

Peatland Restoration Activities Implemented by Yayasan Gambut in Sepahat Village

Yayasan Gambut together with the Sepahat Village Government and *Masyarakat Peduli Bencana* (community group for disaster awareness) of Sepahat Village agreed to take action in preventing land and forest fires. Up to now, a number of activities have been carried out to protect the village and prevent fires in Sepahat Village.

The active involvement of multi-stakeholders is the main foundation for activities in order to achieve better results, especially in monitoring of fire-prone areas.

In determining the location of protected areas, it is based on the outcome of deliberations with the village government and community groups so that it is more targeted.



Canal Blocks

Support in the form of 2 canal blocks in Sepahat Village in fire prone spots. By blocking the canals, the peat water retention can be increased. When the peatlands is wet, it will be difficult to burn.



FDRS (Fire Danger Rating System) Information Board

Support 1 unit of fire danger information board by using the water table as the real time indicator.

FDRS can also be used to predict the fire risk and as a guide for policy makers in developing the measures to protect lives.

Rehabilitation of 3 Ha of Forest Plants

1,200 Pulai and Geronggang Trees and 216 Sago.

Rehabilitation with forest plant aims to restore, maintain and improve the function of peat forest and land, in order to increase their carrying capacity, productivity and role in maintaining life support systems.



Canal Mapping

Mapping the canal pathway in Sepahat Village peatland to determine the need for canal blocking construction.

This activity is also done to obtain data and information regarding the characteristics of peatland ecosystem in Sepahat Village.



Local Partner

Masyarakat Peduli Bencana (MPB) of Sepahat Village

In dealing with the relatively high level of land fires in Sepahat Village, in 2009 the village government formed *Masyarakat Peduli Api (MPA)*, i.e. community group on fire awareness, which has now changed to *Masyarakat Peduli Bencana (MPB)*, i.e. community group on disaster awareness. This group continues to carry out activities with existing support to patrol and outreach to the people of Sepahat Village.



Sepahat Village peatlands potential



Thickness of peat in Sepahat Village (meter)

Sepahat Village has a distribution of **9.056,33** hectares of peatland

> 4

2. 766,69 Ha

1-2

5.755,90 Ha

0,5-1

533,74 Ha

Sepahat Village is a village with high level of fire hazard. There are around 360 km of canals in the village, and this condition is the main potential for fires in Sepahat Village's peatlands.



Sustainable Peatland Management in Sepahat Village, Bukit Batu Sub-District, Bengkalis Regency

365 Hot Spot

Based on hotspot analysis data from the Terra Aqua Modis satellite, there were 365 hotspots from 2010 to 2018, with confidence level above 70

Reducing the adverse effects of floods and droughts

Peat forest has a very high absorption capacity, it can hold water even up to 450 to 850 percent of its dry weight, or around 90 percent of its volume.

Support the economy

Peat soil is a natural habitat for several plants with economic value, including Rattan, Rubber, Pineapple, Tembu, Sago, coconut, etc.

Natural habitat of various biodiversity

Several endangered species of animals that live in peat areas are orang utans (*Pongo spp.*), red langurs (*Presbytis rubicunda*), Bornean clouded leopards (*Neofelis diardi borneensis*), swamp forest cranes (*Ciconia stormi*), and white-winged geese (*Asarcornis scutulata*).

Benefits of Peatland

Peatland is a type of wetland formed from piles of organic matter such as tree remains, grass, moss and decaying animal carcasses that are buried in the ground. Indonesia has the largest peatlands among tropical countries, which is around 21 million hectares, distributed over the islands of Sumatra, Kalimantan and Papua.

Protect the environment from climate change

Peatlands can absorb 550 gigatonnes of carbon or about 30% of the carbon in the world's soil. Meanwhile, peatlands in Indonesia can store up to 57 gigatonnes of carbon or about 20 times more than other types of forests and soil can store.

Adverse Effects of Peatland Fires

Peatland fires have a significant impact on different aspects, including ecology, health, climate and economy resulting in numerous losses.

Impact on Human Health

In 2015, peatland fires caused respiratory infections in approximately 500.000 individuals. Additionally, haze caused by the fires led to an increased number of premature deaths and traffic accidents as a result of limited visibility.

Impact on Economy

Economic losses caused by fires on peatlands include losses to agriculture, forestry, transportation, trade, industry, tourism and other sectors with a loss value of around USD 16 billion (2015)

Ecological Impact

Loss of flora and fauna habitat and threatens the loss of biodiversity.

Impact on Climate

In 2015, forest and land fires in Indonesian resulted an estimated 1.6 million tonnes of Co2 emissions, which is more than the total daily greenhouse gas emissions of the United States. These emissions will further increase the rate of global warming.

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