



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

A Brief Progress Update from December 2022 until 15 July 2023

1. Introduction

The Global Environment Centre (GEC), a Malaysian non-profit organisation with expertise in peatland conservation, and Prosper Capital Holdings Sdn. Bhd. or Prosper (formerly known as Prosper Palm Oil Mill Sdn. Bhd.), 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 December 2022 until July 2023 according to the project implementation plan.

2. Progress of the activities according to the project implementation plan from December 2022 until July 2023

The following table outlines the progress of the activities from December 2022 until July 2023 according to the project implementation plan:

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Code	Activity	Progress and accomplishment of the activities
Activity	1 : To assess location and scale of degra	dation in the identified forest compartment areas
Act 1.1	Undertake appropriate assessments on key issues including fire incidents and their root causes affecting biodiversity, water management, and so on.	 Conducted aerial surveys and ground observations in FC 1, 2, 3, 4, 5, 23, 24, 25, 35, 37 & 38 to monitor the natural regeneration of degraded areas due to interventions such as fire prevention, forest patrolling, rewetting and revegetation undertake at BBEFR (Figure 1). Development of project impact maps showcasing the degraded areas before the intervention (before March 2020) and the impacts (degraded areas transformed into low forests) after the interventions (in 2023) (Figure 2). Organized site visits and meetings for the "Review of Project Achievements" by MYTransform to the Prosper recovery project site in BBEFR and Felda Sungai Tengi Selatan (Figure 3).
Act 1.2	Develop a plan for rehabilitation of the degraded peatland areas.	The first draft of the rehabilitation plan for BBEFR was developed based on the initial assessments of the BBEFR during the implementation of the project in the past three years. These assessments provide baseline data for BBEFR's rehabilitation plan and activities (Figure 4).
Activity	2 : Rehabilitation of 200 ha through	rewetting and assisted natural regeneration and selected
planting	in priority portions of the BBEFR	
Act 2.2	Seedling procurement and nursery establishment	As of July 2023, 1,768 tree seedlings have been sown in the KWHSTS nursery. Currently, the nursery accommodates 1,578 tree saplings after contributing some trees for the replacement planting activities at FC





	T	1	
			25, BBEFR (Figure 5).
		•	The tree species grown in the nursery comprised Tenggek
			Burung (Melicope lunu-ankenda), Mahang (Macaranga
			pruinosa) and Kelat paya (Syzygium myrtifolium). The
			other species comprised landscape trees and vegetables
			such as eggplants, etc. that can be a benefit for the
			members of the group.
Act 2.3	Land preparation for rehabilitation	-	Conducted a small-scale tree planting event with KWHSTS
&	activities (20 ha) periodic tree planting		and Felda representatives on 9th December 2022. A total
Act 2.4	activities with PROSPER staffs,		of six KWHSTS members, three FELDA representatives
	volunteers and community groups (Act		and four GEC staff successfully planted 200 trees raised in
	2.3) & Organize tree planting activities		the KWHSTS nursery via the sapling buy-back programme
	with Prosper staff, volunteers and/or		(Figure 6).
	community groups (Act 2.4)	_	
		-	A tree planting event was organized on 22 nd June 2023 at
			FC 25 for the Prosper staff (7 pax), supply chain members
			(14 pax), KWHSTS (15 pax) and GEC (9 pax) during the
			'Stakeholder Visit to Prosper recovery project site at
			BBEFR'. About 300 Nyatoh trees (Madhuca hirtiflora)
			were successfully planted at FC 25 during the event
			(Figure 7).
Act 2.5	Maintenance of planted trees (20 ha)	-	Two field staff of GEC, who are also the members of
Act 2.5	Maintenance of planted trees (20 ha)		KWHSTS conducted the maintenance activities at 6 ha of
			planted sites and 2 units of canal blocks in FC 25, BBEFR
			(Figure 8).
		-	The site cleaning activities were conducted at FC 3 and FC
			25 as a preparation for the "Review of Project
			Achievements" by MYTransform and 'Stakeholder Visit to
			Prosper recovery project site at BBEFR'.
Act 2.6	Encouragement of natural regeneration		Approximately 244 ha of the degraded sites at FC 1, 2, 3,
1100 2.0	in less degraded areas (180 ha) – 3		4, 5, 24, 25, 37 & 38 BBEFR have undergone natural forest
	_		<u> </u>
	years		regeneration process (transformed from degraded areas
			to low forests) as a result of project action on rewetting,
			revegetation, regular forest patrolling and fire prevention
			initiatives (Figure 2).
		•	The natural forest regeneration of this area is also
			anticipated to prepare seeds and dispersal agents to
			promote the forest recovery and regeneration of the
			adjacent degraded areas.
A ativity	2 . Enhance the understanding of	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	, -
			nity and stakeholders on peat hydrology, sustainable
	ment on peatland and fire prevention w		
Act 3.2	Meetings with stakeholders, local	•	A stakeholder visit to Prosper recovery project site at
	communities and landowners to		BBEFR was conducted on 22 nd June 2023. During the site
	discuss on sustainable management of		visit, the stakeholders have been showcased with the
	peatland and fire prevention measures,		project activities implemented based on the 5R
	including livelihood training		approaches [Rewetting, Revegetation, Reduction of fires,
			Revitalisation (community engagement) and Reporting &
			Monitoring]. The external assessor concluded that the
			rehabilitation of BBEFR by GEC in the past 3 years has
			delivered results indicated in its proposal and met the
	I .		r-re-





Act 3.3	Promoting the Malaysia Good		necessary conservation and community development requirements for a Recovery Plan. The stakeholders witnessed the project's impacts on site and registered their satisfaction and support for the continuation of the Recovery Project (Phase 2) for enhanced rehabilitation efforts, results, socio-capital and economic development (Figure 9). Three selected members of KWHSTS participated in the 'Social Entrepreneurship Training with Community-based Organisation' in Taiping from 19th-21st May 2023. This training was to provide some sharing sessions and practical training on local product development, product branding and marketing strategies, effective product promotion according to the current market segmentations and practical training in video making (Figure 10). Three selected members of KWHSTS participated in the 'Forum Pembelajaran bersama Komuniti dan Lawatan Sambil Belajar di Selangor' from 10-13th July 2023. This forum was to exchange the experience and knowledge and build collaboration among the 25 CBOs that attended, in implementing ecosystem restoration efforts at the local level using Nature-based Solutions (NbS) strategies (Figure 11). Conducted training on 'Good Agricultural Practices on
Act 3.3	Promoting the Malaysia Good Agriculture Practices (myGAP), Malaysian Sustainable Palm Oil (MSPO) and Roundtable on Sustainable Palm Oil (RSPO) Manual	•	Peatlands and MSPO Certification' on 22 nd March 2023 in collaboration with MPOB for 24 KWHSTS members and Felda representatives. The training was on the management of peatlands for agricultural and oil palm plantation activities and the requirements of MSPO certification that encompasses aspects related to site management, water management, environment-friendly practices, occupational safety and security (OSH) and social and workers' welfare (Figure 12).
Act 3.4	Training of local community on peatland water management appropriate to best management practices for agriculture including crop selection	•	Organized a study visit to the agricultural zone of Johan Setia on 21 st March 2023 for KWHSTS members to showcase GAP on peatland, which covers land and water management, selection of crops based on peat depths, water tables, crop root zones and other factors for optimum yield (Figure 13). The KWHSTS members were brought to the Communal Vegetable Plots at KOA Pulau Kempas to learn how the Orang Asli Temuan practise crop selection, crop alternation, site maintenance, manuring, etc. linked to organic farming and GAP.
Act 3.5	Establishment/guidance of local fire prevention and monitoring team to monitor and communicate with relevant authorities	•	Two patrollers of KWHSTS from Felda Sg. Tengi Selatan actively undertook community-based patrolling and monitoring activities at fire-prone peatland areas from December 2022 until July 2023 in BBEFR (Figure 14). The patrollers updated the Fire Danger Risk Warning Signboards according to the Fire Danger Rating System (FDRS) on a daily basis.





		•	The		-	performed		table
		monitoring activities at the BBEFR and adjacent oil palm plantations twice per week, 16 times a month. No encroachment, illegal activities and fire incidents were						
		he patrolling	g period.					
Act 3.6	Boundary signage and protection past	 Developed, printed and erected the following signboards at respective sites (Figure 15): 					ooards	
	establishment							
		- Two units of canal block signboards at FC 25 and FC 3					d FC 3	
			t	o provide inf	ormation re	garding rewe	tting and	l canal
			b	olock constru	ction at BBF	ER.		
			- (One unit of n	ursery estab	lishment sigi	nboard e	rected
			a	it the KWHST	'S nursery in	Felda Sungai	Tengi Se	latan.

3. Problems encountered during the implementation period (December 2022 - July 2023)

3.1 The quick spread and dominance of Lalang grass in the planted site at FC 25, BBEFR

Since FC 25, BBEFR is a fire-affected area, the Lalang grass grew very rapidly and dominate this area after each maintenance activity. The overgrown Lalang grass tends to compete with the planted trees and limit their acquisition of adequate nutrients for enhanced growth. Therefore, frequent maintenance activities need to be conducted at the site to remove potential competitors and fire risks.

3.2 The frequent rainfall episodes and high-water tables at BBEFR during the beginning of 2023 impede the ground activities such as field visits, site maintenance and tree planting

The frequent rainfall and high-water tables at the forest compartments of BBEFR during the beginning of the year 2023 caused some delays in the completion of certain scheduled field activities such as field visits, site maintenance and tree planting activities. Therefore, another 6 months of project extension was obtained until September 2023 to complete the pending activities in order to mark the completion of the Phase 1 restoration project for BBEFR.





4. Pictorial report of the activities implemented from December 2022 until July 2023

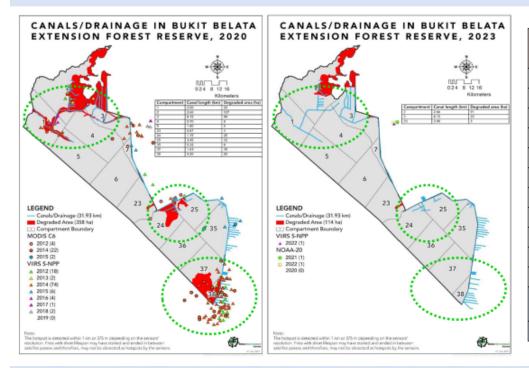


Figure 1. Conducted aerial surveys and ground observations BBEFR to monitor the natural forest regeneration of degraded areas due to fire prevention, forest patrolling, rewetting and revegetation.



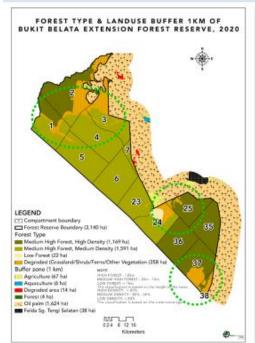


Reduction of hotspots and degraded areas throughout project implementation period [before (2020) and after (2023)] - 244 ha



FC	Degraded Area (ha)				
	2020	2023			
1	20	0			
2	127	91			
3	98	20			
4	8	0			
5	5	0			
23	3	3			
24	25	0			
25	12	0			
35	0	0			
37	35	0			
38	25	0			
Total (ha)	358	114			
Differe	244				

Changes in the vegetation type throughout project implementation period [before (2020) and after (2023)] - 244 ha





Vegetation	Area	Changes		
Туре	2020	2023	(ha) -	
Medium High Forest (High Density)	1,169 (37%)	1,169 (37%)		
Medium High Forest (Medium Density)	1,591 (51%)	1,591 (51%)		
Low Forest	22 (1%)	266 (8%)	+244	
Grassland/ Shrub/ Ferns	358 (11%)	114 (4%)	-244	
Total (ha)	3,140	3140		
Difference	e (ha)		244	

The project established rehabilitation process in degraded areas of 244 ha:

FC 1 (20ha) FC 24 (25ha) FC 2 (36ha) FC 25 (12ha) FC 3 (78ha) FC 37 (35ha)

FC 4 (8ha) FC 5 (5ha) FC 37 (35ha) FC 38 (25ha)

Figure 2. Development of project impact maps showcasing the degraded areas before the intervention (before March 2020) and the impacts (degraded areas transformed into low forests) after the interventions (in 2023).







Figure 3. Site visits and meetings for the "Review of Project Achievements" by MYTransform to the Prosper recovery project sites and Felda Sungai Tengi Selatan.

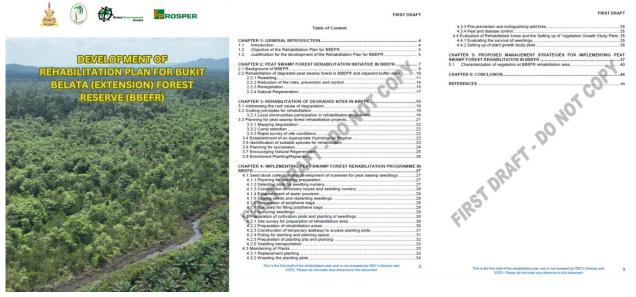


Figure 4. The first draft of the rehabilitation plan for BBEFR was developed based on the initial assessments of the BBEFR during the implementation of the project in the past 3 years.







Figure 5. As of July 2023, 1,768 tree seedlings have been sown in the KWHSTS nursery. Currently, the nursery accommodates 1,578 tree saplings after contributed some trees for the replacement planting activities at FC 25, BBEFR.



Figure 6. Conducted a small-scale tree planting event with KWHSTS and Felda representatives on 9th December 2022 - successfully planted 200 trees raised in in the KWHSTS nursery via sapling buy-back programme.







Figure 7. A tree planting event was organized on 22nd June 2023 at FC 25 for the Prosper staff (7 pax), supply chain members (14 pax), KWHSTS (15 pax) and GEC (9 pax) during the 'Stakeholder Visit to Prosper Recovery Project Site at BBEFR' – successfully planted 300 Nyatoh trees (*Madhuca hirtiflora*) during the event.



Figure 8. Two field staff of GEC, who are also the members of KWHSTS conducted the maintenance activities at 6 ha of planted sites and 2 units of canal blocks in FC 25, BBEFR.







Figure 9. A stakeholder visit to Prosper recovery project site at BBEFR was conducted on 22nd June 2023. During the site visit, the stakeholders have been showcased with the project activities implemented based on the 5R approaches [Rewetting, Revegetation, Reduction of fires, Revitalisation (community engagement) and Reporting & Monitoring].













Figure 10. Three selected members of KWHSTS participated in the 'Social Entrepreneurship Training with Community-based Organisation' in Taiping from 19th-21st May 2023.







Figure 11. Three selected members of KWHSTS participated in the 'Forum Pembelajaran bersama Komuniti dan Lawatan Sambil Belajar di Selangor' from 10-13th July 2023.







Figure 12. Conducted a training on 'Good Agricultural Practices on Peatlands and MSPO Certification' on 22nd March 2023 in collaboration with MPOB for 24 KWHSTS members and Felda representatives.



Figure 13. Organized a study visit to the agricultural zone of Johan Setia on 21st March 2023 for KWHSTS members to showcase GAP on peatland, which covers land and water management, selection of crops based on peat depths, water tables, crop root zones and other factors for optimum yield.







						Latest Piezometer Reading FC. 3, 7 & 25 BBEFR					
TARIEN	MITER PAIR KAYU			Kayu	CATITAN -	(Bacaan Piezometer Terkini di Kompt. 3, 7 & 25 BBEFR)					
27/1/2023	BBT		54.4	41-5							
	BBT		64.9	60.0		Sites	Piezometer	15/6/2023 (cm)			
	BBT		49 6	750							
	1381		395	42.0		FC25	BBT01	-1.1			
	BRI		428	42.2		1025		4,4			
1/7/2023	Be;	01		54.7			BBT02	-9			
	BAST	02	6x 4	71.0			55102	-9			
	BBT	03	50.0	61-5			BBT03	2.4			
	867	04	21.2	82.2		FC7	DD103	-3.4			
	BBI	02-	44.0	77.0							
	BBF	05	47.0	49.0			BBT04	-21.4			
77/2023	BIST	01	27-0	420							
	BET	03	640	26 9		FC3	BBT05	-15.3			
	BET	03	49.5	84.6		1.00		10.0			
	BAST	04	510	762	Dolans Sonalam		BBT06	-4.5			
	BET	07	42.1	45.0	Petans Somalam hujan lebat		BB100	-4.5			
	BBT	06	44.5	39-0	hujan lebat	(-) N€	egative indicate water level b Update by GEC- FCP	elow ground			

Figure 14. Two patrollers of KWHSTS from Felda Sg. Tengi Selatan actively undertaken community-based patrolling and monitoring activities at fire-prone peatland areas from December 2022 until July 2023 in BBEFR.









Figure 15. Developed, printed and erected canal block and nursery establishment signboards at FC 25 and FC 3 as well as at the KWHSTS nursery in Felda Sungai Tengi Selatan.

Note: A final report that provides a summary of the Phase 1 Prosper project activity completion and its impact to the recovery of BBEFR will be prepared and submitted by the end of September 2023.