



“Año del Bicentenario, de la consolidación de nuestra Independencia, y de la conmemoración de las heroicas batallas de Junín y Ayacucho”

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The natural hazards faced by the forest concession were evaluated based on historical data collected by various official sources and studies, mainly from the National Statistics Institute (INEI) and the National Civil Defense Institute (INDECI).

Natural hazards necessarily to be assessed are Fire, Plagues and Endemic Diseases, Extreme Weather and Geological Hazards. Besides the ones mentioned, no other natural hazards that have a direct impact on carbon stocks or promote changes therein have been identified.

1. Fire

Due to the climatic characteristics of the area: high humidity, annual average rainfall of 2000 mm also considered as high, maximum moderate temperatures; there is a very low incidence of natural fires in the Amazon region, which correspond to the department of Madre de Dios.

In Wildfire (2007) Manta states that “the Forest Fires of natural cause in South America is associated to thunderstorms (lightning). For the specific case of Peru, it states that forest fires are 100% anthropic and explicitly intentioned, with a main cause arising out from grazing and burning agriculture. However, it also mentions that other factors such as the promotion of agriculture and stock farming, oil exploitation and construction of pipelines and roads, etc., make the natural forests to be more vulnerable to fire.

The international forest fire alert system “Fire Alert System” shows that for period 2002 – 2009, there have been many outbreaks of fire. The map shows that these focuses are distributed throughout the interoceanic Highway, for which it can be deduced that they correspond to the burning of agricultural areas and/or opening of new ones, since these are located just around the road axis. The difference between these sources of information shows that the official data only includes data from large-scale forest fire, which compromise forested areas.



Although it is common practice for local people to deforest for the installation of agriculture and livestock systems using fire, the spread to the surrounding forests is low.

2. Pests and Disease outbreaks

The tropical rain forest, due to the great diversity of species it has, is very resistant to plagues and endemic diseases. These usually occur in areas of homogeneous vegetation, such as plantations; and especially when the species are not native in the area, and therefore not fully adapted. In the Amazon forest there are no reports on plagues and endemic diseases in natural forests of Madre de Dios.

3. Extreme weather

The INDECI statistics there are many weather events considered natural emergencies. However, the region of Madre de Dios only has records of floods as recurrent and severe emergency for the population, affecting agricultural areas, pastures and urban areas mostly. For the forests, periodic flooding of the floodplain is part of its natural dynamics and does not represent a risk of change in carbon stocks.

Another event that affects the population is the cold waves which occur cyclically and can be described as the incursion of polar air masses associated to the sudden decrease in air temperature (15 °C in just a few hours), increase in the cloudiness of strati form type, intensification of the winds and increase of the atmospheric pressure. According to Marengo (1984) the most affected department is Madre de Dios, but as is a natural cyclical event, do not represent a danger to the permanence of the standing forest.

4. Geological Risk

Madre de Dios is a geologically stable department. According to the National Center of Geophysical Data is a región with no seismic activity. This is because it is far from the Fire Belt.