



# Forest Restoration in Giam Siak Kecil-Bukit Batu Landscape, Riau

ASKUL-Belantara Project

March 2025 | Belantara Foundation



# Introduction

Forest areas in parts of GSK – BB have experienced reduced forest function (degradation) and land change (deforestation). Degradation and deforestation in this area occurs due to forest fires and land cover changes.

Restoration efforts are needed to restore ecological function of degraded forests, including peat and mineral forest.

Restoration is rebuilding and maintaining forest conditions so that degraded forest will regain its function as habitat for biodiversity, buffer for the hydrological system, and store carbon stocks. Forest restoration is also a key form of climate actions (adaptation and mitigation).





# Program Objectives

Restoring 100 hectares of degraded forest in the Giam Siak Kecil-Bukit Batu landscape to support the Sustainable Development Goals.

## Long-term Goals

- Improve biodiversity composition in the restoration area
- Improve the well-being and economic opportunities of community groups in Tahura SSH
- Increase carbon sequestration and carbon stock within the project area
- Increase forest cover in degraded area in Tahura SSH

## Short-term Goals

- Increasing species richness of insects
- At least 20 community members economically benefited from the project area
- 50% of tree saplings are locally prepared by the community
- Increase carbon sequestration and carbon stock within the project area
- 100 hectare of degraded areas in Tahura SSH are planted with multi-purposes tree species





## Location

Tahura Sultan Syarif Hasyim, Riau, within the Giam Siak Kecil-Bukit Batu landscape, Riau.

# Activities



## Survey

(April 2024)

We surveyed the tree planting location several times to ensure the location is accessible, ready to be planted, and tree planting activity could run smoothly. Survey activities were also carried out to ensure the current condition of the planting location. The initial condition of the planting location was in the form of shrubs (70%) and wild acacia trees (30%). Based on the results of the survey, we ensure that planting can be carried out with as many as 500 stems per hectare.



## Project preparation

(December 2024 and January 2025)

In the course of the program, we also coordinated with the Ministry of Forestry to extend the cooperation in the implementation of protection and restoration programs at Minas Tahura and register the project to national level collaboration.



## Capacity building



## Nursery

(July 2024)

One of the targets of this program is to provide economic benefits to the community. We currently have a nursery in Tahura Minas SSH that is managed by a group of forest farmer communities and a nursery in Pemandang village, Rokan Hulu Regency that is managed by village forest management. Through this program, we will develop one more nursery in the community area. The development of this nursery is to increase the source of seedlings that come from the community. The community that prepares and cares for the seedlings will benefit economically from this program.

- KTH Minas Nursery - capacity of 10,000 trees
- Pemandang Nursery - capacity of 50,000 trees



## Land preparation (on going)

### *Land clearing*

(February 2025 – still on going)

Before planting, the land must be cleaned by cutting shrubs by following the plant path according to the contour line planting pattern with a width of one meter with a planting distance adjusted to field conditions. Planting is done with a lane system with a total of 500 plants/hectares. The seedlings planted must meet the specifications that have been determined.

### *Installation of planting site markers*

(February 2025 – still on going)

Marking the planting location is done by using wooden markers in each planting lane. This marking aims to provide information to the tree planting workers for

The direction of the rows of plants is made by using the stakes of the direction of the rows and is determined by referring to the condition of the location rehabilitation is carried out according to the condition of the rehabilitation area.

The direction of the plants is marked with stakes, with the intention of providing a definite direction in the implementation of field cleaning work / making planting lanes and installing stakes. The number of stakes is adjusted to the condition of the area, so that it is easy to use as a guideline for the implementation of activities. The larikan direction stakes will be used as a sign in the field where the planting lanes will be made. The stakes are made from wood (dead plants and/or invasive plants) that is easily available around the location of the activity with a size that allows it to be seen from a distance.

### *Stake installation*

(March 2025 – still on going)

Installation of plant stakes is carried out after determining the direction of the larikan and cleaning the planting path. The installation of plant stakes serves as a sign in the implementation of making plant holes. Plant stakes are made from wood (dead plants or invasive plants) or from bamboo splits or other materials. Plant stakes are made of bamboo/wood with a size that makes it easy to see as a marker for planting holes.

### *Making the disk and planting hole*

(March 2025 – still on going)

Planting holes are made of adequate size at a predetermined point where the plant is staked. A plant disk is made around the plant surrounding the plant hole. Making a plant disk is done by clearing bushes and other plant grass so that it becomes clean. If the planting hole is located in a sloping location, the plant disk is made flat and does not follow the slope. The crop circle is made by clearing bushes, grass, and other plants around the planting hole.



## Tree planting

Currently, the tree planting process will be carried out in March and April 2025 after the land preparation is completed. The first phase of tree planting will take place on 45 hectares of land in Tahura Minas Sultan Syarif Hasyim. In the first phase, the number of seedlings to be planted is 22,500 trees.



## Monitoring (tree planting maintenance)

Tree planting maintenance will be carried out six months after planting in October – November 2025. During the tree planting maintenance process, we will replant approximately 20% of the planted trees.



## Protection

Protection activities will be carried out using the SMART Patrol method. In preparation for these activities, we have conducted training for Tahura SSH staff. Routine patrol activities commenced in March 2025. The patrol activities will cover an area of at least 200 hectares within the Tahura region.

Stakeholders participating in the forest patrol activities include:

- Tahura SSH Staff
- Belantara Foundation Staff
- Forest Rangers



## Evaluation



## Equipment support

To support planting preparation, monitoring, and evaluation activities, we have purchased a DJI Mavic 3 Multispectral drone. The purchase of this drone was also carried out with the support of other Belantara programs such as the Forest Restoration Project program: SDGs Together and Sustainable Village Forest Management. Drones provide a cost-effective and efficient way to monitor, protect, and restore forests.



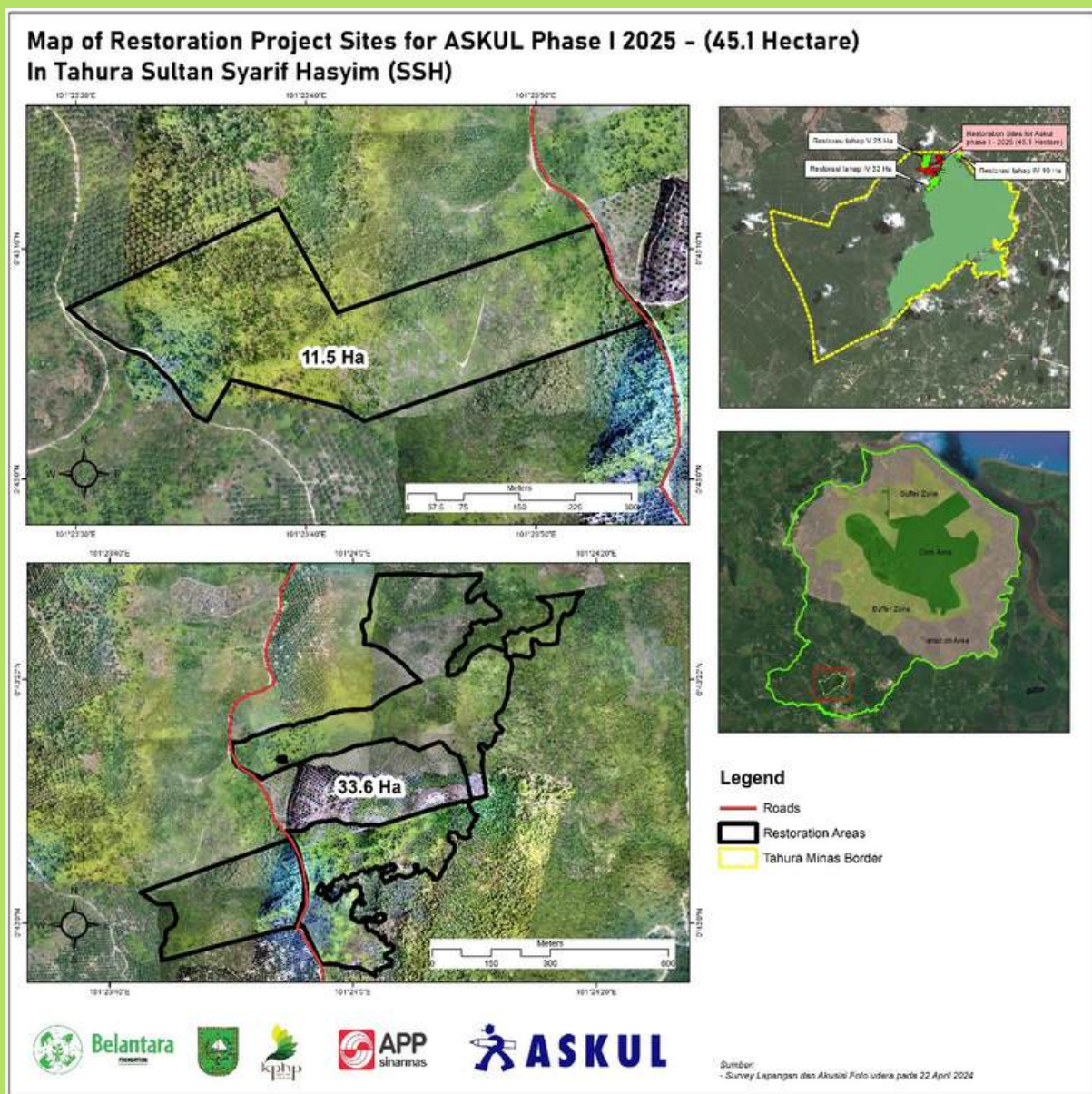
## Baseline assessment



## Management



# Maps



Logo APP masih yang lama?



# Revised timeline

The timeline of the project has been delayed for several reasons such as:

1. There were changes in Belantara's management team in mid 2024, where we didn't have enough staff on program teams.
2. At the end of 2024, the weather in Riau was relatively very dry and we are waiting for the rainy season to enter at the end of 2024 and early 2025.
3. Currently, we have agreement with the Environmental & Forestry Agency of Riau Province, however the Forest Management Unit of Tahura SSH (which is under the Environmental & Forestry Agency) requests to extent the agreement to national level with Ministry of Forestry to received national recognition. We are now in the process of developing a cooperation agreement at the national level with the Ministry of Forestry.

Activities	2025										2026					
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Survey																
Project preparation																
Capacity building																
Nursery																
Land preparation																
Tree planting																
Tree maintenance																
Protection																





# Financial Summary

## Income

Date	Term	Total (IDR)
July 10, 2024	Term 1	Rp 420.369.000
December 12, 2024	Term 2	Rp 420.369.000
Total		<b>Rp 840.378.000</b>

## Expenses

Activities	Total (IDR)
Survey	Rp 30.212.693
Project preparation	Rp 77.650.000
Capacity building	-
Nursery	Rp 5.880.000
Land preparation	Rp 30.000.000
Tree planting	Rp 16.740.000
Tree maintenance	-
Protection	Rp 10.000.000
Evaluation	-
Equipment support	Rp 76.790.000
Baseline assessment	-
Management	-
Total	<b>Rp 247.272.693</b>





## Survey



23 Feb 2025 10:06  
259  
Index number:



21 Feb 2025 13:57:01



23 Feb 2025 12:17:36



23 Feb 2025 10:54:07







# Field activities



## Land preparation – Making the disk and planting hole







## Seedlings preparation







## **Land preparation – land clearing**







## Forest patrols preparation







## Forest patrols











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