

Conservation of Southeast Portion of North Selangor Peat Swamp Forest Phase 1 - Bukit Belata (Ext) Forest Reserve (BBEFR) Project

A Brief Progress Update from October 2020 to April 2021

1. Introduction

The Global Environment Centre (GEC), a Malaysian non-profit organisation with expertise in peatland conservation, and Prosper Oil Palm (Prosper), a Malaysian oil palm company, signed an Agreement in March 2020 to support the conservation of the Southeast portion of the 81,000ha North Selangor Peat Swamp Forest (NSPSF), which is the largest contiguous peat swamp forest in Peninsular Malaysia. Phase 1 of the project (2020-2023) is focused on Bukit Belata (Ext.) Forest Reserve (BBEFR), which covers 3,140 ha. It has been designed by Prosper as part of its Recovery Plan. The work is undertaken in the framework of the MoU between GEC and the Selangor State Government, which has facilitated joint forest conservation actions in NSPSF since 2010. This brief report describes the progress of the activities conducted from October 2020 to April 2021 according to the implementation plan.

2. Progress of the activities according to the project implementation plan from October 2020 to April 2021

The following table outlines the progress of the activities from October 2020 to April 2021 according to the project implementation plan:

Code	Activity	Progress and accomplishment of the activities
Activity 1 : To assess location and scale of degradation in the identified forest compartment areas		
Act 1.1	Monitoring of rehabilitation and wildlife including regular ground and drone surveys, water table and vegetation growth monitoring as well as camera traps at selected locations for wildlife	<ul style="list-style-type: none"> ▪ Six (6) piezometers were installed at FC 3, 7 and 25 and water tables at both forested areas and adjacent oil palm plantations were monitored in the aforementioned forest compartments (Figure 1). ▪ The water table data was analyzed and interpreted by the GEC officers before disseminated to the stakeholders WhatsApp groups on weekly basis to alert the relevant local stakeholders to take necessary precautions based on the shared information.
Act 1.1	Monitoring of rehabilitation and wildlife including regular ground and drone surveys of the rehabilitation site and water table and vegetation growth monitoring as well as camera traps at selected locations for wildlife	<ul style="list-style-type: none"> ▪ Conducted wildlife assessments at FC 3, 4, 6, 7, 23, 24 and 25 from October 2020 to March 2021. ▪ About 21 species of mammals from 13 families were recorded with more than half (11 species – 52.4%) of the species were listed as of conservation priority by IUCN.
Activity 2 : Rehabilitation of 200 ha through rewetting and assisted natural regeneration and selected planting in priority portions of the BBEFR		
Act 2.1	Canal blocking and rewetting	<ul style="list-style-type: none"> ▪ Two (2) locations at FC 25 and seven (7) locations at FC 3 were identified and surveyed for the construction of canal blocks. The width of each canal blocks ranges from 6.00-7.00 m whereas the depth ranges from 1.3-2.5 m (Figure 2).
Act 2.2	Seedling procurement and nursery establishment	<ul style="list-style-type: none"> ▪ Conducted a peer visit from the newly formed Community-based Organization (CBO) called as 'Komuniti Warisan Hutan Sg. Tenggi Selatan' or KWHSTS to SHGSU community nursery as an exchange/learning session to identify and learn techniques involved in seedling

		<p>procurement, wilding collections, medium preparation, proper planting methods and the maintenance of the planted seedlings at the nurseries (Figure 3).</p> <ul style="list-style-type: none"> Provided hands-on activities to KWHSTS to prepare suitable medium for the efficient growth of the peatland species and to plant '<i>Melicope lunu-ankenda</i>' (Tenggek Burung) seedlings using proper planting techniques. Performed follow up activities with KWHSTS on the procurement of the seeds and wildings to set up a community nursery at Felda Sungai Tengi Selatan (FSTS) to supply trees for the planting and maintenance work at BBEFR.
Act 2.4	Land preparation for rehabilitation activities (20 ha)	<ul style="list-style-type: none"> Conducted tree planting activity at six (6) ha of degraded site of FC 25 to replace the tree cover destroyed by peatland fires in the previous years. One (1) ha of degraded area that comprised of peat soil and five (5) ha of degraded area that comprised of mineral soil were planted with a total of 3,070 of Tenggek Burung (<i>Melicope lunu-ankenda</i>) and 600 of Pulai (<i>Alstonia scholaris</i>) trees using both mound planting and conventional planting techniques (Figure 4). Performed tree census and survival count upon completion of the planting work that indicated high survival rate (82.56%) among the planted trees.
<p>Activity 3 : Enhance the understanding of community and stakeholders on peat hydrology, sustainable management on peatland and fire prevention with local communities and landowners</p>		
Act 3.1	Development and distribution of information materials on fire prevention	<ul style="list-style-type: none"> The designing work of the boundary signage and Fire Danger Risk Warning signage was completed and pending for approval from the Selangor State Forestry Department (SSFD) Sign boards illustrating (i) rehabilitation site at FC 25, (ii) location of canal blocks at FC 3 and (iii) processes involved in the canal block construction are under preparation.
Act 3.2	Organization of meetings with stakeholders, local communities and landowners to discuss on sustainable use of peatland, fire risk and prevention measures	<ul style="list-style-type: none"> Conducted a series of meetings with 'Ketua Peneroka', 'Ketua Blok' and FSTS community to discuss on the formation of a CBO to participate in forest rehabilitation activities at BBEFR. Successfully formed a CBO that was informally called as 'Komuniti Warisan Hutan Sg. Tengi Selatan' (KWHSTS) with the selection of the main committee members. Conducted a peer visit from KWHSTS to GEC-CoSPeC and hosted a sharing session between the SHGSU and KWHSTS to understand the roles and activities of SHGSU towards the conservation of peatland forests in NSPSF. Conducted a meeting with the new director of Selangor State Forestry Department and the district level forestry officers to present the implementation plan of the rehabilitation projects for the year 2021 at BBEFR and NSPSF.
Act 3.5	Establishment/guidance of local fire	<ul style="list-style-type: none"> Two representatives from FSTS were selected, trained

	<p>prevention and monitoring team to monitor and communicate with relevant authorities</p>	<p>and appointed as the local community patrollers to undertake community-based patrolling and monitoring activities at fire prone peatland areas in BBEFR (Figure 5).</p> <ul style="list-style-type: none"> ▪ The patrollers were updating the Fire Danger Risk Warning Signboards according to the Fire Danger Rating System (FDRS) on daily basis. ▪ The appointed patrollers were responsible in undertaking water table monitoring activities at the forest and adjacent oil palm plantations twice per week.
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3. Problems encountered during the implementation period

The Movement Control Orders (MCO) the cancellation of the outdoor activities to ward off the spreading of COVID-19 pandemic has resulted in slightly delayed implementation of the planned activities at BBEFR from October 2020 to April 2021. Nevertheless, the project activities were implemented on timely manner in smaller scale with strict adherence to SOPs. Besides, the Felda community’s involvement in the formation of a CBO to participate in the planned rehabilitation activities was slightly delayed due to the second MCO/Conditional MCO. However, GEC approached the Felda community leaders and conducted a series of discussions to form the CBO at FSTS before reaching out to the interested community members. On the other hand, periodical rain episodes associated with the northeast monsoon season starting from September 2020 and the La Nina phenomenon caused high water tables at the proposed planting site at FC 25 until January 2021. The high water level conditions of the peatland reduced the accessibility into the sites and hindered the commencement of the planting activities. Therefore, the planting activities were conducted in January 2021 onwards when the high water level subsided. Starting from February 2021, hot weather due to heat waves as reported by Malaysian Meteorological Department (MetMalaysia) affected the adaptability and survival of the newly planted tree saplings at the sites. However, mound-planting technique enabled the trees to survive in such conditions. Moreover, frequent site observations helped the problems to be identified immediately for corrective actions and watering the planted trees that were exposed to direct sunlight.

4. Pictorial report of the activities implemented from October 2020 to April 2021



Figure 1. The pictures illustrating the piezometer installation process at BBEFR including the measurement of peat depth and installation of piezometers

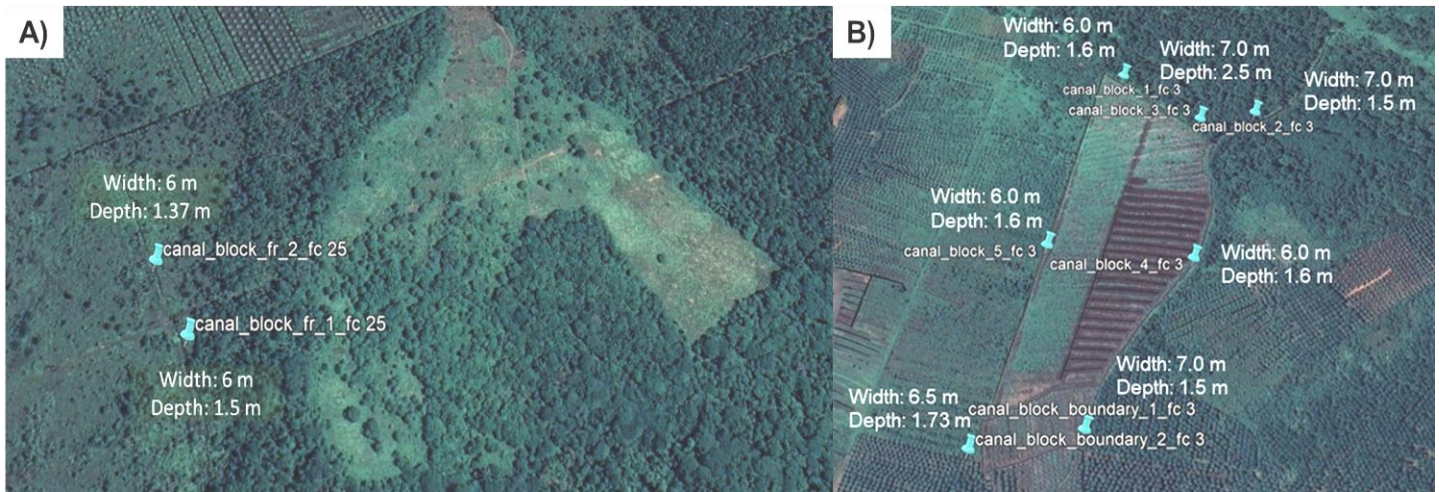


Figure 2. Canal blocks: A) Two (2) units of canal blocks to be constructed at FC 25, BBEFR; B) Seven (7) units of canal blocks to be constructed at FC 3, BBEFR



Figure 3. Peer visit from KWHSTS to GEC-CoSPeC and SHGSU community nursery to understand the roles and activities of SHGSU towards the conservation of peatland forests in NSPSF.

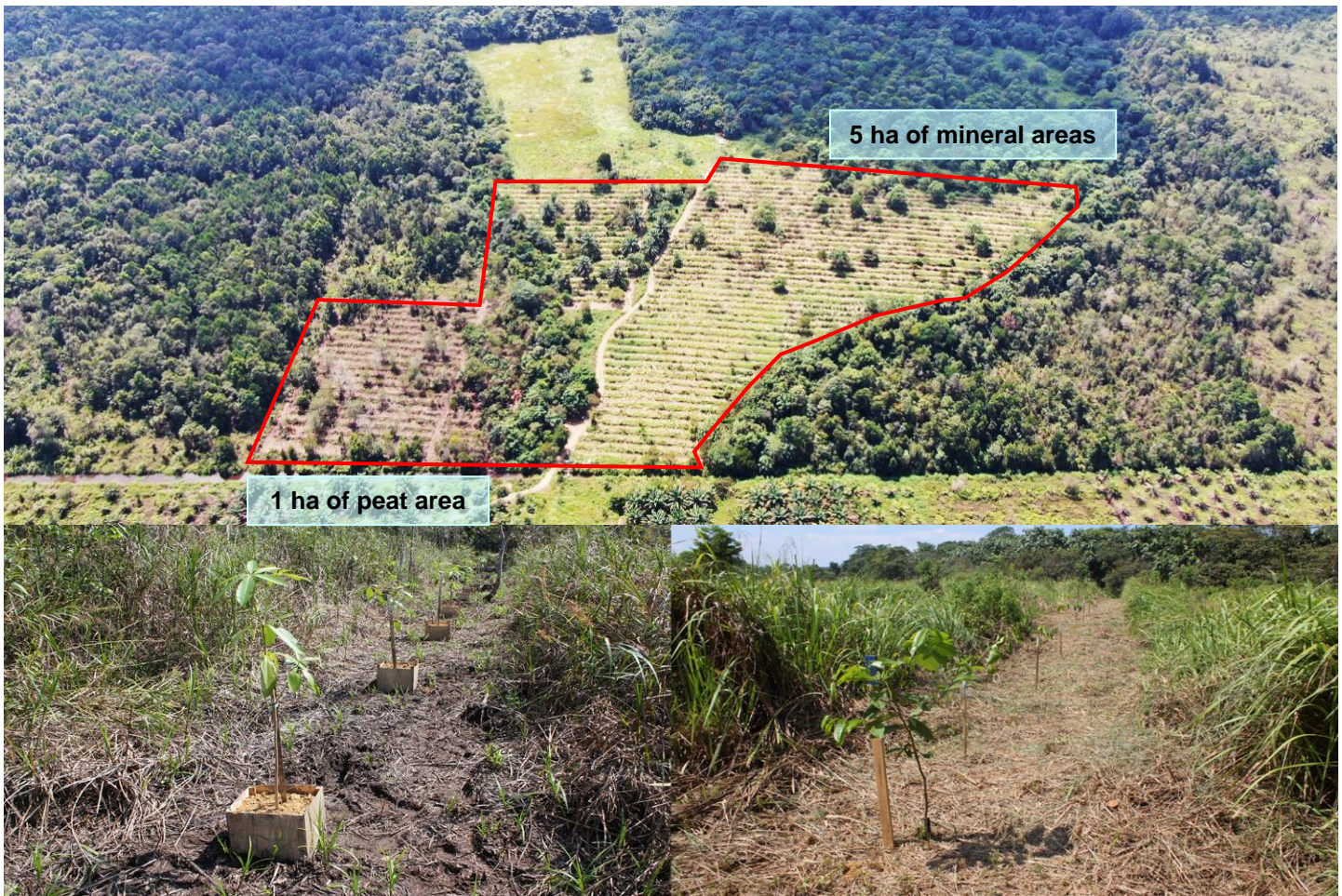


Figure 4. Trees planting at six (6) ha planted site at FC 25, BBEFR.



Figure 5. Patrolling activities and water table monitoring using piezometers at both forest and adjacent oil palm plantation sites as well as updating FDRS colour codes at the forest sites based on the daily FDRS updates disseminated to the patrollers by GEC via WhatsApp groups.