

# PM Haze Peatland Restoration Programme

Riau, Indonesia

PM Haze has committed to a peatland restoration programme in Sungai Tohor Village in Riau, Indonesia, to restore burnt peatland for productive uses. Sungai Tohor is a village in the Meranti Islands Regency on the island of Tebing Tinggi, Riau Province. The island is covered entirely in peat. Since 2007, the peat has been drained for industrial agriculture contributing to massive fires that affected the community and was one of the key motivations to the community's commitment to peatland restoration.

PM Haze works with LSM Ekonomi Kreatif Andalan to realise the community's dream of bringing balance back to their living environment. Our peatland restoration project hence aims to implement a scalable, scientific and community-centric model for peatland restoration on degraded peatlands. The project has the following objectives:

**1. To take a scientific approach towards community peatland restoration activities**

A scientific approach is objective and standardised, providing empirical evidence which allows us to better understand our measures of success. Our peatland restoration activities utilises empirical data such as sample plants growth, peat water levels, peat subsidence levels etc. This allows us to compare the empirical results over different restoration sites to determine the success of our restoration efforts.

**2. To engage the local community in peatland restoration activities**

Our peatland restoration activities are community-centric, involving locals in the brainstorming, execution, and monitoring processes. Engagement with the local community not only helps to build trust and rapport with the community, it also empowers the community with knowledge and hands-on experiences. This also helps to ensure long-term sustainability of our programme.

**3. To build a network of partners to collaborate in peatland restoration**

Establishing and maintaining a network of partners allows for knowledge sharing and capacity building. To-date, PM Haze has partnered with Ekonomi Kreatif Andalan (EKA), our community Partner, as well as Nanyang Technological University (NTU) Singapore and the University of Newcastle Singapore (UONS) for research partnerships.

## Why restore Peatlands?

Peatlands are natural wetlands formed from decomposed plant matter, accumulating to form layers of peat on the forest floor over centuries. Peatlands serve as the greatest reservoir of carbon in the world, containing three times more carbon than all the plants and trees in the world combined. They also contain a multitude of flora, fauna, and are home to much wildlife. They preserve important ecological, archaeological information and are crucial in biodiversity conservation.

Our restoration effort consists of two main approaches: Revegetation and Rewetting. It is also condensed in the infographic attached below.

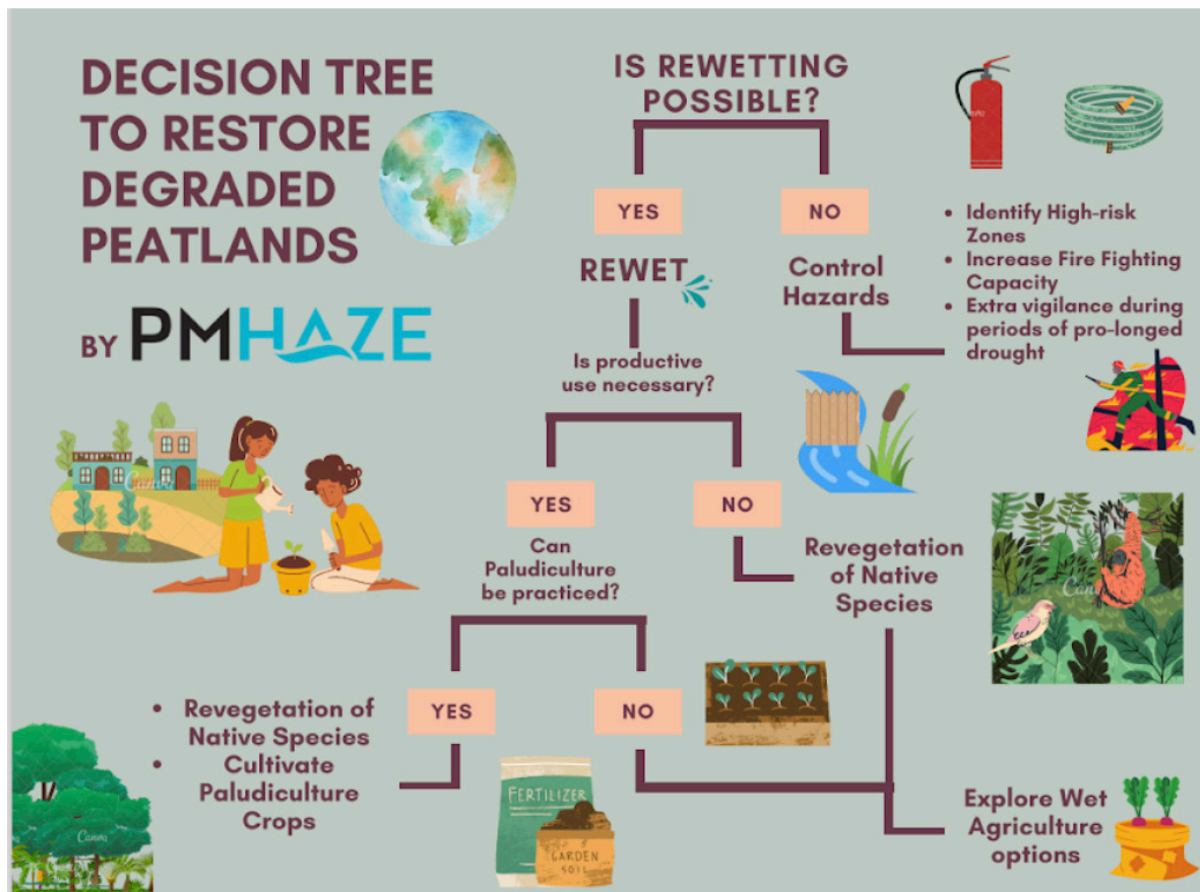


Figure 1: Decision tree to restore degraded peatlands

## 1. Revegetation

Our revegetation process consists of three key steps:

- (a) building a nursery;
- (b) transplanting the saplings;
- (c) monitoring the growth.

### (a) Building the nursery

A nursery is a structure with cover to ensure that the saplings are grown in a protected environment. The nursery is usually built near the replanting area for easy transplanting of saplings. Stem cuttings of verified species are collected and put into polypropylene bags, together with some burnt peat to acclimatise the saplings to the soil. The saplings will be in the nursery for about three months, and are transported to restoration sites once they have matured.

### (b) Transplanting the saplings

Once the saplings are ready, they will be transplanted to the restoration sites. The saplings will be tagged for monitoring.

### (c) Monitoring the growth

The water table level will be monitored within the replanting area every month. The traditional method is to bore holes at selected locations and measure the groundwater level manually.

## 2. Rewetting

Our approach towards rewetting involves mainly repairing and constructing canal blocks. Canal blocks will increase peat water levels, reducing the occurrence of fires on these wetlands. By increasing peat water levels, the chances of survival of saplings planted also increases.

### ***What we have done so far***

Since 2019, we have achieved the following milestones in our Peatland Restoration Programme.

1. Established 4 nurseries with a capacity of more than 10,000 saplings
2. Established 2 restoration sites (6ha)
3. Replanted burnt peatland area with 7,670 saplings of pioneer native species
4. Repaired 4 canal blocks
5. Established 21 dipwells for measuring peat water levels
6. Established a show area for advocacy and education at the secondary forest -- workhalls, community garde, banner installation
7. Organised community activities and events to build awareness amongst the communities (ie peatland restoration workshops)

**PMHAZE**