

Minutes of Meeting

Subject : 5th Peatlands Working Group 2 (PLWG-2) Meeting
 Date : April 3rd & 4th, 2018
 Venue : Aloft Hotel, Kuala Lumpur

Name	Organisation	Status
Faizal Parish	GEC	Substantive
Dr. Joshua Mathews	Bumitama Gunajaya Agro	Substantive
Dr. Shahrakbah Yacob	Sime Darby	Substantive
Chin Kai Xiang	Bunge Loders Croklaan	Substantive
Jason Hon	WWF	Substantive
Dr. Arina Schrier	Wetlands International	Substantive
Dr. Gotz Martin	Sinarmas-Agri	Substantive
Julia Lo	GEC	Alternate
Almo Pradana	World Resources Institutes	Alternate
Lim Sian Choo	Bumitama Gunajaya Agro	Alternate
Richard Kan	Golden Agri	Alternate
Javin Tan	RSPO Secretariat	Secretariat
Amir Afham	RSPO Secretariat	Secretariat
Devaladevi Sivaceyon	RSPO Secretariat	Secretariat
Lee see Lung	RSPO Secretariat	Secretariat
Sara Cowling (only the second day)	RSPO Secretariat	Secretariat
<i>Absent with apologies:</i>		
Jason Foong	KLK	Substantive
Tey Seng Heng	AAR(KLK)	Alternate

No.	Item Descriptions	Main Discussion Points	Action Points	Progress Update
April 3rd (afternoon onwards, Tuesday)				
1.	Review of previous meeting's minutes and progress on actions	The meeting started with a round of introduction from each member and RSPO Secretariat. Secretariat went through the progress update from previous meeting.	Secretariat to circulate link to presentations from the RT 15.	

		<p>Faizal briefly shared updates from the P&C review meeting. The last meeting at Bali was mainly to respond to comments received as this process is part of demonstrating compliance to ISEAL's requirement. Based on comments received, re-wordings as and where needed was discussed and agreed at the meeting in March 2018. However, there wasn't enough time to completely restructure sentences in the new P&C which will be outcome based so as to align with Theory of Change. Other issues such as to avoid duplication of the components of the P&C was also highlighted by Co-Chair.</p> <p>Another item of discussion was to revive the mandatory audit checklist. The existing checklist which was supposed to be mandatory but has been ignored in practise. As for ISEAL's requirement, compliance is only made on P&C and not for guidance. So, there was a discussion to incorporate important guidance into the audit checklist. However, it became complicated and near impossible since audit checklist might be varied in different countries depending on the National Interpretation (NI).</p> <p>The new P&C will have two new criteria (4.3b and 7.4b). The feedback received was positive where most of them support the new criteria and specific guidance for peat.</p> <p>As for updating of the peat BMP modules, online feedback form has been translated into Bahasa Indonesia by GEC and Secretariat has reached out through announcement in RSPO website and e-mail blast by RSPO Secretariat. To date, there are 2 feedbacks received from Indonesian.</p> <p>On peat poster, currently the translation process to Bahasa Indonesia is on-going with Wetlands International.</p>	<p>Jason Hon to share Smallholders BMPs to all working group (WG) members.</p>	<p>Secretariat has extended the deadline for the form & has planned a further 2 email blasts on 7/05 & 01/06</p>
2.	<p>Welcoming new members/ members composition discussion</p>	<p>The current composition of the WG (Annex 2) was discussed and potential candidates were identified and listed.</p> <p>The WG also welcomed a new member, Almo Pradana from World Resource Institute as an alternate for Wetland International.</p>	<p>Arina to get the CV of the 3 nominated social NGO and circulate to WG.</p>	<p>Riza Harizajudin and Wida Nindita have been appointed to the Substantive and alternate seat for Soc-NGO.</p>

		<p>3 nominations for social NGO:</p> <ol style="list-style-type: none"> 1. Ali Kaba (SDI Liberia) 2. Riza Harizajudin (Sawit watch) 3. Intim Vinda Gesvita (Sawit watch) <p>WG mentioned the need of viewing the CV of the 3 nominated representatives for Social NGO to have a better understanding of their background before deciding the appointment. Gotz expressed his concern of the representative from the Liberia, as there is no oil palm cultivation in the country and the travel can be challenging from Liberia to attend physical meeting.</p> <p>Following which, Chair raised one of the feedbacks from the consultation workshop in Miri where it would be great to have company with NDPE policy to join the WG. He suggested Wilmar International aside from having the NDPE policy, they also have significant existing oil palm plantation.</p>	<p>Jason Hon to confirm alternate for WWF.</p> <p>Kai Xiang to nominate alternate for Bunge Loders Croklaan.</p>	<p>Rianto Sitanggang appointed as alternate for Bunge Loders Croklaan.</p> <p>Ian Orrel (NBPOL) appointed to Growers (ROW) seat. Dr Shah (SDP) will be taking up the Growers (Malaysia)</p> <p>Mr Tey Seng Heng (AAR) has stepped down as alternate of KLK. Dr Sim Choon Cheak and Mr Arif Sugandi from AAR will replace him as KLK alternates for Malaysia & Indonesia respectively.</p>
3.	WG Discussion: Regional Peat Definition (LaTAM & Africa)	<p>Co-Chair started the session with a presentation of peat from different countries (Annex 3) in South East Asia (excluding Malaysia and Indonesia).</p> <p>According to presentation, most of the peatlands in Malaysia and Indonesia are dome with water input from the rain.</p> <p>For the rest of SEA, Chair provided a few case studies in several countries to delineate the physical difference and also how it affects the mineral content of the peatland.</p> <ol style="list-style-type: none"> 1. Heho Valley, Myanmar. There are hills surrounding the peat, thus by default the peat would have a higher mineral content as a result from the run off. 2. Inle Lake, Myanmar. The peat area also contributed by the runoff from eroded hills. The agricultural practice in Inle Lake is 	WG to share references/publication for peat definition.	WG have commented on the wordings for the definition of peat for Malaysia, Indonesia & ROW. Final confirmation email sent 7 th May 2018. Finalised definition attached (Annex 7)

		<p>interesting as they cut the peat into strips and overturn it with boats for tomato plantation.</p> <p>3. Southern Peninsular Myanmar. Based on the study, most of the organic content in the peat fall in the range, 20% - 35% and 35% - 65%.</p> <p>Of the abovementioned situation, it is not advisable to use the peat definition constructed from last meeting. Hence, Chair proposed to have SEA (excluding Malaysia and Indonesia) defined differently due to the higher mineral content. In general, landscape such as delta, basin and floodplain would have a higher mineral content as compared to peat dome. It is crucial to take these factors into consideration when defining peat as it would create loophole that allowed the plantation to carry out based on the definition.</p> <p>Jason Hon also advised to look into another angle when defining the peat as the focus should be made in region that is suitable for oil palm cultivation in RSPO context.</p> <p>In Africa, according to the research paper by Dargiel et., 2017, a total of 14,500,000 ha of peatland was estimated in Republic of the Congo (ROC) and Democratic Republic of the Congo(DRC). The definition of soil in Africa depends on the former colonial country, which is France. In Africa, peat is defined as Histosol according to World Reference Base(WRB).</p> <p>In Brazil, peatland is classified as Haplic Histosols, by Brazilian System of Soil Classification (2006).</p> <p>Africa, Latin America and Brazil do not differentiate muck soil from peat soil. Both of the soils are defined as organic soil.</p> <p>The meeting was continued in the next day due to time constrain and also a need to verify the ROW definition proposed by Arina.</p> <p>Chair highlighted the key point in defining peat for new plantation and existing plantation prior the discussion in the next day. For new planting, it should be emphasized on the precautionary approach for</p>	<p>Arina to verify the source of definition shared with WG.</p>	
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		guidance to avoid new plantation on peat. For existing plantation, it is not to overcomplicate the definition as there might be a need for the growers to reclassify existing plantation and etc.		
4.	Way forward on Drainability Assessment Guidance, by WI	<p>Arina provide the WG with progress update and proposed next step on Drainability Assessment as Annex 4.</p> <p>Arina briefed on the required data to carry out the drainability assessment:</p> <ol style="list-style-type: none"> 1. Peat delineation 2. Peat depth 3. Soil subsidence 4. DEM/LEM 5. Natural drainage limit 6. Depth to drainage limit <p>From previous update: Qualitative guideline solely was not adequate to comply with the Principle 4.3. Hence a combined guideline was then released that include both qualitative and quantitative measures. During RT 15 at Bali, it was decided the guideline would be in 3 tiers, from the simplest and conservative method (Tier 1) to a very precise method (Tier 3). However, during the technical meeting in February, the guideline was amended whereby Tier 2 and 3 was merged to further reduce the complexity while Tier 1 exists as a separate method. It was agreed by growers, WI, RSPO and Indonesia Oil Palm Research Institute. This method was then presented by Dipa during the Soil Subsidence Conference in Jakarta dated 28th March organised by WI. Unfortunately, not much feedback and comment were received. Arina also shared the concept version of drainability assessment in March 2018 to gauge feedback from WG.</p> <p>In the proposed next step, Arina seek approval from the WG to start testing the guideline. In fact, GAR had tested Tier 1 method together with Dipa in one of the plantations prior replanting.</p> <p>Companies that agreed to carry out the testing:</p> <ul style="list-style-type: none"> • Sime Darby (PT BNS) - Tier 1 and Tier 2 in the end of April 	<p>Arina to circulate base documents to collect input from WG by 14th April.</p> <p>GAR to request the team to provide insights from Tier 1 assessment.</p> <p>RSPO Secretariat to check with KLK for the Drainability assessment guideline testing.</p> <p>RSPO Secretariat to contact SOPB for the pilot testing.</p> <p>RSPO Secretariat to arrange a session on the data collected for pilot testing in the next meeting.</p> <p>Arina to provide the list of external reviewers with details such as name, fees (if any) and etc.</p>	<p>AS shared the base document on 4/04 for WG review.</p> <p>GAR provided input on the drainability guidance document through email on 12/04.</p> <p>KLK pilot testing currently ongoing as at latest update (25/06)</p> <p>Secretariat has contacted SOPB (Mr. Galau Melayong) on 11th May, SOPB management have not responded to date.</p> <p>SDP scientists to share their findings on the pilot testing of the drainability assessment guidance.</p> <p>AS has sent out invites to 5 potential candidates: 1. Dedi Mulyadi (Deltares) 2. Dr. Muhammad Zuhdi (Uni. Of Jambi)</p>

		<ul style="list-style-type: none"> • KLK • GAR (RIAU) – Completed Tier 1 • Bumitama (Central Kalimantan) – Tier 1 <p>Kai Xiang suggested a potential plantation (medium grower in Peninsular Malaysia) for the testing. However, the growers need assistance in getting the elevation data. WI Indonesia team is willing to help with the DEM creation. Nevertheless, Kai Xiang will be visiting the plantation soon and would have a better view on their data availability.</p> <p>Companies that have completed the pilot testing would share the data with WG members. Sian Choo also suggested Arina to prepare a simple template with checklist for data collection.</p> <p>Dr.Joshua expressed his concern in the terminology used in the manual as it was confusing. And there is a need to make consistency of the terminology used in the manual.</p> <p>The external review should be done parallel with the pilot testing to avoid unforeseen circumstances and delay in the process. WI intended to carry out the external review in an official way to increase the credibility of the guideline.</p> <p>WI prepared a list of institution for external review as followed:</p> <ul style="list-style-type: none"> • Deltares • MPOB • Jambi University <p>However, Gotz concerned about the recognition and acceptance of the nominated institute/organization by the Indonesian. He urged to seek reviewer from a more prestigious institute/organization.</p>	<p>RSPO Secretariat to send Arina a list of external reviewers who attended the technical meeting in February held at Jakarta.</p> <p>WI to develop a template with checklist for the data collection of the pilot testing.</p> <p>Jason Hon would look for information from the Tropical Peat Workshop that held in Kuching,1991.</p>	<p>3. Dr Kho Lip Khoon (MPOB)</p> <p>4. Dr Suroso Rahutomo (IOPRI)</p> <p>5. Dr. Winarma (IOPRI)</p> <p>Checklist created by WI & distributed to pilot testers on 17th May 2018.</p>
5.	Progress update and discussion on Peatland Mapping	<p>RSPO Secretariat provided an update on this as Annex 5.</p> <ol style="list-style-type: none"> 1. RSPO Secretariat had approached organization such as Starling and Planet.com for the secondary data on land cover map (2015 & 2017). But the option was not feasible as the charges were too expensive solely for land cover map and there was 		

		<p>also conflict of interest where they requested for RSPO member's concession maps.</p> <p>2. Digital information such as certified and non-certified areas, year planted and set-aside areas were available in the audit report. The problem arises as RSPO Secretariat do not have enough technical experts to manually digitise the information. At the moment, there is only one GIS manager in Secretariat. However, another possible solution is to wait for the new submission of ACOP report which is due in May 2018. A webinar had been conducted by the GIS manager to include the required digital information for the peat mapping in their new concession map submission.</p> <p>For the update, RSPO Secretariat conducted a research by using data from GFW (2010-2016) as an indicative land clearance for RSPO member concession on peat. As the lacking of oil palm layer remained as the main challenge in peat mapping, land clearance data is used as a proxy for the oil palm cultivation growth trend analysis.</p> <p>For the next updates, Chair urged Secretariat to write to grower individually for the data verification. And also, to explore data from the research paper proposed by Jason Hon.</p> <p>There is a need to fasten the peat mapping exercise to at least identify the planted and set-aside area on peat by RSPO member prior RT16.</p>	<p>RSPO Secretariat to verify planted area with the grower's companies.</p> <p>RSPO Secretariat to explore data from the research by NUS University.</p>	<p>Secretariat has circulated the figures to Growers on 24/04 and received 6 verification replies from 35 sent. Details to be briefed in 6th meeting</p> <p>NUS datasets available in online map, however could not be downloaded for analysis purposes.</p>
No.	Item Descriptions	Main Discussion Points	Action Points	Progress Update
January 4th (Wednesday)				
6.	Regional Peat definition (continuation from first day)	<p>A series of discussion was done by the WG and they have reached consensus on the peat definition.</p> <p>During the discussion, WG also took Indonesia regulation into consideration when defining peat as to avoid conflict with the existing law in Indonesia.</p> <p>As agreed, there will be one generic definition (histosol) for countries without national definition on peat and peat would be defined as Histosol. Nevertheless, countries may propose its nationally accepted</p>		

		<p>definition as part of National Interpretation process for the upcoming Principle and Criteria.</p> <p>For Malaysia and Indonesia, the definition would be further refined into muck and peat.</p> <p>Refer Annex 6 for the definition as discussed during WG meeting with pending confirmation from all (just for the wordings and not context) to be done via email.</p>	Secretariat to circulate the peat definition draft to WG.	Refer comments Item 3
7.	Brief updates on feedback received on BMPs, by GEC, Reflection on Field Visits (PT BNS, Sg, Balim, Woodman) and Consultation Workshop in Miri.	<p>Julia Lo updated the gaps identified and some brief suggestions over the past 2 months for the BMP updates, as in Annex 7.</p> <p>Gaps identified:</p> <ol style="list-style-type: none"> 1. New peat definition 2. Revised total area for oil palm planted on peat 3. Drainability 4. Drainage design – follow contour 5. Replanting/ compaction 6. IPM – more photo 7. Fertilizer regime - more photos, like examples of deficiency plants <p>Field Visit to Woodman: Julia Lo updated a few highlighted management practises by grower:</p> <ol style="list-style-type: none"> 1. Herringbone drainage system 2. Water way transportation of the FFB 3. Compaction 4. Composting of FFB 5. Pest control by using colour to identify treated palm tree 6. Small machinery 7. Lime stone treatment <p>Field visit to SPOB</p> <ol style="list-style-type: none"> 1. Tidal gate and screw pump, 2. subsidence pole 		

		<p>Overall, comparison could not be made between Woodman and SPOB as Woodman is a new plantation. According to Dr. Joshua, SPOB was once flooded but eventually they manage to drain the water. From this point of view, they actually excel in water management.</p> <p>Sian Choo urged to document the good practices as case study into the BMP as a great examples and good learning curve for the users.</p> <p>Lesson learned:</p> <ul style="list-style-type: none"> • Compaction is important to avoid leaning palm • High yield for oil palm on peat is possible with good management practices. • Good water management. • Biological control to deal with pest and diseases <p>Field Visit to PT BNS</p> <p>A few key practices were highlighted by Julia Lo and the WG who went to the field visit.</p> <ol style="list-style-type: none"> 1. The transformation of ruined existing plantation to a productive area. 2. Extensive usage of water gates and water way. 3. Good subsidence management. 4. A different approach to manage coastal area which subjected to tidal intrusion as PT BNS is located in an island. <p>Lesson learned:</p> <ol style="list-style-type: none"> 1. Water zoning is crucial to maintain water level. 2. Proper hydrology study need to be done prior to land development 3. Water management is vital in achieving good yield and reducing impacts. <p>Workshop Miri:</p> <p>Julia Lo went through the discussion and feedback received from the workshop in Miri.</p>		
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		<p>Sian Choo resonated with one of the comments received from the workshop where there is a need to include economic analysis and financial consideration into the BMP.</p> <p>For the online feedback form, 18 responses were received for the English version and 2 responses for Indonesian version.</p> <p>In regards with the online feedback, Sian Choo raised the issues of inaccessibility of the manual by the growers since manual is not available in hardcopy for circulation. The issue is exacerbated in remote areas where internet access is mainly utilized for official work of the plantation.</p> <p>The current manual is too wordy and difficult for the grower to use as a manual. Some of the practices are even conflict with the existing SOP of the company.</p>		
8.	Existing Plantation BMP revision (Cont'd), by GEC	<p>Julia Lo presented the tracked changes on the document to seek consensus from the floor. In addition to that, comments and suggestion from the floor were captured concurrently.</p> <p>In overall view, there is a need to update more illustrations in the manual to give a better understanding for the users. Besides that, some of the situation could only be depicted through illustrations such as the diseases and condition of infected palm tree.</p> <p>Another point mentioned was to change the cover of the both manuals as the existing cover does not distinguish much from each other. However, orange and green colour would be remained as the symbolic feature from the previous manual.</p>	<p>Dr Shah to update the case study in the BMP. With more reinforced data and result of the implementation.</p> <p>GAR to update on the water management in a small text box.</p>	
9.	Rehabilitation BMP Revision	<p>Julia Lo presented the comments made by WG and gauged everyone consent and comment on the BMP. All changed and feedback were tracked on the go.</p> <p>In overall, WG raised the need to update the manual with a broader aspect where it should include Latin America and ROW. Therefore, more examples from other countries are required to update this</p>	<p>GEC to check on the regulation on peat – Thailand, Myanmar, Papua New Guinea, Congo, Peru(Brazil), Latin America and also to check countries with</p>	

		<p>manual. For instance, the regulation on peat from other countries such as Thailand Myanmar, Papua New Guinea, Congo, Brazil(Peru) and Latin America.</p>	<p>peat cultivation for RSPO members.</p> <p>Almo to share rehabilitation guideline to put in the manual.</p>	
10.	Proposed next step for SH	<p>From the previous meeting in Bali, it was discussed that thick BMP was not strategic wise for smallholder. There is a need to come out with a more appropriate material, videos, posters and etc. And also, as agreed, smallholder material would be separated from the BMP.</p> <p>Secretariat is still in the midst of recruiting the SH manager. At the moment, the focal person to collaborate for the BMP revision falls to Kertijah (smallholder unit manager), but she is quite occupied with the Smallholder Interim Group (SHIG) for P&C review. On top of that, Smallholder Academy would be launched in 2019 as training platform to the smallholder.</p> <p>Chair then raised his concern to start producing training materials rather to wait for the launching of SH Academy in 2019.</p> <p>In line with the production of separate material for Smallholder, Sian Choo suggested to leverage the BMP by only taking what is applicable to the smallholder while keeping it affordable for smallholder. She also recommends Dr. Lee from Procter and Gamble as the facilitator for reaching out to Smallholder for capacity building.</p> <p>After a series of discussion, Chair suggested to first mandate a subgroup which comprises of the member below to brainstorm on the content for training for SH:</p> <ol style="list-style-type: none"> 1. Setara Jambi 2. Procter & Gamble (Dr. Lee) 3. Proforest 4. Cargill 5. Kai Xiang 6. Joshua 7. Arina 	<p>Secretariat to provide briefing for the smallholder academy in the next meeting.</p> <p>RSPO to contact Setara Jambi and Dr. Lee from Proctor and Gamble as there is no clear instruction from the meeting.</p> <p>WI to update and share the information related to the smallholder training booklet and circulates with WG.</p> <p>A meeting of subgroup to discuss way forward for smallholder.</p>	<p>Smallholder Manager to brief WG on SH academy on 6th meeting.</p> <p>ToR for PLWG2 SH Sub-group finalized. To send invites to those currently not involved in PLWG2:</p> <ul style="list-style-type: none"> • Setara Jambi • Dr. Lee (P&G) • Cargill

		<p>Following which, Dr.Joshua suggested coming up with a simple booklet with lots of illustration for smallholders. Also, it was suggested to make a simple video that can be viewed and downloaded from the Youtube app. Arina could help with the materials as WI completed something similar few years ago. There are 5 keys practices identified as followed:</p> <ol style="list-style-type: none"> 1. Pest and Diseases 2. Fertiliser 3. Water management 4. Leaning palm 5. Harvesting <p>Along the discussion, Julia Lo also provided some input from her finding and experience on the one-day training for Smallholder in Johor. Basically, smallholders are very aware with what they are dealing. Their main concern is to get better yield. The key issue she identified is the water management.</p>		
11.	Communication and Outreach materials (video production)	<p>Sara Cowling (Communication and Content Manager) from RSPO Secretariat briefed an overview of the beta version of the Sustainability College. And at the same time, she also requested PLWG members to have a quick run through and provide feedbacks for the beta version of the sustainability college website.</p> <p>Arina expressed her concern where the current modules are in chalk and talk/animated doodle videos which might be difficult for the audience to understand certain situations.</p> <p>O&E department planned to launch 6 modules prior to EURT in June. However, one of the modules has failed to meet the deadline, therefore a replacement is needed. WG volunteered to replace the slot with GHG module since the scripts are ready. However, WG suggested to focus on the 3 chapters first – Introduction, Water management & Pest and Diseases.</p>	<p>Secretariat to share the script with O&E for launching, just for a test trial before the full production for the whole module.</p> <p>Secretariat (Sara) to extract data from ask.rspo and send to WG for FAQ production.</p>	<p>Videos for GHG & Peat module have been launched in Sustainability college. Another 4 are in progress.</p> <p>Ask RSPO FAQ's sent to WG on 14/05. Sent another. To be updated & finalized in Day 2 of meeting.</p>
12.	AOB	<p>Next P&C review meeting will be on 15th of May. Chair would provide update on:</p> <ol style="list-style-type: none"> 1. Drainability status 2. Definition of Peat 3. BMP revision 	<p>RSPO Secretariat to prepare the status of the 3 items to present in the next P&C meeting.</p>	

		<p>BMP draft is expected to be available around early June.</p> <p>Next meeting will tentatively be around second week of July at Jakarta. Bumitama has generously volunteered to host the next meeting.</p> <p>After that, the following meeting will be during first week of September.</p>	<p>Julia Lo to circulate the audit checklist to gain feedback.</p>	
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Annex 1: Meeting agenda and attendance sheet

5th PLWG meeting

Venue: Aloft KL Sentral, Kuala Lumpur

Day 1, 3rd April 2018 (Tuesday) – Half day

Time	Agenda
12.30pm – 2.00pm	Lunch (Nook Restaurant, Aloft KL Sentral)
2.00pm – 2.30pm	1. Review of previous meeting's minutes and progress on actions
2.30pm – 2.45pm	2. Welcoming new members/ members composition discussion
2.45pm -3.30pm	3. WG Discussion: Regional Peat Definition (LaTAM & Africa)
3.30pm – 4.00pm	Break
4.00pm – 4.30pm	4. Way forward on Drainability Assessment Guidance, by Wetlands International
4.30pm – 5.00pm	5. Progress update and discussion on Peatland mapping
5.00pm	End Day 1

Day 2, 4th April 2018 (Thursday)

Time	Agenda
9.00am – 9.30am	6. Reflection on Field Visits (PT BNS, Sg. Malim, Woodman)
9.30am – 9.45am	7. Brief updates on feedback received on BMPs, by GEC
9.45am – 10.30am	8. Existing Plantation BMP revision, by GEC
10.30am – 11.00am	Break
11.00am – 12.30pm	9. Existing Plantation BMP revision (Cont'd), by GEC
12.30pm – 1.30pm	Lunch (Nook Restaurant, Aloft KL Sentral)
1.30pm – 3.00pm	10. Rehabilitation BMP revision, by GEC
3.00pm – 3.30pm	Break
3.30pm – 4.00pm	11. Proposed next step for SH
4.00pm – 4.30pm	12. Communication and Outreach materials (video production)
4.30pm – 5.00pm	13. AOB

5th PLWG-2 Meeting,
3rd – 4th April, Tactic 3
Aloft Hotel, Kuala Lumpur

No	Name	Organisation	Signature	
			3 rd April'18 (pm)	4 th April'18
1.	Faizal Parish (co-chair)	GEC		
2.	Joshua Mathews (co-chair)	Bumitama Gunajaya Agro		
3.	Shahrakbah	Sime Darby		
4.	Jason Foong	Kuala Lumpur Kepong Bhd (KLK)		
5.	Jason Hon	WWF		
6.	Kai Xiang Chin	^{BUMSA} JRF Loders Crokiaan		
7.	Gotz Martin	Sinarmas-Agri		
8.	Tey Seng Heng	AAR (KLK)		
9.	Arina Schrier	Wetland International		
10.	Almo Pradana	World Resources Institutes		
11.	Julia Lo	GEC		
12.	Sian Choo Lim	Bumitama Gunajaya Agro		
13.	Richard Kan	Golden Agri		
14.	Amir Atham	RSPO Secretariat		
15.	Javin Tan	RSPO Secretariat		
16.	Devaladevi Sivaceyon	RSPO Secretariat		
17.	Lee See Lung	RSPO Secretariat		
18.	Sara Cowling	RSPO secretariat		

Annex 2: Updated composition of WG members by sector

Sector	Substantive Member	Alternate Member
Growers (Malaysia)	1. Jason Foong (KLK) 2. Dr Shahrakbah (SDP)	13. Sim Choon Cheak (AAR) [Mas] 14. Arif Sugandi (AAR) [Ina] 15. Vacant
Growers (Indonesia)	3. Joshua Matthews (Bumitama) 4. Gotz Martin (GAR)	16. Lim Sian Choo (Bumitama) 17. Richard Kan (GAR)
Growers (ROW)	5. Ian Orrell (NBPOL) 6. OLAM/Daabon/SIAT group/Univanich	18. Vacant 19. Vacant
Social NGO	7. Jason Hon (WWF) 8. Harizajudin (Sawit Watch)	20. WWF/SDI Liberia (FPP) 21. Wida Nindita
Environmental NGO	9. Faizal Parish (GEC) 10. Arina Schrier (WI)	22. Julia Lo (GEC) 23. Almo Pradana (WRI)
Palm Oil Processors and Traders	11. Chin Kai Xiang (BLC) 12. Cargill/Wilmar/Musim Mas	24. Rianto Sitanggang (BLC) 25. Vacant

Annex 3: Discussion on regional peat definition

RSPO Peatland Working group

RSP0 Peat definition

Kuala Lumpur 3-4 April 2018

Faizal Parish
Global Environment Centre



RSPO Definition of organic soil (Histosols):

- *Tropical Organic soils are soils containing 35% or more of organic matter (35% or more Loss on Ignition) or 12-18% or more organic carbon.*
- This definition is for use in all palm oil producing countries globally. This classification has been derived from the global definition of Food and Agriculture Organisation of the United Nations (FAO) and is in line with the United States Department of Agriculture (USDA) definition.

Regional peat definitions

Peatlands cover 23 million ha in Southeast Asia



Source: 2010 RSPO Peatland Working Group (2010)

Most peatlands in Indonesia and Malaysia -domed with water input from rain



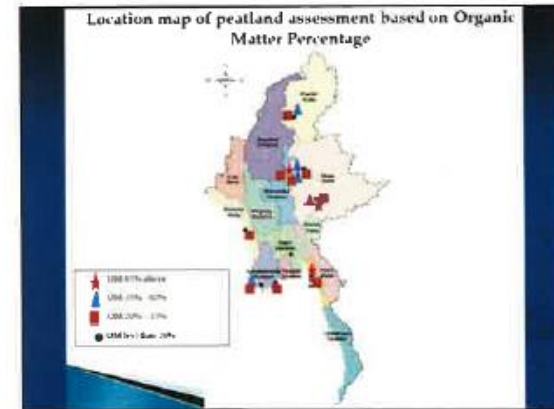
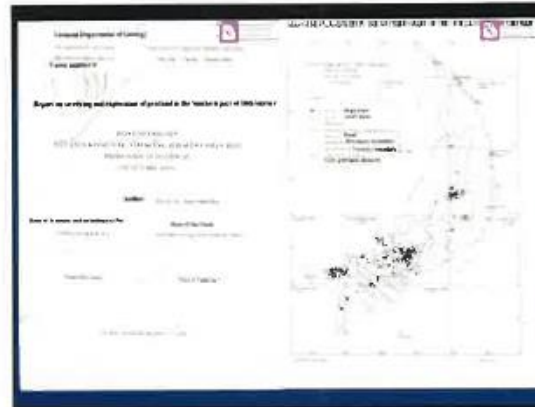
Definition Indonesia and Malaysia

	Muck**	Peat***
Organic matter content (Loss on ignition)	> 35% - 65%	more than 65%
	More than 15cm	More than 50cm

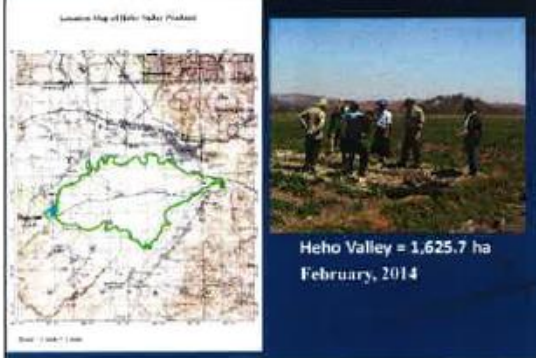
* Primarily for domed peat.

For the purpose of RSPO, Tropical lowland peat in Indonesia and Malaysia is defined as soils with an organic layer of at least 50cm in the top 100cm of soil containing 65% or more of organic matter (65% or more Loss on Ignition) or 35% or more organic carbon.

Other south east Asian countries



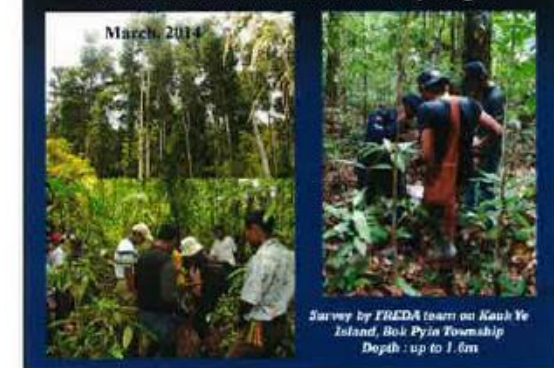
Peatland Assessment in 2014



Peatland Assessment in Inle Lake Region



Peatland Assessment in Thanintharyi Region



Peatland Assessment in Htu-In, Ayeyarwady Region



Htu-In = 502 ha

May, 2014

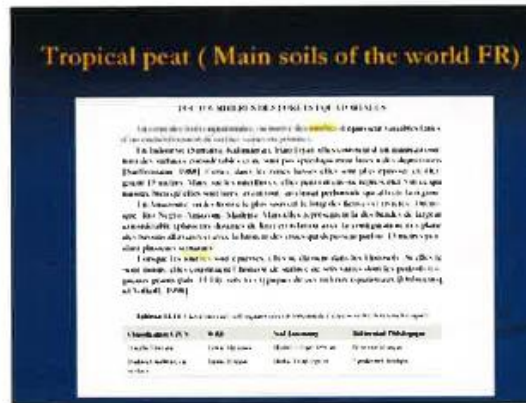
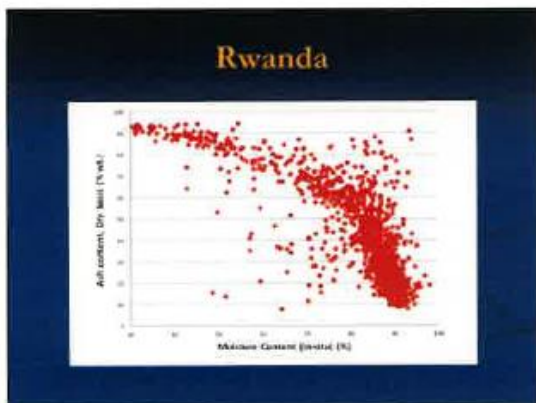
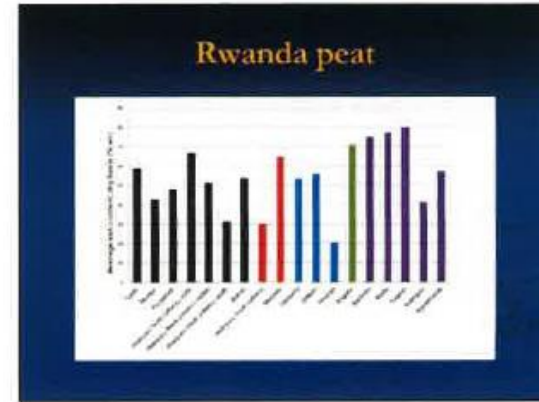
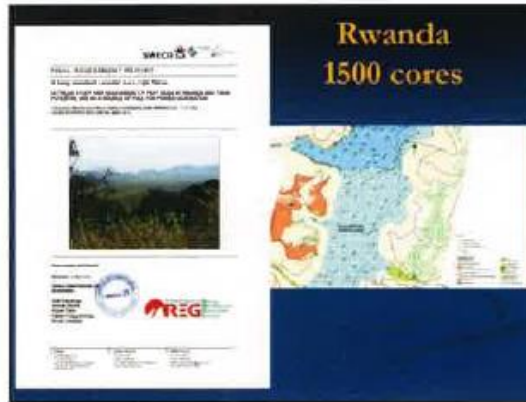
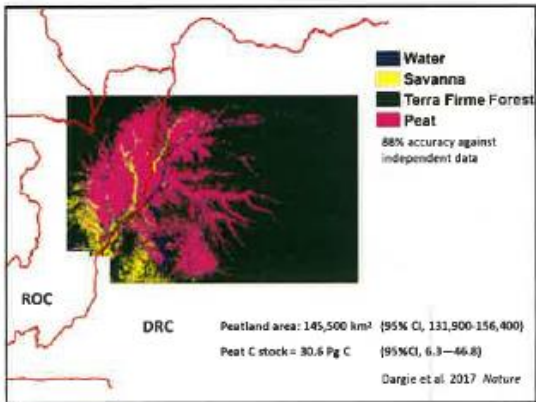
SUMMARY OF SOIL ANALYSIS in Phase I

Organic Matter Content	Number of Soil Samples	Composition %
• Peat Soil a) - Organic Matter (OM) 65% and above	37	9.6%
• Peat soil b) - 35 - 65 OM %	103	26.8%
• Organic Clay - 20-35 OM %	87	22.6%
• Mineral Soil - less than 20 OM %	158	41.0%
Total	385	100

Africa

Peat swamp Forest RoC





World Reference Base for Soil Resources (WRB).

- ✦ Define peat soil (histosol) as a soil which has a layer of organic material of 20% or more organic C. This layer starts within 40 cm from the soil surface and has a depth of at least 40 cm.

ROW

- ✦ *For the Purpose of RSPO, tropical peat in Africa and Latin America (and countries in Se Asia other than Indonesia and Malaysia) are defined as soils with an organic layer at least 40cm thick in the top 80cm of the soil surface containing 40% or more of organic matter (40% or more Loss on Ignition) or 20% or more organic carbon.*



Annex 4: Slide on next step for drainability assessment

Status Drainability Assessment Guideline

About the Insight in Future Drainability

Discussion on how

- Qualitative Guidelines not suitable for compliancy to P&C 4.3 -> not use it for a quick release of Guidelines, this might confuse
- TIER 1 – TIER 3 idea: Quick release of TIER 1 (conservative) method, while keep working on testing and development of TIER 2 and TIER 3.
- Conclusion discussion during RT15 (side-meeting RSPO): TIER 1 –2 and 3 approach; to be proposed by WI.
- Company expert meeting held 13 February 2018: conclusion to merge TIER 2 and 3 and keep TIER 1 separate.
- Methods presented by Wetlands International on 28 March, Jakarta, Soil Subsidence meeting.

Status

- Concept versions ready
- Needs external review
- Needs shaping and design
- Testing can start meanwhile
- Needs to be included and/or referred to in other RSPO documents
- Needs to be translated to BMP

What is required for the assessment

- Peat delineation
- Peat depth
- Soil subsidence rate
- DEM/DTM/LEM
- Natural drainage limit/drainage base
- Depth to drainage base

Versions shared for review

Concept versions shared on 14, 15 and 16 March 2018:

- Base document
- Annex 1, Tier 1 Assessment
- Annex 2, Tier 2 Assessment
- ANNEX 3, identification and calculation of water level elevation of relevant natural water bodies
- ANNEX 4, DEM and peat thickness generation
- Microsoft Excel File, Calculation Template for Levelling Data

-> Received no POWG comments

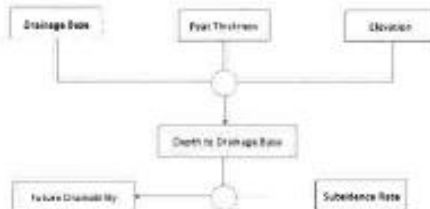
NEXT STEPS

- PLWG agreement on start with testing (AI).
- RSPO to bring WI in contact with testers
- Update & advise P&C Taskforce on (progress) if required (Arina)
- Companies testing TIER 1 & 2 as soon as possible (Dipa)
- Finish base document (Arina)
- Finish TIER 1 and 2 based on company-testing (Dipa)
- External review Proposed:
 - Delans
 - MPO
 - Jambi University
- Finish base doc + TIER 1 and 2 based on external review (Dipa, Arina).
- Integrate the drainability in the revised BMP (GEC, Arina)

Timeline

Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Activity	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment	Site Assessment

Tier 1 & 2 Approach



Calculate Average Peat Thickness

- Provide Peat Thickness Map
 - Polygon, or
 - Raster
- Calculate Average Peat Thickness
 - Polygon: Use Area(strate)-Weighted Average
 - Raster: Use Pixel-Based Histogram Average

TIER 1

- Take average values per peat-unit to calculate the 'time-left', based on the 2-crop-cycle threshold; 1/N replanting.

Peat Unit (PU)	Weighted Average Peat Thickness (mm)	Depth to Drainage Base (mm)	Average Subsidence Rate (mm/year)	Drainage Unit Left (Y/N)
A	4.2	1.2	0.5	57
B	3.2	1.2	0.5	66.8
C	1.7	3.40	0.5	34
D	1.4	1.2	0.5	34

The approach for TIER 1 - TIER 2 is valid, but the level of accuracy is lower for TIER 1.

Drainage Base Calculation

- Calculate centroid (point) of replanting peatland area
- Identify the nearest natural water body, find the nearest position (point) on the nearest natural water body, calculate distance between the 2 points ($\Delta X_{(water)}$)
- Calculate annual average water level elevation at the nearest natural water body ($Z_{(water)}$)
- Calculate drainage base ($Z_{(DB)}$)

$$Z_{(DB)} = Z_{(water)} + 0.0002 \times \Delta X_{(water)}$$

Calculate Average Elevation

- Provide DEM or LEM
 - LEM: Polygon, or
 - DEM: Raster
- Calculate Average Elevation
 - Polygon: Use Area(strate)-Weighted Average
 - Raster: Use Pixel-Based Histogram Average

Calculate Depth to Drainage Base

- Provide Drainage Base (Z_{DB})
- Provide Average Elevation (Z_a)
- Calculate Depth To Drainage Base (D_{DB})

$$D_{DB} = Z_a - Z_{DB}$$

Calculate Future Drainability

- Drainage Limit Time
$$\text{If } D_b \geq D_{DB} : DLT = \frac{D_{DB}}{S} \quad \text{If } D_b < D_{DB} : DLT = \frac{D_b}{S}$$

Where

- DLT : Drainage Limit Time (year)
- D_{DB} : Depth to Drainage Base, found in 2.2 (m)
- D_b : Peat Thickness, found in 2.2 (m)
- S : Subsidence Rate (cm/y)

- Two Crop Cycle Threshold (TCCT)

$$TCCT = DLT \times 60$$

Where

- \hat{S} : TCCT = Positive : Replanting in CR
- \hat{S} : TCCT = Negative : Replanting in MCF CR

Determine Subsidence Rate

- Default : 5 cm/y
- Default : Back-calculate based on Carbon emissions, Bulk Density and Carbon Content of site-specific peat soil(s) of replanting area
- Historical (with sufficient record, well distributed measurement)

Annex 5: Progress update on peat mapping

Peat Mapping

Progress update and next step

From previous update/challenges:

1. Secondary data (OP layer) for 2015, 2017
2. Certified vs non-certified areas, year planted
3. PNG peat soil layer

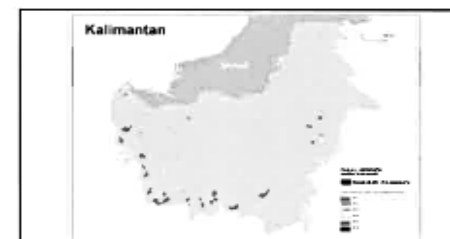


Objectives:

- To provide an update on the overall trend of oil palm cultivation on peat compared to the 2010 baseline (by GHG WGG) in Indonesia, Malaysia and Papua New Guinea
- To map the area of peatlands within the operating unit (including estate or group of estate/ land title/ concession) of RSPO member companies which either has been planted or set-aside/conserved

1. Oil Palm planted on year 2015 & 2017 (secondary data)

- ❖ Not feasible to access data from resources such as: planet.com, starling.
- ❖ Too expensive
- ❖ Confidential in data exchanging



Recap from previous update:

1. Total concession on Peat (2017) by RSPO-members for Indonesia and Malaysia.
2. Cultivation of OP on Peat by year - 2005, 2010 (from GHG technical paper).

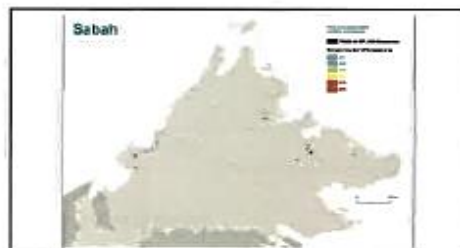
2. Certified vs non-certified areas, year planted

Lack of manpower to extract the information from Audit report. Waiting for the new submission of map from growers - (4th May - deadline)

3. PNG soil layer

Pending. Main focus on Malaysia and Indonesia





Next step:

- Land cover map
- FRM, RM 300k for only Malaysia.



Indicative Land clearance

	Consolidation (ha)	Final (ha)	New (ha)	Land cleared after (ha)	ARC (ha)
Malaysia	458,400	232,724	3,625	30,575	188,879
Malaysia	138,307	44,074	222	1,127	82,448

** Data from the Ministry of Natural Resources
 -> Excludes of PPTs. Data shown for land cover loss, cover, clearance, construction, and planting of PPT.
 -> Data from the Ministry of Natural Resources for the original PPT plan or master plan.
 *** Data is only for land cleared after the construction of PPT, subject to land clearance.

RSPO Organic & Peat Soil Classification

RSPO Peatlands Working Group 2 (PLWG-2) has adopted the common definition of ‘Histosol’ (organic soil) effective 1st May 2018 as follows:

Histosol (organic soil) are soils with cumulative organic layer(s) comprising more than half of the upper 80cm or 100cm of the soil surface containing 35% or more of organic matter (35% or more Loss on Ignition) or 18% or more organic carbon (FAO 1998, 2006/7; USDA 2014; IUSS 2006).

In some regions, peat soil is identified using the definition of ‘Histosol’ (FAO 1998, 2006/7; USDA 2014). In other regions, Histosol has been further sub-classified into different sub types. In Malaysia, Histosol are subdivided into muck and peat soil.

In Malaysia, peat soils are defined as:

Soils with an organic layer of more than 50cm in the top 100cm of soil containing more than 65% of organic matter (65% or more Loss on Ignition) or 35% or more organic carbon (Leamy and Pantan 1966, Paramanathan 2016, IUSS 2006).

	Muck	Peat*
Organic matter content (Loss on ignition)	> 35% - 65%	> 65%
Depth	> 15cm	> 50cm

* Primarily for bog or dome type peat with limited mineral inputs

Indonesia peat soils are defined as:

Soils with an organic layer of more than 50cm in the top 100cm with organic matter containing more than 65% (Agriculture Ministry Regulation, 2009)

Soils with an organic layer of more than 50cm in the top 100cm (Presidential Regulation, 2016).

RSPO recognises the use of the above definitions in Indonesia and Malaysia for the purpose of management of existing plantation. Other countries (outside Indonesia and Malaysia) should use the Histosol (FAO 1998, 2006/7; USDA 2014) definition for identification of peatlands/peat soils.

An alternate nationally accepted definition¹ may be proposed through the National Interpretation (NI) process for the RSPO Principle and Criteria

¹ As with all RSPO National interpretations – any modified definition proposed by a national interpretation will need to be approved by RSPO in line with its normal procedures which may involve reference to a relevant RSPO Working Group or to appropriate expert(s)

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Soils with an organic layer of more than 50cm in the top 100cm of soil containing more than 65% of organic matter (more than 65% Loss on Ignition) or 35% or more organic carbon (Leamy and Panton 1966, Paramanathan 2016, drawing on IUSS 1930).

	Muck	Peat*
Organic matter content (Loss on ignition)	> 35% - 65%	> 65%
Depth	> 15cm	> 50cm

* Primarily for bog or dome type peat with limited mineral inputs

In Indonesia peat soils are defined as: *Soils with an organic layer of more than 50cm in the top 100cm of soil containing more than 65% of organic matter.*

This is based on: *Soils with an organic layer of more than 50cm in the top 100cm (Government Regulation, 57/2016); Soils with an organic layer of more than 50cm in the top 100cm with organic matter containing more than 65% (Agriculture Ministry Regulation, 14/Permentan/pl.110/2/2009)*

RSPO recognises the use of the above definitions in Indonesia and Malaysia for the purpose of management of existing plantations. Other countries (outside Indonesia and Malaysia) should use the definition of Histosol (as above - ref FAO 1998, 2006/7; USDA 2014) for identification of peatlands/peat soils.

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Annex 8: Feedback on BMPs, reflection from field visit and consultation workshop at Miri by GEC

Review and Update of existing RSPO Manuals on BMPs relating to Peat

By
 David Smith / July 12
 20 April 2012, at PLWS meeting




Identify and document gaps

- Discard page definitions
- Revised table layout and table format on page
- Clarity
- Change checks, follow-up
- Mapping/management
- FPM
- Database system

Identify new practices or (if any) innovation

- Techniques for mechanically treated Diffusional Leaching of Oil Palm on Peat
- Compost as a fertilizer
- Biological
- Farming

Item	Issue	Recommendation	Priority
Item 1.1	Item 1.1.1	Review existing manuals	High
Item 1.2	Item 1.2.1	Consultation workshop	High
Item 1.3	Item 1.3.1	Review and update manuals	High
Item 1.4	Item 1.4.1	Final review and approval	High

Item	Issue	Recommendation	Priority
1	Item 1.1.1	Review existing manuals	High
2	Item 1.2.1	Consultation workshop	High
3	Item 1.3.1	Review and update manuals	High
4	Item 1.4.1	Final review and approval	High

Field visit- Woodman

- Water management (Using hierarchical drainage system to dig collection drains with concrete and minimize need for weirs)
- Transport of FFB to barges on collection drains (to reduce transport costs)
- Compost prior to planting
- Compost from FFB and POME
- Biological pest control
- Mechanization (for collection of FFB in fields and spraying)
- Limulane after application (low cost)

Field visit- SPOB

- Field gaps and access points (to release water at high water table)
- 25% fertilizer rate



Lesson learned

- Compaction prior to planting is key to minimizing and avoiding leaching
- High yield for oil palm on peat is possible with good management practices (Ailing Estate had yields of 100 T/ha for shallow peat and 300 T/ha on deep peat)
- Good water management to avoid too much water/ flooding or too little water during dry season
- Biological control to deal with pest and diseases
- Importance to monitor subsidence to enable longer term water planning

Field visit- PT BNS

- Water zoning is crucial in maintaining the water level at optimum range of 30-70cm below ground surface.
- Proper hydrology study prior to land development is needed to avoid mistakes.
- Water management is important in achieving good yield and reducing impacts.



Workshop at Miri

- Discussion series
- Discussion study – presented by 4 stakeholders (BNS)
- 2 day management planning session – to share experiences of Workshop Thailand
- Need to continue to change to new BMPs (sustainability and productivity)
- Need to improve water table monitoring
- Model and economic assessment for the modified hydrological in tropical tropics
- Exercises in management – comparing BMPs (sustainability and economic price)
- Current research needs to be updated and expanded
- Need to start a regional guideline for peat hydrology
- The importance of growing on peat in BMPs (sustainability)

BMP for Existing Oil Palm Cultivation on Peat

- Water management – drainage system based on contour of peat depth
- Comparing guidelines on drainage as requested by DHD
- Support with current guidance develop by EOP (PUBG) / WT
- Fertilizer and soil nutrient management – update based on current experience and studies
- Integrated pest management – update on recent experience and new approaches for pest and diseases (Gambusia)
- Green chemistry chemicals for those that should be phased out
- Competition – include guidance on how to do competition especially when replanting

BMP for Management & Rehabilitation of Natural Vegetation

- Maintenance and rehabilitation of conservation areas on peat – update with experience of the past 5 years; include more case studies
- Rehabilitation and Paludiculture – options to consider if drainability assessment indicates a need to consider alternatives to replanting the oil palm
- More piloting on species for paludiculture
- Further guidance on species selection and natural regeneration versus planting

Event feedback

- 35 feedback forms, overall responses received from the participants were very positive with the major complaint came from logistics
- 86% indicated they are either satisfied or very satisfied with the workshop
- 97% indicated that the workshop is relevant and very much helped with their job
- 23% average satisfy with the venue
- 68% not satisfy with the venue facilities, citing the wrong table
- 86% satisfied with the session content

Additional comments

- Request research to other stakeholders including DHD
- EOP should do more on-going support in engineering principles of drainage and hydrology of peat in tropical tropics. Use of 3D water management is preferred
- It would be good to have a course on oil palm on BMP and economic. Support to help the field with economic issues and to create evidence for self-reliance
- Need to add DHD and community approach
- Efficiency of BMPs monitoring that will be broken in the support of BMPs and continue engaged while the issue of existing planting growth continue to challenge their operations
- It is good to have a workshop on the issues on water, pest, disease, monitoring of water management on a level of EOPs as a national network
- There will be a requirement to do more on hydrology, forest development in peat, conservation (sustainability) of peat

Online feedback

- 18 received for English version
- 2 received for Indonesian version

Thank You