INDEPENDENT PEAT EXPERT WORKING GROUP

APRIL Independent Peat Expert Working Group (IPEWG)

Summary Report

Subject: IPEWG Meeting #3
Time/Location: Aug 19 – 23, 2016 - Singapore

Participants

IPEWG: Prof. Dr. Supiandi Sabiham, Dr. Ari Lauren, Prof. Susan Page, Prof. Chris Evans, Dr. Vincent Gauci, and Dr. Ruth Nussbaum.
SAC: Joe Lawson and Jeff Sayer (for TNC on Day 2)
APRIL: Praveen Singhavi, Lucita Jasmin, Mark Werren, Dr. Anthony Greer, Brad Sanders, Rudi Fajar, Ikhsan, Taufan Mega Chrisna,
Facilitator: Jonathan Wootliff
Secretariat: Tim Fenton (APRIL)

Stakeholder Presentations

Wetlands International–Marcel Silvius, Program Head Climate-Smart Land Use
The Nature Conservancy – Dr. Herlina Hartanto, Indonesia Terrestrial Program Director; Dr. Joe Kiesecker, Lead Scientist Global Lands; and Kei Sochi, Scientist Global Lands
Deltares – Dr. Aljosja Hooijer and Dr. Ronald Vernimmen

Appendices

Work Stream Matrix: Appendix I
IPEWG Meeting #3 Recommendations: Appendix II

1. Opening Remarks and Administration

IPEWG Meeting #3: The focus of this meeting is the IPEWG Work Streams and information gathering from Guest Stakeholder Presentations - Wetlands International, The Nature Conservancy and Deltares.

SFMP2.0 Audit by KPMG
The audit commissioned by the Stakeholder Advisory Committee for APRIL's Sustainable Forest Management Policy 2.0 has commenced in Kerinci, Riau

2. IPEWG Work Stream Status Updates:

Work Streams 1.1 and 1.3 – GHG emissions field data and emissions monitoring

The planning and methodology for data collection, analysis and storage needs to provide the basis for moving forward – i.e. capable of providing evidence that:

- Forests inside RER / conservation zones are not being affected by plantation operations
- Buffer zones as currently designed are functioning effectively
- Plantation water levels are being maintained within acceptable range
- Subsidence is being minimised; and
- Developing scenarios for future landscape zoning and enabling management to take account of temporal & spatial dynamics – integrated with LiDAR data (e.g. DEM) and the Plantation Simulator – is feasible.

1.1 Peer Review of Winrock Methodology – IPEWG broadly supports Winrock's approach for monitoring of GHG emissions by APRIL. The report recommends a number of actions – IPEWG supports these, and will make additional suggestions / amendments to make this a working document - requiring iterations by both APRIL and Winrock. IPEWG to submit comments to APRIL for Winrock's review.

1.2 Review of Wetlands International report: *Assessment of Impacts of Plantation Drainage on the Kampar Peninsula Peatland, Riau* - has been reviewed by IPEWG. Wetlands International requested an opportunity to speak with the IPEWG and Marcel Silvius was granted time at Meeting #3. Anthony Greer and Lucita Jasmin attended the discussion on behalf of APRIL. Co-author Professor Susan Page is not involved in the IPEWG review and discussion. APRIL's assessment on the Wetlands report has been previously presented to the IPEWG.

- The Wetlands International / Deltares report took a reasonable modeling approach of subsidence in the Kampar Peninsula. There is little argument that drainage-based plantations under current or likely future improved management scenarios will inevitably lead to subsidence.
- The scenario of 3.5 cm of subsidence per year is reasonable and seems to broadly agree with APRIL data.
- While the report is generally clear in detailing the approach to assessing flood risk there is some opacity over what is meant by flooding / flood risk throughout the report.
- The report could be interpreted as suggesting that flooding is absolute and persists year-round (i.e. chronic flooding). However the predictions actually appear to suggest that the land will only experience flooding at some point during the year (acute flooding).
- The significance of the impact of acute vs. chronic flooding depends on the resilience of acacia to intermittent / occasional flooding.
- There is a question over the regression model used from Hooijer *et al* (2012) which infers that subsidence is likely even when water tables are at the surface, as data on subsidence rates in plantations with water levels within 30 cm of the surface are scarce. However this uncertainty does not fundamentally alter the flooding predictions.
- Methodological issues identified by the IPEWG were discussed with Marcel Silvius
- There is an opportunity to develop a constructive situation where the Deltares flood risk predictions can be used as a management tool by APRIL. This may support:
    - Provision of flood predictions for chronic (and 'worst case' acute) flood risk;
    - Sharing subsidence and new elevation data to improve model predictions;
    - Literature scoping and experiments for improved information on Acacia flood resilience;
    - Recognition by APRIL that drained plantation agriculture causes subsidence; and

- Recognition by Wetlands International that APRIL's measures to mitigate subsidence generate benefits in terms of productive lifetime, flood risk and CO_2 emissions

1.3 GHG Field Data – APRIL responded to IPEWG's information request. IPEWG needs to review the information in parallel with the information provided on the RD Web and consider Work Stream 1.4.

- These data could provide the basis for moving forward with monitoring GHG emissions / removals (cf Winrock approach); and considering peatland management options now and into the future that will protect Carbon stocks, forest biodiversity, plantation production, and local community livelihoods
- IPEWG have ascertained the type of data currently being collected. Data collection appears to be strongly focused on enabling "site by site" comparisons, rather than providing the basis for a landscape scale approach to emissions monitoring (i.e. spatial & temporal trends)

1.4 GHG Measurement Methodology – a detailed review has been completed by the IPEWG. IPEWG welcomes the investment in flux towers, to greatly strengthen the evidence base relationship between peatland management and GHG emissions. APRIL's intention is commendable; the equipment is of a high standard.

IPEWG feedback: The Mixed Landscape is going to be a challenge to differentiate, due to turbulence at forest / plantation boundaries and heterogeneity of land-use within the tower footprint and will probably require more ground control measurements in the different landscape types. There are opportunities to add value to the existing measurement programme through a modest additional investment in equipment to measure methane and nitrous oxide emissions, as well as waterborne carbon losses, which could be supported by a PhD studentship. IPEWG is willing to help fine-tune methods and support future data analysis.

IPEWG is encouraged by APRIL's commitment to join AsiaFlux which will add credibility to findings and subsequent management decisions. APRIL will review the IPEWG report and continue active discussions with IPEWG during flux start up. The quality of flux data is critically dependent on data processing – IPEWG can provide support with exchange visits of APRIL staff to the UK (CEH) to work with flux tower experts.

1.5 Gap Analysis of Data Modeling – the draft Gap Analysis document was circulated prior to Meeting #3, including model documentation. The model requires further peer review to seek out gaps

1.6 R&D of different Crop Species – Work Stream 1.6 is moved to Work Stream 3.3 and will be discussed at Meeting #4.

Work Streams 2 and 3 - Existing Plantations and New Development

The overall goal is to develop Best Management Practices for peat at 3 levels:

- Policy & Regulation
- Landscapes (economic, social and environmental)
- Operational (compartment)

APRIL needs to develop its own 'approach' which incorporates scientifically credible elements of Eko Hidro and existing operational SOP guidance together with IPEWG recommendations, to provide a holistic approach to responsible peatland management. This approach requires the development of an APRIL 'Responsible Peatland Management Guide' which should become a public document.
APRIL is open to suggestions of sharing knowledge and best practices but will defer further discussion on distribution and broader engagement until the output nears completion.
Work Stream (WS) 2.1 and 2.2 – Existing Development – these work streams are to be combined and further developed at 3 levels:

a) **Policy Level** – overall goals of management in relation to regulatory and policy framework. Requires synchronizing with government legislation and regulations.
b) **Landscape Level** – it is necessary to plan and implement peat management at a landscape scale. Both physical aspects (water management fire control and minimizing subsidence) and social and economic aspects (land conflicts, rural and community development) operate across concession boundaries. As thinking on peat management evolves, it will be important to integrate and balance these different dimensions in collaboration with others in the landscape.
c) **Operational Level** – what does science tell us today? What are the best management practices currently being used or advocated by others and what do they deliver? E.g. subsidence and water table drivers.

WS 2.3 Approach and Guidance on Best Practices – the review of key science and Best Management Practices to develop recommendations - Policy Level in the Work Plan - IPEWG needs to understand what it means by GoI Policy level to balance Economic with Social and Environment. The second level is Landscape and how APRIL fits into this landscape; the third level is the compartment (operational) level. Develop a summary at each level for what is Best Management Practice (BMP). The start can be where everyone agrees what BMP is; and what BMP is not. Then we need to integrate into the group. Monitoring of Carbon Cycle balance and biodiversity resources is required; not just subsidence.

Briefing Papers to be developed and issued by IPEWG on challenging issues, summarising relevant science to inform discussion, e.g.40cm water table depth; 3m peat thickness; hotspots; etc. APRIL welcomes this recommendation and encourages the IPEWG to prioritize in order to contribute to ongoing scientific and political discussions on peatland management, conservation and restoration. .

WS 2.4 Comparison of current APRIL Management Practices and outcomes of studies on best practices – this work will build on the outcomes of the previous work streams.

WS 2.5 Development of a Plantation Simulator – the mass balance model is complete, however, it would benefit from controlled field experiments to test productivity responses to different target water levels and to provide data against which the model can be validated / improved. The model is based on independent, published data (Hooijer et al 2012), *Subsidence and carbon loss in drained tropical peatlands*, Biogeosciences 9:1053-1071 Riau Sumatra, Acacia plantation and from information provided by APRIL. The proposed use is for management of peat subsidence mitigation considering water management, fertilization, weed management, and rotation length adjustment. Documentation was distributed by email prior to Meeting #3.

WS 2.6 Recommendations to APRIL on Best Management Practices (BMP) – the phasing of this work stream to follow completion of preceding work streams.

Work Stream 3.0 - New Development
For current Operational Completion areas - once field implementation is underway (with IPEWG recommendations), oversight is then transferred to the Stakeholder Advisory Committee (SAC) who will request IPEWG input again if needed. Future proposals require a thorough field-based approach to decision making and future models for development. Summary of existing guidance, thinking or initiatives on new developments on non-forested peat require Landscape level approaches and alternative scenarios.

WS 3.1 Development of a system for input into operational completion areas – see Operational Completions update with APRIL during meeting #3.

WS 3.2 Review of options for managing non-forested peatland: a) Small Holders b) Integrated Production-Protection and c) Local Capacity Building. For APRIL to be viewed as contributing positively, pro-actively and pragmatically – APRIL needs to support development of programs to help small producers of Oil Palm and Fiber to raise yield levels to at least 70% of industry standard including appropriate water management.

Work Stream 4.0 - Conservation & Restoration
IPEWG have commenced a conversation with APRIL to better understand RER activities and their role within landscape peatland management. IPEWG can add value to these activities. This work stream will encompass not only RER but also other forest land cover within APRIL peat concessions outside the Kampar landscape. This requires an understanding of the peat 'status' of these landscapes - in terms of subsidence rates, tree fall rate, forest growth / re-growth, Carbon emissions, etc. – all which impact forest 'sustainability'. IPEWG will develop a Summary Plan for this work stream, clearly identifying scope, purpose and objectives.

3. APRIL Updates to the IPEWG

Peatland Regulations Update – Tony Wenas

1. BRG reports to the President and coordinates all activities through the MoEF.
2. The MoEF processes the legislative requirements for BRG initiatives and improvements.
3. The MoEF is currently revising government regulation no. 71 / 2014 (PP71) – regarding the protection and management of peatland. It is currently in the public consultation phase.
4. Draft regulation points are:
    a. No land clearing in peat land for certain plantation types (type not yet defined)
    b. Prohibited to construct drainage that will dry peat land
    c. Government to take over areas of burnt peat land that belong to companies (temporarily)
    d. Minimum 30% of Peatland Hydrological Area (KHG) located in peat dome shall be a Protection area
    e. Peatland thickness of >3m should be a Protection area
    f. Damage in peat land Protection Area may include surface water >0.4m below surface

g. Business permit to utilize peatland inside Protection function of peat land issued prior to enactment of draft regulation and already in operation shall remain valid until expiry.

5. Forest Fire regulation: Article 51(1)f: Every concession holder must prepare facilities and infrastructure to support Fire Brigade activities, which at least consist of:
    a. Article 52(3): Technical Prevention Facilities as stipulated in Article 51(1) consist of man made fire break, green belt and water point.
    b. Article 52(4): facilities to manage canal in peatland as stipulated in Article 51(1) consist of simple hydrology equipment, canals and water gates.

Badan Restorasi Gambut (BRG) – the Peat Restoration Agency

- Meeting 26 Feb 16 – APRIL shared its peat land maps
- Meeting 30 Jun 16 – BRG introduced its 'indicative map' process for APRIL to conduct its own verification process for peat land restoration and rehabilitation areas and report back to BRG's Verification team to discuss differences and agree on field verification areas.
- Meeting 2 Aug 16 – BRG requested APRIL to explain a recent community report of digging canals in Bagan Melibur village, Pulau Padang (PPD). APRIL provided the legal basis (SK 180, RKT 2016); the definitive boundary mapping; the informal map used by local NGOs as well as the social context in PPD. BRG requested additional information on the spatial maps.

Operation Completions

a) **Pelalawan (BOB)**

- HCS assessment completed; additional conservation area squared off along compartment boundary lines
- Small Holder Farmers vs Investors – similar to APRIL's Small Holder Local vs Non-local categories
- A Farmer Association is often formed to secure the land in the name of the community.
- How does APRIL ensure the contracts with settled small holders will actually discourage / prevent them from encroaching in other areas again? APRIL is changing their approach to tailor Community Development needs for the local small holders while supporting law enforcement for non-local, small-holder encroachment.

b) **Pulau Padang**

- HCS Assessments for livelihood areas completed – APRIL to provide summary results
- Bagan Melibur SK180 land claim issue – APRIL to provide information to the SAC
- Four Water Management trials established

c) **Bayas**

- Plans for Bayas reviewed, including phasing of work. No work completed to-date.

d) **PT BRP**

- Local government will not allow for approval of RKT due to PP71 interpretation; therefore, operations are not able to start up. APRIL to provide the information to SAC for review to determine how best to support.

Perimeter Canals

- As per government direction, APRIL is completing perimeter canals surrounding peatland concessions to provide a fire break to stop fires from entering concession areas; provide a water source to fight fires and to provide transport of equipment along the canals.
- Perimeter canals do not have a drainage function. Perimeter canals are effectively closed 'moats'; the one drain in PPD perimeter has many controlling canal blocks prior to exit.
- APRIL is monitoring the lake water level in the PPD RER
- Discussion: the islands are a more fire-prone environment due to coastal winds.
    - Open canals will drain peat, but closed, narrow canals with little water movement, result in only a very small Water Table loss.

GHG Towers

- Tower #1 construction in Natural Forest (RER) is forecast to finish in November
- Tower #2 construction in Plantation is complete
- Tower #3 construction in Mixed Land Use will be completed by end of August
- Eddy Flux Gas monitoring equipment is scheduled to be installed mid-September for both Towers # 2 & #3; and for Tower #1 in late November
- IPEWG review of the Eddy Flux Plan and equipment to be submitted in early September.

Winrock International GHG Measurement Methodology Workshop

- APRIL is proposing a 1.5 day workshop to review the proposed methodology for GHG measurement of APRIL's fiber operations. Stakeholders can include IPEWG, Customers, Bankers and environmental NGOs.
- IPEWG has reviewed the methodology and will provide its feedback to APRIL by the end of August. It is most likely that a discussion will follow with several iterations until all is clarified. The reviewed document will be presented at the workshop held in coordination with the next IPEWG meeting in November.

LiDAR

APRIL's Purpose for LiDAR Data Acquisition:

- Digital Elevation Model for hydrological modeling
- Above ground biomass of concessions and surrounding, adjacent lands
- Updated topography and Contour maps
- Flood Risk Analysis
- Plantation Health
- Output Analysis to be shared with Winrock International, Fauna & Flora International, The Nature Conservancy and potentially other NGOs for specific collaborative works
- APRIL needs to identify start area and how mapping will be phased over time
- The scope is broader than Kampar Peninsula, i.e. include APRIL land holdings on the Riau off-shore islands. APRIL to provide a strategy and schedule for IPEWG to review.

4. IPEWG Guest Discussions

Deltares - LiDAR **–** Al Hooijer and Ronald Vernimmen (via Skype conference)

Opening: IPEWG is not advising on Supplier / Vendor – its role is to provide feedback on standards and specifications and provide recommendations to APRIL management. IPEWG thanks Deltares for making the time to inform IPEWG with the benefit of their expertise.

Deltares: Exploration of efficient and cost-effective use of LiDAR data in lowland / peatland landscape mapping and management in Indonesia.

- Mapping coverage has been provided in 10-15% aerial strip intensity surveys (5km between strips = 10%); the provider can zoom in on specific areas for 100% coverage intensity.
- LiDAR strips are used to create contour lines for peat domes as these are often unpredictable shapes. Adding an overlay of existing contour information (gathered from other sources) provides for accuracy.
- For purposes of drainage, flight strip intensity is conducted at 35%
- Due to costs and time, 100% flight coverage is conducted only where needed
- Working at this level of intensity has allowed for coverage of over 1 million hectares
- Water elevations in canals are available from the data due to sediment, detritus and plant growth in the water. For water levels it is best to survey in both seasons – rainy and dry – and at differing intensities (fly twice per year).
- The plan is to provide LiDAR coverage for the whole of eastern Sumatra and the information will (ultimately) be publicly available; it is up to the owners of the raw data whether or not the data itself is made publicly available
- The priority product from the raw data is Digital Elevation Models (DEM)

Question: How can APRIL link to the project? Answer: APRIL should request involvement from the Belantara Foundation.

TNC - The Nature Conservancy – collaborating with APRIL on the RER

- 20+ years in Indonesia conducting large-scale landscape conservation projects

Project: "Development by Design in the Kampar"

- Presented holistic scoping approach to look at APRIL and government initiatives and get a handle on the full range of issues; discussed system dynamics modeling and stakeholder engagement process to develop integrated model of landscape dynamics; will help understand and then compare different potential interventions; don't have time to do much new analysis (e.g. new subsidence analysis or biodiversity assessment) so focusing on getting best available data to populate model, and also identify areas where better information is needed.
- Preliminary work includes RER, peat swamps, plantations, other economically viable businesses, and communities across the landscape. Phase I ends March 2017.

Discussion:

- Government of Indonesia direction for development-to-conservation ratio should target 70/30.
- It is better to focus on what can be done, and do it – rather than spend a lot of time trying to account for all possible landscapes

Wetlands International - Marcel Silvius, public report **–** *Assessment of impacts of plantation drainage on the Kampar Peninsula peatland, Riau*

Marcel Opening: Everything that Wetlands International does is science-based. Wetlands International identifies knowledge gaps and then commissions the work with the best providers to fill them – and prefers to publish after a peer review. Wetlands International has 18 offices world wide

- Marcel presented *Shifting paradigms in Southeast Asia peat land management* **–** a softcopy of the presentation was provided separately
- IPEWG provided a short editorial of their views on the Wetlands Report - *Assessment of Impacts of Plantation Drainage on the Kampar Peninsula Peatland, Riau* – which led to a discussion for clarification of perspectives

Wetlands Summary:

1. Phase out drainage of peatlands
2. Establish Land Use Zoning – Protection; Re-wetted Production; Drained Peat Production with timeframe to wet peat conversion; and Drained Peat Production with no time line with Best Mgmt Practices
3. Ownership of subsidence consequences – start phasing out now
4. Expand focus of peatland restoration beyond previously burnt areas
5. Improved definition for peat management policies that differentiate domed peat from others and provide a clear, legal basis for spatial delineation of the dome
6. Phase in paludiculture – the economic growing of tree species tolerant of high water levels

INDEPENDENT PEAT EXPERT WORKING GROUP

APPENDIX I – IPEWG Work Stream Matrix

IPEWG Recommended Peat Soil Work Streams

Work Stream	No.	Research Focus	Resources	Delivery Date	Remarks / Next Step
1.0 Peat Land Research	1.1	Peer Review of Winrock Methodology report (iLUC leakage to be included) and comparison to IPCC Emission Factors	Winrock ToR and Report	Sep-16	Document Reviewed; APRIL awaiting final feedback submission
	1.2	Review of the Wetlands International report	WI Report on KP	Nov-16	Document Reviewed; APRIL awaiting final feedback submission
	1.3	Collation of GHG Field Data - Part I	GHG Field Data	Sep-16	APRIL has responded to IPEWG information requests. Work-in-progress
	1.4	Review of GHG Measurement Methodology	Flux Tower Methodology	Jul-16	Information / data requestfulfilled by APRIL and reviewed by IPEWG; a short report has been compiled on the flux program;APRIL awaiting final feedback submission
	1.5	Gap Analysis of Data Modeling	Peat Mgmt Data	Aug-16	Documentation completed and circulated to IPEWG / APRIL on 13Aug16
2.0 Existing Development	2.1	Document the approach to Peat management, including a list of all Policy/SOPs/Standards/ QC for Fiber to be reviewed by IPEWG	APRIL SOPs	TBA	Summary of current APRIL approach to peatland management to be the basis for developing the APRIL Guide to be produced by APRIL
	2.2	What information is available on the actual SOP implementation (audit QC results) Combine WS 2.1 and 2.2	APRIL Guide Books	TBA	To be viewed and developed at 3 levels: a) Policy – synchronize with government legislation b) Landscape – synchronize with production, social and environmental concerns. c) Compartment Level – what does science tell us?
	2.3	Review current approach to Plantation and Water Mgmt implementation - SOP/WI/QC/Standards; identify links to Carbon		TBA	Develop a summary at each level for what is Best Management Practice. To start - agree what BMP is; and what BMP is not. Then integrate.
	2.4	Analysis of current APRIL management practices		TBA	Not yet being addressed
	2.5	Development of a Plantation Simulator - decision support tool	APRIL Data and Trial Site	Aug-16	Plantation Simulator developed; to be reviewed by IPEWG and calibrated from APRIL trial data (to be set up and managed by IPEWG)
	2.6	Recommendations to APRIL on best management practices including changes and additions to SOPs to guide future management		2017	Follows Work Streams 2.1 - 2.5
3.0 New Development	3.1	Development of a system for input into Operational Completion areas	Development Plans, HCV/HCS Assessments, Remote Imagery, Contour Mapping	2017	**Not yet developed**
	3.2	Review of options for managing non-forested peatland – a) Small Holders b) Integrated Production – Protection c) Capacity Building locally.		Nov-16	**Summary Plan Required** - develop a program to help small holders OP and Fiber to raise yield levels to 70%+ of industry standard.
	3.3	R&D of the Crop - Acacia/other species - with regards to water table levels	R&D Trial Data	Aug-16	**- Moved to 3.0 New Development -**
	3.4	Review and update of Operational Completion areas	Operational Updates	Nov-16	Discussed at IPEWG Mtg 3 - transfer monitoring responsibility back to SAC after input and recommendations provided to APRIL
4.0 Conservation and Restoration	4.1	Inputs to the RER Board, FFI and TNC for operational management policy and vision	Landscape Study Outputs	Nov-16	Discussed at IPEWG Mtg 3 - to complete a Summary Plan document to address Conservation areas vs. Restoration areas

APPENDIX II – IPEWG Recommendations

No.	Item	Recommendations
1	Work Stream 1.1 and 1.3 - GHG emissions field data and emissions monitoring	APRIL to collect datasets to support active monitoring of GHG emissions / C loss (at the landscape scale) integrated with a systematic database management and analysis system
		IPEWG to be provided time with access to the database so that IPEWG can provide more detailed recommendations to APRIL
		APRIL needs to demonstrate Best Practice Management with their data and be open to independent scrutiny for credibility
2	Work Stream 1.4 - Review of GHG Measurement Methodology	Eddy Flux Tower operations can be improved by: 1. Upgrading power supply, to ensure continuous data generation 2. Ensuring that issues with structures, clearings, tower heights and land-use boundaries are minimised, especially at the transitional forest site 3. 'Gap filling' measurements need to include soil CH_4 and N_2O emissions, tree CH_4 emissions and emissions from drainage canals; possible PhD project 4. Additional measurement sites in other important landscapes, e.g. scrub, smallholder land, trial high water table plantation, oil palm plantation
3	Work Stream 2.1 - Understand current APRIL practices	APRIL to produce a summary of current APRIL approach to peatland management (this will be the basis for developing the APRIL Guide)
4	Work Stream 2.3 - Review of key science and Best Management Practices	IPEWG to develop Briefing Papers on Key Issues summarising relevant science to inform discussion on 40cm water table depth; 3m peat thickness; hotspots; new requirement for perimeter canals; etc.
		IPEWG to produce a summary of other existing guidance and information on best practice (e.g. from RSPO, ISPO)
5	Work Stream 3.0 – New Development	Once Operational Completion area work is underway, following IPEWG input / recommendations, oversight is then transferred to the SAC who will request IPEWG input again if required
		Future sites need a more thorough field-based approach to decision-making
		Summary of existing guidance or initiatives for new development on non-forested peat requires a landscape level approach

6	Work Stream 4.1 - Conservation & Restoration	IPEWG will produce a Terms of Reference for Work Stream 4.1 - to clarify its role & potential outcomes for the company resulting from IPEWG involvement
7	LiDAR	APRIL should publish a clear strategy on a landscape approach for LiDAR data acquisition across plantations, conservation and RER; and make it available to IPEWG and other stakeholders for input
		APRIL to consider collaboration with other stakeholders
		IPEWG recommends that the work is independently verified in order to ensure credibility; APRIL requests IPEWG for the task of independent verification.
		IPEWG recommends APRIL proactively share the outputs to public sources, e.g. BRG. The strategy, format and timing of sharing require further discussion.
8	BRG	APRIL to keep IPEWG informed regarding meetings with BRG and all presentations or papers on peat science should be made public
9	High Carbon Stock	APRIL to maintain HCS patch monitoring records of actions / results for credibility
		APRIL to share HCS assessment completed on Sei Kuat with the IPEWG
10	The Nature Conservancy (TNC)	IPEWG requests copies of any 'output documents' from TNC to align IPEWG focus within the pertinent APRIL Landscapes
11	Briefing Paper	APRIL to prepare a Perimeter Canal Briefing Paper