

Sierra Madre Mountain Range: Backbone of Luzon



Rising above the flatlands of northeastern Luzon, the majestic Sierra Madre Mountain Range serves not only as a sanctuary for the flora and fauna within it, but also as a stalwart protector against the typhoons that affect the Luzon.

Sierra Madre is the longest mountain range in the Philippines. It forms the eastern backbone of Luzon, running from the provinces of Cagayan in the north to Quezon in the south. An unbroken wall of mountains greets the Pacific Ocean to the east, exposed to the brunt of the ocean's waves and the northeastern monsoon.

The Sierra Madre corridor has a land area of approximately 1.4 million hectares, which spans the Cagayan Valley, Central Luzon, and CALABARZON regions, specifically spanning 10 provinces.

The Northern Sierra Madre Natural Park in the midsection of the mountain range consists of 287,861 hectares of land area and 71,652 hectares of coastal and marine waters. It is drained by 14 major river systems, 11 of which empty into the Philippine Sea, while 3 flow into the Rio Grande de Cagayan as tributaries of the Ilagan River.

According to the Department of Environment and Natural Resources (DENR), in 1999, 40% of the 22% forest cover in the Philippines was within Sierra Madre.^[1] Owing to its placement and environment, Sierra Madre has some of the richest and most unique flora and fauna in the Philippines. As a sanctuary to a rich ecosystem, the mountain range boasts 68 protected areas, including national parks, watershed forest reserves, natural monuments, marine reserves, landscapes, and seascares.



The biological importance of the Sierra Madre corridor is due to the intact forest in its central areas, as well as its high plant diversity—with more than 3,500 recorded species.



These represent roughly 45% of all species recorded in the Philippines, with at least 58% of them endemic to the mountain range. Sierra Madre also contains the most species of birds in Luzon, accounting for at least 80% of all resident breeding birds. Of all these species, a study by the International Union for the Conservation of Nature (IUCN) in 2001 listed 106 plant and 28 animal species as threatened.

MAJOR INDUSTRIES IN THE PROVINCES COVERED BY SIERRA MADRE



THE STORMWALL

Sierra Madre's elevation makes it an effective barrier against storms coming into the eastern Luzon area from the Pacific Ocean. Any storm passing through the range is slowed, allowing more time to spread rain. The slowed movement also gives meteorologists and disaster risk reduction agencies time to identify and notify areas that need to be evacuated.

Sierra Madre's storm breaking effect and rich reservoirs benefit the local economies of the provinces it covers, especially in terms of agricultural growth. The Cagayan region hosts the richest and most productive rice lands in the Philippines because of the undisturbed forests in its section of Sierra Madre. During the El Niño phenomenon of 1997, Cagayan Valley was responsible for 30% of the national rice harvest because it suffered no deficit in rainfall.

KEY ROLES OF SIERRA MADRE

- Biodiversity habitat
- Watershed management
- Ancestral domain

EXPLOITATION OF SIERRA MADRE'S RESOURCES

Despite the impactful benefits Sierra Madre provides, its resources are continuously exploited. While mining and agriculture are the main economic drivers of the provinces connected to Sierra Madre, these have started to negatively affect the corridor's ecosystem.

Resource exploitation, changes in land use, infrastructure development, and political neglect have far-reaching consequences for the inhabitants of Sierra Madre.

Illegal logging operations resulted in severe degradation of forestland. About 193,000 hectares of forest areas are covered by Community-based Forest Management Agreements, but species loss still occurs within these areas due to poor infrastructure planning, road access development, and a general failure to follow prescribed harvesting methods. These logged areas invite migrants whose poorly-regulated agricultural cultivation results in further biodiversity loss. Investors' mining claims, covering 811,541 hectares, are also an impending danger to the Sierra Madre's ecosystem, particularly if environmental laws and regulations are not followed.

WHO WILL SUFFER IF THE WALL FALLS?

If unchecked for long, these activities may threaten millions of lives. Indigenous people dwelling in the mountains will lose their ancestral domain and eventually, their identities. The dependence on Sierra Madre for irrigation means that agriculture would also be gravely affected. As more forests are cleared for industry, Sierra Madre would lose what makes it a sturdy wall, leading to flooding or drought in the provinces it touches.