

RATIONALISATION OF THE PROTECTED AREAS SYSTEM OF HONDURAS

EXECUTIVE SUMMARY

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1. INTRODUCTION	3
2. OBJECTIVE	4
3. <i>IN SITU</i> CONSERVATION PROGRAMME	4
4. COMPLEMENTARY CONSERVATION MEASURES	8
5. INSTITUTIONAL MEASURES	8
6. STAFFING NEEDS AND COSTS	10
7. INTERNATIONAL SCIENTIFIC PROFILE	11
8. SUPPORT AND IMAGE BUILDING	11
9. PRIORITY ACTIONS RELATED TO VISITATION	11

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EXECUTIVE SUMMARY

1. INTRODUCTION

The current document is the Executive summary of the study "RATIONALISATION OF THE PROTECTED AREAS SYSTEM OF HONDURAS". The document contains the following Volumes:

- VOLUME I, MAIN STUDY: Overall overview of the presentation of the study with all the conclusions and an overall literature list for the entire study.
- VOLUME II, BIODIVERSITY OF HONDURAS: A biological overview of the scientific background and data of the study. This document has extensive distribution lists of species.
- VOLUME III, ECOTOURISM: Analyses the most immediate economical value of SINAPH and gives popular descriptions of the protected areas with the highest tourism opportunities.
- VOLUME IV: SPECIES OF SPECIAL CONCERN OF HONDURAS, 2002 UPDATE: The data collected required an analysis of the species of special concern. After a first analysis in 1997 and an update in 1998, it was time to re-assess the list and benefit from considerable biological progress in the country. Recommendations are made on how to deal with these species, in and outside of the protected areas.
- VOLUME V, LEGAL STATUS OF THE PROTECTED AREAS OF SINAPH, 2002 SITUATION: The analysis requires precise knowledge and a digitised map of the protected areas. Several official and internal documents showed different data and an exhaustive review was necessary to establish the 2002 situation. The document is annexed with an ArcView shape file.
- VOLUME VI, MANUAL OF MICOSYS: The study has been carried out with an analysis programme in Excel. The manual provides instructions of use and scientific background information on the methodology.

Several documents are accompanied by one or more annexes.

Files in English and Spanish can be downloaded from: http://www.birdlist.org/cam/honduras/hn_parks_study1.htm.

Parallel to the present work, Vreugdenhil (2003, in press) has worked on a document that expands the theoretical background of this study: **PROTECTED AREAS SYSTEM PLANNING AND MONITORING**. It will be made available electronically starting June 2003, from link

The Rationalised Protected Areas System of Honduras, an evaluation by the World Institute for Conservation and Environment, WICE

http://www.birdlist.org/cam/honduras/hn_parks_study1.htm.

This executive summary contains all the recommendations of the entire study. The authors emphasise however, that reading this summary without the underlying reports may well lead to regrettable misunderstandings, and they like to urge the reader to read all volumes to properly understand how and why the authors have come the recommendations condensed in this document.

With 475,000 border crossings per year, the tourism sector has become the number two of foreign currency earners of Honduras. The famous Ruins of Copan, the charming Bay Islands with their gorgeously beautiful coral reefs and dramatic scenery of tropical national parks visible from the mayor cities La Ceiba, San Pedro Sula and Tegucigalpa have all contributed to lifting Honduras to become an increasingly known tourism destination in Central America. Services, including a wide variety of activities, affecting all parts of society, such as hotels, restaurants, tour operating, souvenir shops, transportation – including public transportation, private tour busses, car-rental and commercial flights, have generate and estimated 262 million dollars in 2001. To the tourism sector national parks are far more important than their mere accessibility: (1) The beauty of national parks is a very powerful marketing tool for overseas tourism and business promotion (2) A country that successfully protects its nature in national parks is esteemed for its success as a nation and its organisational credibility. Honduras has already started to benefit from this opportunity and should work at consolidating its position in the tourism market by strengthening its still weakest link of its tourism product: its national parks.

Through taxes earned from tourism, Honduras probably already receives many more economic benefits from its national parks than it pays to maintain them. The dilemma is how to channel some of this un-recognised income to prevent the chicken with the golden eggs - the National Parks - from starving. The Protected Areas Trust Fund, FAP, has been proposed to provide continuous funding from revenues of various sources. With a number of protected areas lacking all but natural habitat, the current system of Protected System of Honduras (SINAPH) incorporates more areas than are needed for conservation purposes. This raises the costs of conservation to unnecessary levels. This study selects identifies the areas

that are needed to protect biodiversity of national and international significance so that the Protected Areas Fund, FAP may function with maximum efficiency.

2. OBJECTIVE

This study intends to strike a broadly accepted balance between the "maximum number of species" and the broad range of other aspirations of the society as a whole. In pursuit of such balance, this study has been formulated to fulfil the following objectives:

- Identify on the basis of scientific biological criteria:
- The protected areas in the of national and international significance for biodiversity protection;
- Important conservation gaps in SINAPH and according to need propose the creation of (a) new protected area(s);
- Areas with other management priorities to be managed by more appropriate organisations like local governments or private institutions;
- Propose an integrated rational, cost-effective and affordable *in situ* biodiversity conservation system of national significance;
- Propose areas to be eligible for financing by the Protected Areas Trust (FAP);
- Prepare cost estimates of the rationalised biodiversity conservation system;
- Review and propose – according to need – to re-categorise the protected areas of the proposed system;
- Identify the primary environmental services opportunities of the proposed system, with emphasis on tourism;
- Present a solid science-based document for fundraising among international donors.

3. IN SITU CONSERVATION PROGRAMME

Ecosystems, rather than species should be the primary basis for building an *in situ* biodiversity conservation system, although the latter should not be ignored. Under this premise, SINAPH has been evaluated on representation of species, for which purpose natural ecosystems were used as proxies for distinct sets of species. It was found that SINAPH probably shelters up to 90 percent of the species currently present in the country and possibly somewhere between 80 and 90 percent of the species present when the Spanish conquerors set foot in America.

The study proposes criteria for optimal species conservation and for a “safe minimum standard of conservation”. Based on those criteria it proposes different models. The proposed model, called the "National Parks System" is a selection of areas of national and international significance (see Table sum1), which **only** together would provide such standard. The model has been called the “National Parks System”, with the intention to upgrade the prestige of its areas to the level that they fully deserve.

All of these areas - where applicable with redefined boundaries - should qualify for funding from the Protected Areas Fund (FAP), as well as those areas that this document recommends to create to protect missing or underrepresented ecosystems.

Several protected areas have been combined into one single protected area:

- National Park Pico Bonito would be unified with Texiguat and Arenal;
- Golfo de Fonseca National Park would result from the merger of the estuarine protected areas on the south coast;
- Bay Islands National Park already consists of the three larger Bay Islands;
- Rus Rus National Park would include Warunta in the proposal;
- Lago de Yojoa would encompass Santa Barbara and Mount Azul Meambar;
- Capiro y Calenturo would be expanded with Laguna Guaymoreto

Whether this can be done legally or only from a management point of view may vary from case to case, but it is important to at least present those areas to the public as integrated national park units with one single name. Their integration would also need to be reflected in fully integrated management plans. This should come instead of regional plans as proposed in the draft strategy for SINAPH.

The proposed Kruta reserve is makes part of the "National Parks System" model. However, this area is very populated. For biodiversity conservation only the less inhabited downstream half of the proposed area is needed and the document proposes to only gazette 60,000 ha around the river mouth. The proposed Caratasca reserve only needs about **130,000** ha instead of the 500,000 ha in the recent proposal (PROBAP, 2001). The proposal of the area of Warunta should also be reduced in size, whereas the proposal for Rus Rus should exclude a substantial inhabited zone along the Río Coco.

The Presence/Gaps analysis shows that several ecosystems are absent from SINAPH or underrepresented. To include/expand those ecosystems a few new areas need to be created or existing areas need to be extended:

1. The **Arid Deciduous Shrubland** is only found only in the Aguan Valley and the Agaltha Valley and was intended to be protected by a protected area named Arenal. It is home to the endemic bird, the Honduran Emerald (*Amazilia luciae*), an endemic reptile (*Ctenosaura melanosterna*) and some 10 species of endemic plants. It is recommend to extend National Park Pico to include this area, rather than to create another small reserve under fragmented management.
2. Two other associated ecosystems are also found exclusively in proposed protected areas, the **Pine**

Savannah found along the Nicaraguan boarder and its associated **Semideciduous Gallery Forests**. These ecosystems need the creation of Rus Rus National Park.

3. With only 407 ha (2 % in the protected in the "National Parks Model"), the **lowland well-drained Pine forest**¹ is all but absent from the system. It is found in small patches along the San Pedro Sula Valley and in much smaller areas along the Pacific Coast. It is proposed to identify an area of National Forest that contains at least 2,000 ha this ecosystem and elevate it to reserve status within the "National Parks System". It might be possible to include this ecosystem by extending one of the existing reserves in the Sula valley (Cusuco, Merendon), but if no National Forest is found close to these existing areas it might be necessary to set up a completely new reserve.
4. With 11636 ha., the **Submontane Pine forest** has only 1 % of its total area legally protected in the "National Park System" Model (2% in SINAPH). As many of the remaining tracts of this forest type are found within extractive reserves in Olancho, it is recommended that 20,000 ha of one of these National Forests be elevated to the status of a protected area.
5. With only 5 % of its total occurrence in the "National Parks System" Model, the **Lower Montane Pine forest** is also underrepresented and it is recommended that any new pine forest reserve created for the expansion of the previous ecosystems should also include some area of this ecosystem.
6. The precise situation of the Bay Islands National Marine Park could not be satisfactorily assessed with the current GIS digital data. With rather unique terrestrial ecosystems and a variety of nationally unique terrestrial species (of Caribbean origin), the terrestrial ecosystems of the Bay Islands are probably not adequately covered and may need expansion to war. Also the territorial cover of the coral reef habitat needs additional analysis and reconsideration. An observation regarding the integrity of the Bay Islands Marine National Park is in order. While the significance of the area's marine environment is and remains paramount, there should be more integration of both marine and the unique Caribbean terrestrial ecosystems into the management attention as well as in the presentation to the visitors.

If these areas can be added to the "National Parks System" Model, a very significant proportion of Honduras's species can be preserved. It would be an academic speculation whether this would raise the biodiversity protection level of the model to 80 or 90% of the originally present flora and fauna of Honduras. What really matters is the realisation that Honduras is still in time to provide shelter

¹ In the text we don't use the full names used on the map as they would make the document difficult to read.

and preserve the vast majority of the species that occurred in the country at the time that the Spanish colonisers set foot at the coasts of the Americas.

Within the SINAPH there is one area of national significance, Copan National Park that is of high profile, but does not fit in the SINAPH profile of protected areas. The area is administered by the Instituto de Antropología, which has no practical relationship with any conservation-oriented authority. This area could better be reclassified as an Archaeological Park under the mandate of that institution and removed from SINAPH.

Dealing with habitation in bufferzones is costly and problematic. It require high personnel input. To reduce costs and conflicts, current boundaries need to be reviewed on possibilities to reduce unwarranted inclusion of excessive human habitation. Other areas need some correction of legal boundaries to include additional vital habitat. Areas in need of corrections of limits are listed in Table Sum2.

As in protected areas only nuclear zones provide full protection, some ecosystems are not adequately protected and some need revision to adequately protect the ecosystems for which the area has been selected. Particularly the nuclear zone of Río Platano is much too small. Many essential ecosystems are outside of the nuclear area and need to be included. Without such correction the those several ecosystems cannot be considered adequately protected and must be considered at serious risk. Table Sum2: "Areas in need of correction of legal boundaries" lists which areas are in need of border corrections of external limits or of zoning limits.

Table Sum1: Selected areas and proposed management category

Main Protected Area	Supporting Protected Area	Current legislature	Current Category	Proposed Status	Regional office
Botaderos		Proposed		Parque Nacional Botaderos	
Capiro y Calentura	Guaymoreto	Ac. 1118-92	National Park	Parque Nacional Capiro y Calentura	La Ceiba
Caratasca		Proposed		Parque Nacional La Mosquitia	Puerto Lempira
Rus Rus		Proposed			Puerto Lempira
Warunta		Proposed			Puerto Lempira
Rio Kruta		Proposed			Puerto Lempira
Cayos Cochinos		Proposed	Marine Reserve	Reserva Biológica Marina	La Ceiba
Celaque		Decr. 87-87	National Park	Parque Nacional Celaque	
Cuero y Salado		Decr. 99-87	Wildlife Reserve	Parque Nacional Cuero y Salado	La Ceiba
Cuevas de Taulabe		Ac. 1118-92	Natural Monument	Monumento Natural Cuevas de Taulabe	
Cusuco		Decr. 87-87	National Park	Parque Nacional Cusuco	San Pedro
El Boqueron		Proposed		Monumento Natural Boqueron	HQ
El Chile		Decr. 87-87	Biological Reserve	Parque Nacional El Chile	HQ
Golfo de Fonseca		5-99-E	Mixed categories	Parque Nacional Golfo de Fonseca	Choluteca
	La Barberia	Decr. 5-99-E	Mixed categories		
	El Jicarito	Decr. 5-99-E	Mixed categories		
	Los Delgaditos	Decr. 5-99-E	Mixed categories		
	Bahia Chismuyo	Decr. 5-99-E	Mixed categories		
	San Lorenzo	Decr. 5-99-E	Mixed categories		
	Las Iguanas-Punta Condega	Decr. 5-99-E	Mixed categories		
	Isla de la Tigra	Decr. 5-99-E	Mixed categories		
	San Bernado	Decr. 5-99-E	Mixed categories		
Guanacuare		Decr. 5-99-E	Wildlife Reserve	Parque Nacional Guanacuare	Choluteca
Islas del Cisne		Ac. 1118-92	Marine Reserve	Reserva Biológica Islas del Cisne	La Ceiba
Jardin Botánico Lancetilla		Decr. 48-90	Biological Reserve	Monumento Nacional Jardin Botánico Lancetilla	La Ceiba
La Montaña de la Botija		Proposed		Parque Nacional Montaña La Botija	
La Muralla		Decr. 87-87	Wildlife Reserve	Parque Nacional La Muralla	La Ceiba
La Tigra		Decr. 976-80	National Park	Parque Nacional La Tigra	HQ
Lago de Yojoa		Decr. 71-71	Protected Area	Parque Nacional Lago Yojoa	SPS
Santa Barbara	Santa Barbara	Decr. 87-87	National Park		
Azul Meambar	Azul Meambar	Decr. 87-87	National Park		
Merendón		Decr. 46-90	Water Production Area	Parque Nacional Merendon	SPS
Montaña Verde		Decr. 87-87	Wildlife Reserve	Reserva Biológica Montaña Verde	HQ
Montecristo Trifinio		Decr. 87-87	National Park	Parque Nacional Montecristo Trifinio	Santa Rosa de Copan
Opalaca		Decr. 87-87	Biological Reserve	Parque Nacional Opalaca	
Patuca		Decr. 157-99	National Park	Parque Nacional Patuca	
Pico Bonito		Decr. 87-87	National Park	Parque Nacional Pico Bonito	La Ceiba
Texiguat	Texiguat	Decr. 87-87	Wildlife Reserve		
Arenal	Arenal	Ac. 1118-02	Biological Reserve		
Pico Pijol		Decr. 87-87	National Park	Parque Nacional Pijol	HQ
Punta Sal		Ac. 1118-92	National Park	Parque Nacional Jeannette Kawas	La Ceiba
Río Platano		Decr. 97-80 170-97	National Park	Parque Nacional Biósfera Río Platano	Catacamas
Islas de Bahía		Ac. 1118-92	Marine National Park	Parque Nacional Marino Islas de la Bahía	
	Roatán		Marine National Park		Roatán
	Isla de Utila		Marine National Park		

Main Protected Area	Supporting Protected Area	Current legislature	Current Category	Proposed Status	Regional office
	Guanaja		Marine National Park		
Sierra de Agaltha		Decr. 87-87	National Park	Parque Nacional Sierra Agaltha	Catacamas
Tawahka		Decr. 157-99	National Park	Parque Nacional Biósfera Tawahka	Catacamas

Table Sum2: Areas in need of correction of legal boundaries

Area	Reason for correction
Opalaca Nature Reserve	The relationship between viable habitat and bufferzone is disproportionate.
Lago de Yojoa PA Santa Barbara NP Azul Member NP	Integration of three protected areas into one and an increase of ecosystem 8.
Pico Pijol National Park	The relationship between viable habitat and bufferzone is disproportionate. Only the ecosystem at the top of the reserve is required.
Pico Bonito NP Texiguat WR Arenal BR	Integration of three protected areas into one and increase of ecosystem 78.
La Tigre National Park	The relationship between viable habitat and bufferzone is disproportionate. Reduce high-density population conflict areas.
Montaña Verde Nature Reserve	The relationship between viable habitat and bufferzone is disproportionate. The area should be resited to uninhabited natural habitat.
Montecillos Nature Reserve	The relationship between viable habitat and bufferzone is disproportionate. The area should be resited to uninhabited natural habitat only.
Montaña de Yoro National Park	The area is no longer suitable as a national park; only the top of the mountain is required to strengthen the viability of the relevant ecosystem class. Reclassification to biological reserve and redefinition of limits to include only a protected area without habitation and healthy natural habitat.
Guanacua National Park	Identify best habitat of ecosystem 75 and 59 and reshape limits.
Agalta National Park	Add ecosystem 78.
Jeannette Kawas National Park	The legal boundaries of the current Punta Sal National Park are referred to a Municipal document, which could not be found when specifically requested! The boundaries should be re-established to reduce productive land and include both sides of the river.
Merendon National Park	Include a portion of ecosystem 32.

4. COMPLEMENTARY CONSERVATION MEASURES

Not all species can be adequately protected in the "National Parks System Model" or in SINAPH. It is recommended to complete the model with a modest *ex situ* conservation programme for the most vulnerable species in the country, the endemic and some of the species of extremely limited distribution in Central America. This system would serve as a "back-up" for the *in situ* conservation programme for Honduras, and it would comprise 3 botanical gardens: one at the Atlantic coast (Lancetilla), one in a dry region (Tegucigalpa could qualify) and one at an elevation above 1800 m. Together these three gardens should form locally-cultivated life collections of endemic species of plants in the country. Additionally, one of these gardens should have a Reptiles and Amphibian house with a captive-bred collection of vulnerable and endemic herpetofauna. The latter could probably be best located in Lancetilla. In principle, these *ex situ* conservation collections should qualify for being subsidised (not fully funded) with finances from a threatened-species management fund, to be established for that purpose. This fund should be no more than 2 percent of the *in situ* biodiversity conservation budget. Further spreading the risk of extinction of Honduras' endemic species could be achieved through with keepers of life collections (botanical gardens, zoos) of appropriate foreign institutions.

To reduce the relentless pressure of hunting on predatory mammals and birds of prey, a predator-kill compensation fund of 1 percent of the *in situ* biodiversity conservation budget would need to be established to compensate farmers for losses suffered from natural predators.

Another necessary step is the updating of the list of species of special concern. The proposed list of Volume IV: *Especies de Preocupación Especial*, needs public revision and approval through a workshop. The same document makes several more detailed recommendations on how to regulate the capture of species of special concern, such as:

- The general prohibition of their collection;
- The appointment of a sub-commission on species of special concern within COBABIOH;
- The stimulation of monitoring and research by granting regulated licenses for professional biologists.

5. INSTITUTIONAL MEASURES

To match the qualification of "National Parks System", the Department for Protected Areas, DAPVS, would have to be upgraded to the "National Parks Service" and become a direct-line-authority with its own regional offices. Regardless of its legal position in the national administration, this "National Parks Service" should be presented to the public as a self-functioning unit and not as a dependency of a larger organisation, such as AFE-COHDEFOR.

The management of national parks can only be carried out by an organisation specialised in nature conservation and management of visitors. This requires properly trained professional national parks management staff operating from regional conservation offices that have the full control over their own tasks. Given the selection of National Parks, recognizable dedicated national parks regional offices², directly under the "National Parks Service" would be required in Roatán, La Ceiba, Puerto Lempira, Catacamas, Santa Rosa de Copan, San Pedro Sula and Choluteca. The protected areas around the capital would be managed from the headquarters in Tegucigalpa. In this set-up the "National Parks Service" needs to be a highly deconcentrated³ line organisation, which consists of three linear levels: (1) the Headquarters; (2) the regional offices and (3) the field. Each level has its own responsibilities:

- The Headquarters deals with integration of the "National Parks System" as a whole: it sets national standards and policies on visitation, national rules and regulations for bufferzones, etc.; pricing of services, distribution of budgets and staff, approval of management plans, interministerial contacts at a national level; management agreements with external parties; dealing with the public on national issues. It also coordinates the monitoring of the system as a whole, as this is part of the supervision of the functioning and success of the organisation.
- The Regional offices have a high level of autonomy when dealing with day-to-day management. They are responsible for the actual management, acquisition of goods and services for their protected areas, supervision and management of staff, organisation of field monitoring, periodic reporting to the Central office, preparation of management plans and annual budgets, interinstitutional coordination, defence of the interests of their parks, attending to the public and supervision of delegated management to NGOs.
- The field staff deals continuously and directly with the public, both visitors and the inhabitants. The tasks involve routine execution of service rounds, promotion of the National Parks philosophy among the local population, monitoring the condition of the park, observation, reporting and registration irregularities, basic maintenance on trails, etc.

Progressing integration between the "National Parks Service" and NGOs as well as cost-efficiency could be achieved by housing the protected areas managing NGOs in the regional offices once they are established.

² These regional offices have been budgeted in the programme. If rented, the costs would probably be lower and the investment requirements would disappear.

³ Deconcentration implies that tasks of the central government are delegated to the regional offices of the same organisation. Decentralisation assumes the transfer of mandate and tasks to local administrations, in the case of Honduras, the municipalities.

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The benefits of managerial renovation, personnel satisfaction and professional enhancement through staff rotation are more readily established in an integrated management organisation. The "National Parks Service" and the "National Parks Alliance" need to find mechanisms for salary equality and integrated career development through exchange of personnel and job rotation.

The "National Parks System" would probably have to be established in the proposed new forestry law and/or a new Code of Regulations for SINAPH that needs to be formulated and legalised.

Honduras uses a rather wide range of management categories, some of which are not clearly defined by law. To enhance clarity, the number of management categories of SINAPH can be reduced to the categories listed in **Table Sum3**, and their definitions as defined later in this document should be included in the new forestry law and elaborated in the previously mentioned new Code of Regulation for SINAPH. Legislation needs to be passed that – according to need – (1) re-defines the status of the proposed areas, (2) re-establishes the boundaries and/or (3) creates a few new areas to improve ecosystem representation and security.

The National Parks Service-to-be (or DAPVS) should exclusively focus on the primary task at hand, which is the management of protected areas of national and international significance. All normative and law-enforcement tasks outside of the "National Parks System", like (CITES, hunting regulation, etc.) should be transferred to DIBIO or decentralised:

- Legally existing areas that have not been selected as areas of national significance should be legally re-categorised to **multiple use areas**; their management should be decentralised to the municipalities, while supervision of management compliance should be transferred to SERNA/DIBIO. Municipalities should be delegated the authority to enforce the law with municipal rangers.
- The tasks of supervision of species conservation (CITES, hunting, harvesting and sales of wild species) should be delegated to SERNA/DIBIO.

A five year moratorium on the proposal of new protected areas other than those resulting from the recommendations of this report would allow the administration to rationalise the currently existing SINAPH, meet with its priorities, and firmly legally and administratively establish the proposed model for the protection of areas of national and international significance. In that context all current proposals for declaration of areas that have not been selected as areas of national and international significance would need to be withdrawn.

Table Sum3: Characteristics and use objectives of categories of management areas

Characteristics and objectives	National Park	Nature Reserve	National Monument	Multiple Use Area	National Forest
Size	More than 5000 ha	Any size	Less than 5000	Any size	Any size
Importance	National or International	National or International	National	Local	National
Integrity of a representative example of an ecosystem	Yes	Yes	Facultative	Facultative in designated areas ¹	Facultative in designated areas ¹
Unique landscapes or geological formations	Yes	Facultative	Yes	Facultative in designated areas ¹	Facultative in designated areas ¹
Research	Yes	Yes	Facultative	Facultative	Facultative
Environmental Education	Yes	Facultative	Yes	Facultative	Facultative
Visitation and Recreation	Yes	Facultative	Yes	Yes	Yes
Production of water	Yes	Yes	Yes	Yes	Yes
Production of wood and non-wood products	No	No	No	Yes	Yes
Hunting	In designated parts of the bufferzones only ¹	In designated parts of the bufferzones only ¹	In designated parts of the bufferzones only ¹	Yes	Yes
Habitation	In designated areas in bufferzones ¹	In designated areas in bufferzones ¹	In designated areas in bufferzones ¹	In designated areas only ¹	In designated areas only ¹

¹as defined and regulated in the management plan.

The management plan is a legal instrument to define (1) zoning, (2) areas for habitation, (3) intensive, extensive or no visitation, (4) other land use and (5) it regulates the use of natural resources and environmental services of an area. It needs to be reviewed that in the proposed Forestry law, **Management plans** for SINAPH be mandated to prescribe zoning en land-use regulation and that adequate countermeasures can be enforced in case of violation.

Currently, updates of management plans are required every five years. This involves too high costs in consultant fees and it would be better to change the cycle to once every ten (10) years. Whenever a specific issue needs to be solved during the period of ten years such can be done in the form of an interim addendum to the management plan in force, written by in-house professional staff. All management plans need to be reviewed on compliance and consistency with the national policy an financing strategy.

6. STAFFING NEEDS AND COSTS

Field staff requirements are calculated proportionate to the area with a formula which is explained in the manual. Regional staff and headquarters staffs each are calculated as 10 percent additional staff for the respective offices. MICOSYS calculates the need for about 700 - 750 staff members for the "National Parks Service" model of 2.4 million hectares. To compare this with the situation of Costa Rica in 1992 (Vreugdenhil, 1992). Costa Rica had 1.1 million hectares under similar management as

proposed in this document. MICOSYS had calculated the need of about 400 staff, which coincided with the factual situation in the field at the time. Given the fact that the "National Parks System" would be more than twice as large as the "Conservation Areas System" of Costa Rica, a staff requirement of 700 for Honduras seems a reasonable estimate.

The investment needs would total fourteen million dollars. Part of those investments are or have already been covered under various foreign aid projects.

Annual costs would amount to five million dollars per year, 2.7 of which would be for salary costs. The nature of the activities are such that they must be considered public sector responsibilities. Even though part of them may be executed as private services under contract, they cannot be expected to be financed by the private sector through privatisation.

With regard to the involvement of the private sector in the wise utilisation of the National Parks should be very ominous, and would include the organisation and guiding of tours and expeditions, transportation, hostelling, food supply and restaurant services the production and sales of souvenirs, research and planning, construction and maintenance. The economic value of those services outweighs the government/ngo administration's spending and investments manifold.

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7. INTERNATIONAL SCIENTIFIC PROFILE

Honduras may benefit from an attempt to rise its international profile of research and environmental services through developing of strategic alliances, such as bi- or multi-lateral research programmes and bioprospecting. Opportunities to be explored:

- Establish a high profile research centre at Lancetilla Botanical Garden and Nature Reserve;
- A low profile research programme from the multiple use centre in Celaque National Park;
- Seek collaboration with INBio;
- Re-vitalise the coral reef research with the Smithsonian Institute.

World wide there are several private CO₂-producers - Electrical companies - who provide funding for durable CO₂-fixation. This interest has not yet taken off yet, but *in order to qualify, it is very important that Honduras establishes a proven record of forest (and thus protected areas) conservation*. Such record would also reflect well on the tourism sector.

8. SUPPORT AND IMAGE BUILDING

In spite of great involvement of NGOs in the management of protected areas, the involvement of the real owners of the national parks, the **People of Honduras**, is still very low. Mechanisms should be explored to greatly increase the involvement of the Hondurans. A powerful instrument could be to sell a national annual (family) entry pass for Hondurans at an affordable price. This pass would require the registration of the pass holder with an address. The passholder would automatically receive a national parks membership to the Alliance of Protected Areas Administrating NGOs and a three-monthly news journal, with the announcements of achievements, special excursions, family activities and children and student programmes.

Popular support and visitability of the "National Parks System" need to increase on all fronts. The proposed "National Parks System" should be presented as a clearly recognisable high-profile national "product". Its management system consists of the legal government institution "National Parks Service"/DAVPS and a variety of NGOs. Together they are responsible for the well-being of the national natural heritage of **all** Hondurans and far reaching integration is eminent. Specific recommendations:

- National profiling through identical uniforms and quality interpretation programmes;
- Before the coming tourism season significantly improved access, both in infrastructure and visitation hours to key areas for visitation;
- Publication of a high quality national parks book with information on access, jointly published by the National Parks Service and the "National Parks Alliance";

The Rationalised Protected Areas System of Honduras, an evaluation by the World Institute for Conservation and Environment, WICE

- Presentation of the national parks as an integrated system of joint management;
- A national tariff system with integrated package products;
- Establishment of a national membership of the national parks system to expand the popular support base.

9. PRIORITY ACTIONS RELATED TO VISITATION

Basic visitation infrastructure and services in protected areas have to contribute to an unforgettable visitation experience: trails, toilets, interpretation programmes, park guides, visitor centres, canopy walkways, audiovisual presentation of flora and fauna, etc. To make the national parks more accessible for visitation, important immediate actions are required in the following fields, some of which could be carried out as an emergency accessibility improvement programme before the coming summer vacation tourism season:

- Organisation of a comprehensive competitive but cost-covering tariff structure and fee collection programme for each of the areas and activities;
- Development of a marketing programme for nature as a visitation destination;
- Train private tourism outfitters and park administrators in selling both directly to the public and to distributors (wholesale);
- Make emergency access improvements for Pico Bonito, La Tigra⁴, Jeannette Kawas and Merendon⁵;
- Benefits visible to the people of the region of the Golfo de Fonseca National Park need urgent improvement and the area administration should develop visitation programmes.
- The Cuavas de Taulabe Natural Monument would add a significant new feature to Honduras's selection and it is recommended that at least the main cave be prepared for visitation – including an interpretative trail - at the short range, while additional caves be explored for additional opportunities.
- Train and equip a staff member to produce interpretation signs.

The protected areas of national and international significance have been selected as an integrated and interrelated group to protect the broadest possible set of

⁴ The area administration of MITIGRA is concerned that improved access would set off an urbanisation spree. Such development should be prevented through strict zoning in the management plan and consecutive law enforcement.

⁵ The core area of Merendon is property of the City of San Pedro Sula, to which the area functions as a watershed protector. However, with such a splendid tropical mountain forest so close to the city, the value of the area for both educational and tourism income generation is under utilised and basic visitation infrastructure like a modest visitor centre and interpretation trails are paramount.

species of Honduras. It is essential that all gaps in legal status, management category and where appropriate corrections of limits be legally corrected speedily and that no area be left behind. Particularly the definition, respectively revision of boundaries of highly threatened areas is paramount, as is the establishment of a basic permanent field presence.

Given the importance of national parks to the national economy, we recommend that the IHT and DAPVS in a joint effort further a continuous marketing programme for the visitation of national parks in Honduras in large volume nature oriented magazines like national Geographic and the house magazines of the Sierra Club, the British Birding association, Audubon Society, the Nature Conservancy, and similar magazines in Germany, France, Italy and Spain.