewed documents, etc.
- 16 Met with Tonny Soehartono, KSDA, regarding review of field training  
Met with P. Lucianus Ginting, Comsos, regarding media production and resources  
Prepared draft recommendation letters
- 17 Met with Erwin, KSDA, regarding follow-up interviews with government agencies  
Met with Sukarman, NRMP, regarding field training expenses  
Met with Roy Voss and Fernando Potess, both of NRMP, regarding field training and follow-up  
Returned to Jakarta
- 18 Worked on training materials  
Organized photo processing and audio tape duplication
- 19 Worked on training materials  
Organized administrative and financial papers



- 20 Worked on training materials  
Met with Colin MacAndrews, NRMP, regarding status of work and results of the training
- 21 Worked on training materials  
Organized reference package for Pontianak team
- 22 Worked on training materials and report  
Conferred with Arief Wicaksono, NRMP, regarding resources and awareness materials
- 23 Worked on training report  
Reviewed materials in USIS library
- 24 Worked on training report
- 25 Worked on training report
- 26 Sorted and organized reference materials  
Revised report
- 27 Purchased supplies  
Faxes to Pontianak  
Wrote follow-up letters
- 28 Reviewed notes and organized list of proposed follow-up appointments  
Packed materials and equipment and left instructions on what to do with them
- 29 Returned to Bali

## APPENDIX 3 : SUMMARY OF CONDITIONS IN THE BUKIT BAKA-BUKIT RAYA NATIONAL PARK AREA

### LOCATION

The Bukit Baka - Bukit Raya National Park is located on the border area between West and Central Kalimantan in the catchment area for the Melawi and Katingan River systems in the Schwanner Mountain Range. Until 1992 it was a strict nature reserve (*cagar alam*). Access is by plane or bus from the West Kalimantan provincial capital, Pontianak, to Nanga Pinoh (approximately 400 km), by speedboat (approximately 2 hours) to the SBK log pond at Nanga Popai, and finally by car (approximately 28 km) to the current Natural Resources Management Project (NRMP) project area near the park. The area can also be reached from Central Kalimantan by road.

Prior to the 1980 entry of logging concessions PT Sari Bumi Kusuma (SBK) and PT Kurnia Kapuas Plywood (KKP), the area was very isolated. The number of villages (*desa*) and hamlets (*dusun*) is still not certain, and accurate maps of the area are difficult to obtain. Although there are several logging roads, many settlements are only accessible by walking great distances or by river travel. Logging camps have generator power, access to television broadcasts via parabola, and radios for communication. A few villages have obtained generators, parabolas, and televisions from the government, but in general the area remains relatively isolated and limited physically, socially, and economically.

### AREA

The park is 181,090 hectares (ha) in size, not including the adjacent communities. NRMP activities are currently concentrated in villages nearest to the main camps of the two concessionaires, SBK and KKP, whose logging areas will be absorbed eventually by the park.

### ENVIRONMENTAL CHARACTERISTICS

The park is important globally because of its rich biodiversity and because there are many rare and endemic species. Information and data maps on climate, soils, topography, and plant and animal distribution are of poor quality or non-existent. The area is characterized by :

- Mostly metamorphic mountain ridges with slopes to the northwest and southeast greater than 60 %, alternating with hills and lower metamorphic ridge systems with 41-60% slopes; hummock plains with 16-25% slopes are mostly located in the south. There are 47 major peaks, hills and mountains,

including the highest mountain in Kalimantan, Bukit Raya. Elevations range from 150 to over 2200 meters above sea level.

- Extensive grasslands (*alang-alang*) estimated at more than 200 square kilometers of *alang-alang* south of the Melawi River to approximately km 28 along the SBK main logging road, and several kilometers to the east and west on either side of it with scattered scrub stands (*belukar*) and some secondary forest especially in valley bottoms. The extent and continued advance of these grasslands is tied to extensive, recurrent grass fires caused by hunting or clearing cattle grazing sites. Fifty years ago there was secondary forest at km 13, but the frequent fires have destroyed vegetation associated with regenerating forest areas, and as a result *alang-alang* grass has become dominant.
- Lowland and hill dipterocarp forest with high commercial value plus montana and moss forest with many species localized and with low density distribution. The area within the park is relatively undisturbed, but secondary and pioneer forest areas are often damaged by grass fires or escape fires from swidden. Habitats are also being disturbed by logging operations, and logging wastes pose a fire hazard. The result is a erosion of the forest edge and a decline in secondary forest and scrub land which reduces the area available for swidden. Swidden and harvesting forest products is prohibited in logging areas.
- Information about flora and fauna is limited. According to local people, most species are still found in the forest area but numbers have decreased noticeably since the concessions began logging, most probably due to habitat loss. Species include orangutans, gibbons, monkeys, lemurs, squirrels, civets, wild pigs, deer, clouded leopard, sun bear, hornbills, kingfishers, eagles and other small birds, mammals and reptiles. The variety and quality of fish have also declined.
- Information about soils is limited. There has been considerable soil disturbance due to logging and road building, logging waste and improper swidden. These have contributed to recent problems of river siltation and water turbidity, especially after rain. This has caused problems for villagers as they depend on the rivers for domestic and agriculture use. During heavy rains the water can be cloudy for extended periods; women then need to walk long distance to smaller streams to locate potable water.
- Roads also disturb the natural course of small streams and drainage. It isn't clear what impacts ponding has. Siltation and logging waste disturb the streams' use for transport.

- There is little information about hydrology. Most desa and dusun depend on the rivers for domestic needs. Natural springs are located near many but not all settlements, and are not yet exploited.
- The climate is tropical with a high average rainfall. There is a wet season (October to May) and a dry season (June to September) often exacerbated by dry winds (El Nino) and periodic draught. Thus fires start and spread easily during this season, and people prefer to open new agricultural areas that are near springs or streams in part because of fire hazards. Flooding in the rainy season makes many streams impassable.
- The park's watershed areas effects over 1,000,000 people in both West and Central Kalimantan.

#### POPULATION CHARACTERISTICS

Population density is very low; the current NRMP project area includes about 2100 people (1500 in West Kalimantan and 600 in Central Kalimantan) who were very isolated from outside contact until recently. Few outsiders enter the area except for NRMP and logging staff, and government extension services are rare. Even now, transport and communication between communities is difficult and affected by the seasons.

The local people live in scattered, distant permanent river side settlements that are far apart, but also maintain smaller settlements near their swidden sites. These are relocated when new swidden sites are too far away. The people have been in the area for about five to six generations, but there have been frequent relocations due to land disputes or other conflicts as well as insufficient viable swidden sites or access to clean water. The settlements are designated as dusun. Several dusun compose a desa. There are also about 800 people employed by the concessionaires (700 by SBK and 100 by KKP) living several camps.

- Limbai Kelait, Kenyilu, Koruh Kenyilu, Ot Danum (Ulu Arai, Ulu Ai'), Melahui, and Ransa Dayak are located in West Kalimantan near the park and concession areas. They do not produce sufficient rice. Swidden are far from the main settlement, fallow time is short and swidden is often on fragile land with too steep a slope. They need to supplement their swidden through employment or commercially exploiting forest resources.
- Melayu' Nyadam villages are located in the grassland areas in West Kalimantan, and besides farming also raise cattle and rubber. Their need for suitable pasture is often cited as a major cause of fires.

- Ot Danum (Ulu Arai, Ulu Ai', Dohoi, Pangin Daya'), Melahui Daya', Pangin, Osa and Ngaju are swidden farmers located in Central Kalimantan and live in more isolated areas (nearer to primary forest) not yet disturbed by logging. They are more successful in meeting livelihood needs from their swidden and have more productive swidden with longer fallow time. They do not need to rely as much on forest products to supplement income.
- Hunter gatherers such as the Punan and Uwo are reportedly in the park area but there is no clear information about them.
- Economic changes are causing social stratification in contrast to previously more egalitarian lifestyles when people could live more successfully from swidden and labor was exchanged rather than salaried. Wet rice paddies (sawah) have become more labor intensive, and salaried labor is beginning to create a laborer class.
- Many local people live in single family dwellings rather than longhouses as a result of a government program to 'modernize' villages, though villagers cite costs, fire hazards and family conflicts as the reasons.
- The median age of the population is 14 years. There is no clear data about infant or maternal mortality.
- The Melayu Nadam villages are Moslem. Christianity and Catholicism are new to the region, in some cases having arrived only 10 years ago. Older beliefs and religious practices prevail with old taboos still being carefully observed. Major village ceremonies focus on planting and harvesting.
- One report claims that "most" children attend school, but others claim attendance is low, especially during peak agriculture activity. According to villagers, dropping out from the elementary schools is usually for economic reasons (fees, supplies, uniforms, test fees, etc.). Some students drop out because the schools are too far from their home. Nonetheless, the children in school represent the only large group that gathers regularly. Elementary schools are located in each village; the concessionaires provide some of the teachers, while others are from the Department of Education. Instruction is usually in a mixture of the local language and Indonesian. The only materials are blackboards, a few books and posters, and teachers' experience limited. Junior and senior high schools are in the district capital (kecamatan).
- Most older villagers are illiterate and do not understand Bahasa Indonesia. Some middle-aged villagers have basic literacy skills (one report states that many have attended school through third grade) and can understand Indonesian, though not fluently. In general few women are literate or

speak Indonesian. Each ethnic group has its own distinct language. Some in Central Kalimantan speak Banjarese due to trade contact.

- Knowledge about farming practices, the forest, and forest products varies among individuals, as does their capabilities as farmers. Knowledge about medicinal plants is sacred and can only be shared following the proper offerings.

## ECONOMIC CHARACTERISTICS

Rice and cassava are the major staple crops and there is little diversity in other crops (corn, bananas, long beans, fruit trees). Fallow swidden is sometimes planted with ratan, coffee or other perennial crops that have potential for regular income. Small gardens and fruit trees are planted next to the settlements.

- In West Kalimantan most still practice swidden, but crops are insufficient and livelihoods must be supplemented by harvesting other forest products or contract work. Non-enrichment fallow is common.
- The SBK Bina Desa program began promoting sawah 3 years ago and has been able to involve some farmers, but the harvest is insufficient for family needs. The land area is not enough. Clearing the land is difficult and requires learning new skills. Learning to use the hoe has been extremely difficult for some and is viewed as much more demanding than traditional methods. Women remark on the increased labor needed to maintain the sawah even though it is more conveniently located nearer to home. The sawah also requires more outside inputs of seeds, fertilizer, and pesticides. These are now being provided free, and NRMP and the concessionaire are concerned about the dependency on outside assistance that this appears to be creating. Some village leaders have expressed concern but, it is not clear how seriously they feel this to be a problem.
- Farmers in Central Kalimantan have more productive swidden and more access to viable forest areas less disturbed by concessions. They also tend to use the fallow swidden more effectively.
- It is estimated that women do 60% of the agricultural work, especially in maintaining the swidden and gardens, harvesting, post-harvesting tasks. They also market garden produce. When there is forest close to their settlements, they may harvest some products, but usually travel only to harvest illipe nuts (*tengkawang*). Women are also responsible for maintaining any livestock (chickens, pigs, cows). Women and children may also pan for gold. Their income is used to buy basic commodities like soap, cooking oil, and the like.

- Men do the heavy work of preparing swidden sites and are usually assisted by women and other family members for lighter tasks. They also collect/harvest forest products, such as *damar* (resin), wild rubber, honey, rattan, *gaharu* (a fragrant resin) and timber, such as ironwood (*ulin*) to sell and *meranti* and *kapur* for their own use. A wood cutter can make 6 times the average pay.
- Collecting forest products is usually done in preharvest or "hungry" season (*paceklik*) and requires a special trip, especially near logging areas where products have become more scarce. Men market the forest products although they may be processed by women. Men usually travel further to sell goods.
- Hunting is a major source of protein, and most claim that it is opportunistic. Animals are harder to find and those that disturb swidden crops, such as, deer, wild pigs, mouse deer, etc. are killed.
- Market prices for agricultural and forest products are not stable. Local people do not have good marketing contacts and are very vulnerable often receiving far less than the value of their goods. Transport is difficult and expensive and may be impossible if there are floods or if river levels drop. Most markets are far away. Some people do market goods to the logging camps, but often there is a glut of the same produce and not enough buyers.
- If employed by the concessions, local people (always men) usually have the lowest paying and least secure jobs as guards, cruisers, or cutters, or in other menial jobs. In part this is due to their limited education, but uncertain availability at agriculture peak times has also been cited. Some have been able to purchase chain saws on credit from the concessionaire and work freelance.
- Children help their parents with household and agricultural tasks, though often not too many demands are made. Young boys may fish or trap small animals to supplement food. The girls assist their mothers with traditionally "women's" tasks.
- Handicrafts are not made for sale but for personal use. There is concern that younger people are not interested in learning the skills and that they are being lost.
- Most villagers do not know how to care for livestock or treat diseases, and veterinarian services are not available. Settlements closer to logging areas claim a higher incidence of disease than previously. As more and more people raise livestock and their numbers increase, veterinary care is becoming important.

## POLITICAL AND GOVERNMENT CHARACTERISTICS

Most desa are defined by population numbers and encompass many isolated dusun. There are great distances between the dusun, unlike in more densely populated areas where neighborhoods abut. In most cases village structures are weak, but conditions vary from dusun to dusun.

- LKMD and PKK are not always functioning.
- Men occupy all village offices.
- In some villages the traditional (*adat*) heads are more powerful than the government-appointed village heads, though this is not always the case. In Nanga Siyai the *adat* council has been revived in response to conflicts with both the *adat* head and village head.
- In general there has been an erosion of *adat* law and government structures have not filled the void. Younger people are less patient and willing to follow *adat*. Traditional regulations or guidelines for *swidden* are being ignored.
- Most government services only reach to the *kecamatan* (sub-district) level and even there staff and resources are limited. Visits by government extension workers are rare and sporadic as they are inhibited by limited budgets. Only family planning seems to have had any involvement and village representatives were trained and now distribute contraceptives (though some claim the choice and availability is limited.) Some equipment from projects or routine programs have been brought to the area (sewing machines, TV and parabola, typewriters, hoes, etc.), but these are rarely available to the average villager and are not found in each village.

## NRMP INVOLVEMENT :

NRMP is a GOI project assisted by USAID. Project staff in Bukit Baka - Bukit Raya include a Nature Conservation Advisor (1991), Social Forestry Advisor (1991), Natural Forest Management Advisor (1992) and a Research Advisor / Team Coordinator (1992), two field assistants, and 3 drivers. The project counterparts are from Ministry of Forestry's Suboffice of Natural Resource Conservation (SBKSDA). Their work includes:

- cooperating with concessionaires to improve production forest management so it is more ecologically and economically sound;
- cooperating with local communities and the concessionaires' Village Development Program (Bina Desa) thru agroforestry, fire prevention, and other community development activities;



- supporting development and implementation of a park management plan that integrates community development and conservation; and
- supporting development of research station and research programs.

#### MAJOR ENVIRONMENTAL CONCERNS

Local communities are acutely aware of negative changes in the environment and sometimes their causes but do not acknowledge that these may result from their own actions. The most critical problems are :

- river pollution from soil run off, kerosene and gasoline and siltation;
- wild fires which damage forests, plantations, personal property, and contribute to alang-alang spread;
- the spread of grassland areas which encroach on forest, inhibit regeneration of the forest, and sometimes affect water tables and hydrology;
- unnecessary destruction of habitats, vegetation, water and soil systems from inappropriate logging techniques, waste, and road and other construction;
- exploitation of flora and fauna, especially protected or endangered species to compensate for insufficient rice production and lack of other comparably profitable income sources;
- soil disturbance and erosion from swidden farming on inappropriately steep slopes, due to limited access to suitable land;
- soil degradation due to over farming and reduced fallow times, again due to land pressures; and
- sawah farmers' increased reliance on pesticides and chemical fertilizers and result in soil degradation and pollution.

#### OTHER RELEVANT CONCERNS

- The planned highway along the current concession road will open the entire area to greater exploitation and increasing demands on resources.
- The projected industrial timber plantation (HTI) will require clearcutting 3,000 ha of primary and secondary forest destroying habitats and land already under local cultivation.

- The supporting HTI transmigration programs and staffing will impose more land pressures.
- The casual attitude of most local people towards fire, forest ownership, protected species and their role in contributing to or exacerbation current problems prevents most from realizing what they could do to improve their situation.
- Local people claim that resources are still abundant enough to share with others contradicting their claims regarding a lack of suitable land, fewer animals, and the like. The rapid and unfamiliar changes in their social and economic environment require new and more appropriate skills and attitudes. The degradation of traditional relationships, culture and law (adat) adds to their confusion and vulnerability.
- Local land rights are not documented or recognized. Areas are given to concessionaires without consulting local people or considering the impact on their lives. Thus there are growing feelings of inequity and powerlessness and increasing through silent resentment towards the government and concessionaires over the lack of respect given to villagers and their proprietary land rights and over unfulfilled promises. Such dynamics undermine the sense of empowerment and responsibility necessary for community participation.

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**APPENDIX 4:**  
**CIE STRATEGY RECOMMENDED BY NGOS**

# STRATEGI LSM DALAM MENGELOLA T.M

NO	KEGIATAN	TUJUAN	POK SAS	MATERI	METHODE	LOKASI	SARANA
1 2	<b>SURVAY</b>  <b>PENYADARAN MASY.</b> A. Pengertian tentang Taman Nasional B. Manfaat Taman Nasional C. Program Taman Nasional	Mengumpulkan dan Identifikasi data  - Menumbuhkan, menqakalq dan meningkatkan kesadaran masy. terhadap TM. BB-BR  - Meningkatkan peran serta aktif positif dan kolektip masyarakat terhadap TM.	Masyarakat sekitar Taman Nasional  1. Anak laki-laki dan perempuan tidak sekolah  2. Anak sekolah  3. Wanita/pria dewasa  4. Ibu-ibu  5. Bapak-bapak	so'sek Bud. Hutan, lingkungan Konservasi, peraturan, sanitasi  - Pend. membaca/tulis, gambar-gambar tentang flora/fauna  - Pengajaran, pengenalan flora/fauna - Dasar-dasar L.H. - Taman Nasional - Konservasi  - Taman Nasional - Konservasi - Taman Nasional - Konservasi - Sanitasi	- Observasi partisipan - interviu  - Belajar kelompok - Demonstrasi - Ceramah berpartisipi  - Pengenalan lap. - Diskusi kelompok - Ceramah - Dialog  - Dialog - Peragaan  - Dialog - Peragaan	- Sungkup - Dalabdn - Manja Juwoi  Idem Idem Idem  - kawasan Hutan lind. - kelas - sekolah  - Diruangan  - Diruangan  - Diruangan	Camera, Recorder, Alat tulis Surv  Alat-alat tulis, bahan pelajaran Gambar dll.  Alat-alat tulis & Sarana Camping Bahan pelajaran  ATK, Gambar, Recorder dll.  ATK, Gambar, Recorder dll.  ATK, Gambar, Recorder dll.
3 75	<b>PERTANIAN MENETAP</b>	- Menqurangi aktifitas pindah-pindah berpindah	Bapak/Ibu Remaja	- Budi daya Padi sawah - Jriqari - Cetak sawah - Teknik penyemprotan/ - menggunakan SAPROTAN/ SAPRODI dan pestisida - Pembuatan pupuk kompos - Pasca panen	- Demonstrasi - Fasilitas - I  - Demonstrasi - Pengkaderan - Maqang - Pembinaan kontinu	- Idem -  - Idem -	- Cangkul, sabit, petrang, pupuk <del>...</del> , pestisida kopur (SAPROTAN/SAPRODI) - Pupuk (pupuk kandang/kompos) - Diklat.
4	<b>PENYULUHAN SANITASI</b> A. Lokasi Pemukiman B. Air Bersih. C. Kesehatan	- Menuju hidup sehat	Anak-anak Remaja Dewasa	- Ekoloqi - Hygiene - Instalasi air bersih	Ceramah Simulasi Advocacy Fasilitasi teknik <del>...</del> Ceramah Diskusi KLP	- Idem -	Gambar, Film, Te Slide, Foto Pipa semen, bath (yang ada di pedes)
5	<b>PENYULUHAN MG.RT</b> (MANGUNGAN RUMAH TANGGA)	- Meningkatkan kesej Masyarakat	Dewasa	- Peningkatan pendapatan keluarga. - Penqalasi ABK	Ceramah Diskusi KLP	- Idem -	ATM.
6	<b>MENGATIPKAN KEMBALI PRANATA-PRANATA ADAT</b>	- Memperkuat Insti - Memperkuat peran masyarakat dalam lulaan Taman Nas	Peranqkat dalam adat	- Menyatukan persepsi Hyg Hukum Adat - Mendemonstrasikan peraturan-peraturan Ad	Fasilitasi Advocacy	- Idem -	- LITERATUR  - ATM. - Pendokumentasi istiadat adat

**APPENDIX 5 :**

**COMMUNICATION, INFORMATION, AND EDUCATION RESOURCES  
FOR CONSERVATION, PARK, AND DEVELOPMENT EDUCATION STRATEGIES**

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