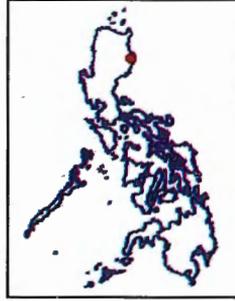


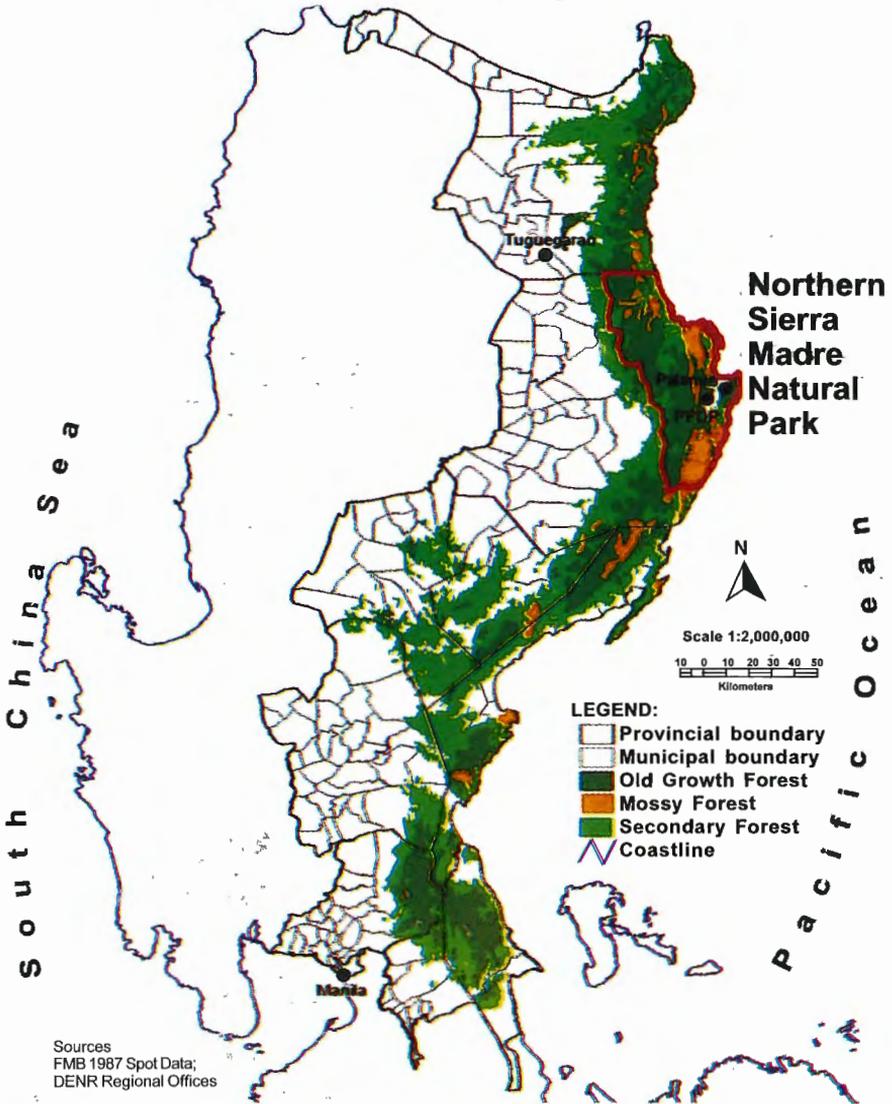
# Palanan Forest Dynamics Plot



# Location Map of the Northern Sierra Madre Natural Park



## Sierra Madre Mountain Range



## Palanan Forest Dynamics Plot

The Palanan Forest Dynamics Plot (PFDP) is part of a global network of tree-demographic research plots being coordinated by the Smithsonian Tropical Research Institute-Center for Tropical Forest Science (STRI-CTFS). Currently, there are twenty member plots scattered across Meso- and South America, Asia and Africa representing major forest blocks of diverse biotic, climatic and topographic-geologic variations in tropical and sub-tropical areas. These plots are primarily designed to derive statistical information concerning the dynamics of tropical forests.



The PFDP is designed to monitor forest dynamics in an insular setting heavily affected by typhoons. Currently, it is the largest and most detailed plot in the Philippines. Grid network, tree tagging and measurement, as well as pre-identification of voucher specimens have been completed. Topographic mapping was completed in August 2000.

The PFDP is the centerpiece of biodiversity research in the Northern Sierra Madre Natural Park. It started in 1994 with the combined efforts of CTFS, Plan International, Isabela State University and Conservation International-Philippines (CI-P). A close tie-up between CI-P and the Institute of Biology, University of the Philippines-Diliman, allows graduate and undergraduate students to undertake research within the plot. Currently, the PFDP is operated under the auspices of the NSMNP Protected Area Management Board and CI-P.



### Role of the Palanan Forest Dynamics Plot in conservation work within the Northern Sierra Madre Natural Park (NSMNP)

- To better understand the dynamics of biodiversity in the NSMNP and provide biological baseline for the fine-tuning of the NSMNP management plan.
- Serve as research, training and instructional facility for in-country scientists, students, protected area managers and staff.
- Serve as interpretive facility showcasing biologically-rich and endangered Philippine lowland rainforest habitats.

## Biophysical Characteristics

- Climate in the area is characterized by an evenly distributed rainfall throughout the year.
- Annual precipitation in the coastal and near the highest peaks is estimated at 2500 mm and 5000 mm, respectively.
- January to February represent the coldest months with an average temperature of about 23°C while in June is the warmest at 27.9°C.
- The area is frequently hit by typhoons at an average of 20 typhoons per year. Prevailing southerly winds with a velocity of 1-2 mph from May to September.

## Accessibility

The site can be reached only by light plane or an outrigger boat. An air taxi servicing regular flights to and from the site is stationed in Tuguegarao, Cagayan and Cauayan, Isabela airports. It will take approximately 30-45 minutes to Palanan. Jump-off point by boat to Palanan, Isabela is from Sta. Ana, Cagayan and Baler, Aurora. Travel time by boat will take approximately 10-16 hours. From Palanan town to the PFDP, it will take at least one and a half hour walk through a rolling terrain and occasional stream and creek crossing.



### Salient features of the Palanan Forest Dynamics Plot

The plot represents a typical lowland dipterocarp rainforest in the Philippines. Within a five (5) kilometer radius from the plot are two (2) other major terrestrial habitat types within NSMNP: forest over limestone and forest over ultramafic substrate.

About 300 species of free-standing trees from 71,400 stems were identified. Maximum diameter recorded within the plot was 190 cm for Red Lauan (*Shorea negrosensis*).

In 1997, Conservation International-Philippines conducted a rapid survey on the wildlife fauna of the 16 hectares plot. A total of 95 species of fauna were recorded. This includes 7 frogs, 5 reptiles, 67 birds and 16 mammals. The bird species recorded in the plot represents 24% of the known bird species in the Park.

Wildlife species such as Rufous Hornbill (*Buceros hydrocorax*), Gray's Monitor Lizard (*Varanus olivaceus*), Luzon Pygmy Fruit Bat (*Otopteropus cartilagonodus*) are some of the endemic fauna in the country that frequent the 16-hectare Forest Dynamics Plot. Freshwater turtles, shrimps, crabs and gobies are some of the freshwater inhabitants that thrive abundantly in the network of streams and rivers.



## Research Facility and Nature Interpretation

The 16 hectares Forest Dynamics Plot is envisioned to become a research facility for biodiversity studies. This will cater to graduate students and student volunteers that are interested in doing such work. Research such as plant-animal interaction, population and behavioral studies and forest dynamics are among the



researches being planned in the site. Protected Area managers working in the park as well as other protected areas can use these



researches as baseline information. This will help them formulate sound management plans and interventions to ensure the survival of these unique plants and animals.

Aside from research, the area is also designed for ecological tours for visitors. This will give them a glimpse of the richness

and uniqueness of Philippine Biodiversity. Activities include lectures in biodiversity, bird watching, mist netting of birds and bats and nature interpretation. This will also serve as an income generating activity for the local communities to gear them away from unsustainable resource use practices.

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