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1. Title: La Macarena National Park, Columbia - Provision of equipment
2. Originator: Instituto de Desarrollo de los Recursos Naturales Renovables (INDERENA)
Carrera 14 No. 25A-66, Apt. Aéreo 13458
Bogota - Columbia
3. Amount of grant requested: US \$ 20'000 (1975)
US \$ 15'000 (1976)
US \$ 30'000 (1977/78)

4. Project Description:

Scope: - Provision of equipment for game guards, construction of guard posts, funds for survey and master plan.

Objective: - To enforce and improve the guard system in order to prevent illegal settlement, hunting, fishing and timber extraction, and to provide the scientific basis for the proper management and development of the area.

Justification: - La Macarena was declared a biological reserve by law in 1948. Its limits were laid down by Decreto 2963 in 1965; and since 15th September, 1971 it is administrated by INDERENA as a National Park according to Acuerdo No. 26 proclaimed by the Presidency of the Republic.

La Macarena is the biggest National Park in Columbia (see below) and according to scientific and technical opinion, it is outstanding in Latin America for its magnificent scenery, great variety and diversity of animal and plant species. When analysing the composition of flora and fauna in the area, one encounters typical representatives of the Orinoco, the Amazone and the Guayanen centres.

Thanks to its geographical and topographical situation, La Macarena is an unique refuge for mammals, birds, reptiles, fish and insects, which are threatened or already exterminated outside its boundaries. The reserve offers great opportunities for tourism, education and research. Its relicts of the tertiary biota as well as its geological features which include precambrian formations and sediment layers of the mesozoic and cenozoic are of particular interest for the scientific community.

Due to its outstanding characteristics, INDERENA and the University Nacional allocate the highest priority for enforcing the control of the Park in order to guarantee its ecological integrity and to prevent destructive human activities.

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Background - La Macarena constitutes an isolated mountain range (120 km long, 35 km wide) in the eastern lowlands (250-300 m) of Columbia in the immediate vicinity of the Andes (20 km). It reaches 2'500 m altitude and its plateau descends in the form of a step escarpment to the west, while the eastern slopes are carved by the deep canyons of numerous river valleys. Due to its location and geomorphological features, it is considered as the most western representative of the guayana system.

The Park covers most of this mountain range and its eastern foreland. It is situated in the Department of Mela, south of the town of Villavicencia and covers 630'000 ha.

According to R.L. Holdridge, the lowlands of the Park include humid tropical forest (bosque humedo Tropical bh-T). In the altitude, this is being replaced by different kinds of mountain rain forests (bosque muy humedo Tropical bmh-T, and bosque fluvial sub-tropical bp-ST). Tropical rain forest occupies 90 % of the area. The remaining parts are covered by grasslands or by plant communities which are typical for eroded soils.

The fauna of the area is spectacular, and includes Tapir (Tapirus terrestris) peccari (Tayassu pecari), giant otter (Pteronura brasiliensis), White-tailed deer (Odocoileus virginianus) jaguar (Felis onca), Spectacled bear (Tremarctos ornatus) and various monkeys. Among the birds, the Harpy eagle (Harpia harpyja) and the Cock of the Rock (Rupicola rupicola). Among the reptiles, the Orinoco crocodile (Crocodylus intermedius) need to be mentioned.

The present Park staff consists of 23 game rangers, and administrative personnel, who are stationed in 10 guard posts around the perimetre of the Park. The guards are under the direction of a Park chief and have some equipment and transport facilities available. Due to the growing number of colonists around the Park (annual increase of 20%) which leads to increasing violation of the Park area, (hunting, fishing, timber extraction, establishment of fields), it is vital for the Park's future and for maintaining its integrity to improve the guard system by providing sufficient equipment for patrols, by employing more personnel and construction additional guard posts at strategic points. Due to financial restrictions, the guards could not work effectively and prevent that parts of the northern park section being occupied by colonists. The present situation is critical.

Project details - To prevent the entry of settlers, the destruction of the forest and the wildlife some action must be taken immediately: construction of guard posts, provision of boats and outboard motors and mules for improving the guards patrols.

To provide the scientific basis for the proper protection and development of the area and to advise local authorities on the most urgent needs for improving the conservation situation of the Park during the next years, a master plan needs to be elaborated and various detailed studies on wildlife and human influences to be undertaken.

Execution - INDERENA and Park staff.

INTERNAL INFORMATION

5. Estimated costs:

<u>Item</u>	<u>No.</u>	<u>Cost per unit</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>Total</u>
Elaboration of master plan, supervision)			3'000				3'000
<u>Motors - Radios</u>							
Outboard motors, Johnson 50 hp	8	1'400	1'400	1'400	2'800	5'600	11'200
Generators, Lister	2	500		1'000			1'000
Radios, Motevola S.A. 104B	2	1'000		1'000		1'000	2'000
Spareparts for motors & radios			800	800	1'000	1'000	3'600
<u>Equipment for guards</u>							
Guard posts	5	4'000	8'000	8'000	4'000		20'000
Mules, saddles, bridles, etc.	10	200	400	1'000	400	200	2'000
Fibreglass boats	5	1'600	3'200		3'200	1'600	8'000
General equipment			3'200	1'800	3'600	5'600	14'200
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TOTAL	US \$		20'000	15'000	15'000	15'000	65'000
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6. References and responsibilities:

Reference - Universidad Nacional de Colombia.

Dr. Alvaro Fernandez, Director Instituto de Ciencias Naturales

Technical responsibility:

Instituto de Desarrollo de los Recursos Naturales Renovables - INDERENA
Division de Parques Nacionales y Viad Silvestre.

Administrative responsibility: To be determined.

7. Timing of financial requirements:

Period - January 1975 - December 1978

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Timing of financial disbursements:

	US \$	Sw.fr.
February 1975	10'800	28'080
August 1975	9'200	23'920
February 1976	8'000	20'800
August 1976	7'000	18,200
February 1977	7'800	20'280
August 1977	7'200	18'720
February 1978	7'600	19'760
August 1978	7'300	19'240
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TOTAL	US \$ 65'000	Sw.fr.169'000

Bank Account for payments:

8. Others funds Not foreseen
9. Remarks : For the period of the project, **INDERENA** will employ additional staff and pay their salaries. INDERENA will also provide maintenance of the equipment and provide additional outfits to existing guard posts. There may be a revision of the requested items for 1976-1978, in the light of the Master Plan which will be produced in 1975.
10. Project Officer: Dr. Hartmut Jungius

Date of original application: August, 1974.

Date of IUCN/WWF Full Project : November, 1974.