Independent Peatland Expert Working Group

IPEWG

- Meeting 7, Summary Report -

Time/Location: Sept 7-8, 2017 – Pangkalan Kerinci and Jakarta, Indonesia; Oxford, England

Participants

IPEWG: Prof. Dr. Supiandi Sabiham, Dr. Ari Lauren, Prof. Susan Page, Prof. Chris Evans, Prof. Vincent Gauci, and Dr. Ruth Nussbaum

APRIL: Praveen Singhavi, Lucita Jasmin, Dr. Ibrahim Hasan, Rob Pallett, Wong Ching Yong, Dr. Anthony Greer, Dr. John Bathgate, Craig Tribolet, Yogi Suardiwerianto, Chandra Deshmukh, PhD., Chandra Ghimire, PhD., Taufan Chrisna

Secretariat: Tim Fenton (APRIL)

Guest Visitors: Professor Febrio Kacaribu – University of Indonesia

Denny Irawan - University of Indonesia

Jenny Williamson – Centre for Ecology and Hydrology (UK)

Objectives of IPEWG Meeting 7:

1. To discuss and update progress on the workplan
2. To prepare for the November on-site meeting

Progress Report on the IPEWG Workplan

Topic	Discussion Overview Notes	Workplan Ref.
Component 1 – Building Science-based Understanding and Minimizing Impacts		
D1. Subsidence and carbon balance	**Subsidence data analysis:** Progress updates were provided on both the methodology and analytical results of 10 years of continuously measured peatland subsidence, spread over various land uses within the license area. Relationships to variables are now being tested and modelled. Further progress has been made by IPEWG building on the analysis reviewed at the last meeting. In parallel, the University of Indonesia has analyzed the data with different methods and incorporated other variables to strengthen the resulting outcomes. Next steps include validating additional data - rainfall and water table levels and providing consideration of factors such as the thickness of peat, compaction and decomposition – and agreement on the series of publications that can present the results from this study. **Action**: All parties agree to review a draft outline of a paper at the next meeting in November 2017 with the aim of submitting for publication by the end of 2017	**Output D1.1** Analysis of patterns of subsidence in APRIL plantations on peat for internal discussion and subsequently for further dissemination

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D1. Subsidence and carbon balance	**Action D1.3 a, b, c - GHG flux data** – it is the objective for the towers to provide a landscape level assessment approach (currently at an ecosystem level). We need to move from data collection to understanding what the data means. There is potential for early career researchers, PhDs or Post Docs to conduct research in conjunction with Indonesian capacity building to further the aims of APRIL's workplan while benefiting from external expertise and resources. **Action:** Schedule time in November 2017 meeting to 'workshop' a strategy for collaboration which includes the collection of additional data to meet the landscape requirements and to complement the existing Eddy Covariance tower data	**Output D1.3** Support for Eddy Flux Towers
D2. Water table management and hydrology	**Action D2.2a –** design and set up a water table manipulation trial APRIL reviewed the latest Water Table trial design with IPEWG. The IPEWG is willing to collaborate with APRIL to ensure the trial is established in a way that will mean the data collected are publishable. Design requirements are: • 3 Water Table (WT) targets: 40, 60, 80cm depth • WT fluctuation data is expected to overlap; this is not considered a problem from a scientific perspective provided that there is a consistent offset between the different treatments. • Separate sites are required to utilize Water Zones and avoid pumping. Sites should be characterized in advance to confirm similarity (including peat pore size) • 3 replicates of each treatment Also discussed: • The use of ash as a nutrient source will decrease risk of nutrient mobility • The plantation simulator can calculate when and how much nutrient to apply • Emissions and emission pathway tracking are core to the original idea and so should be incorporated in any monitoring program though this could be through collaborative arrangement • IPEWG will look at providing a PhD student and participate on campaign measurements, including chamber analyzers • In addition to finalizing the conceptual design – a project management strategy needs to be proposed and agreed upon with PICs • IPEWG to provide their requirements in writing to APRIL by end of Sept • APRIL to review these and advise on the final trial design and strategy • The Project Proposal to include all contributions and expected outputs **Action**: APRIL to propose final design, budget, resources (including a Project Mgr) and timeline in November so the trial can begin no later than the next 3-4 months	**Output D2.2** Improved understanding of options for and impacts of managing water tables

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D2. Water table management and hydrology	**Action 2.3 –** Water Table and Water Use Lysimeter Trial **-** to better understand WT effects on tree water use and growth rate. A full rotation (5 yrs) trial of 2 WT target levels (40cm and 80cm) is proposed by APRIL within bounded Lysimeter plots, which allow for strict control of ground water table levels. Expected key outcomes are: • Effects of WT on tree water use **=> Best management practices;** • Effects of WT depth on tree growth/ stability **=> Best management practices;** • Soil and vegetation parameters for predictive hydrological model **=> Water management** IPEWG requests measurements just outside the Lysimeter plots for comparison to 'natural' environmental conditions experienced in a less hydrologically controlled plantation environment. This trial is complementary to the operational scale WT trial and also requires collaboration.	**Output D2.3** Improved understanding of Ground Water Table on Tree Water Use and Growth Rates
D3. Growing Trees on Wetter Peat	**Action D3.2** – developing new water tolerant species: • R&D has established a new organization within its structure identifying roles to focus on alternate species for wetter peat • R&D has contracted an experienced dendrologist to consult on potential local species to include / incorporate into the trial program • IPEWG notes it would be useful for APRIL to collaborate with the MOEF/BRG and/or Universities working with MOEF/BRG on a similar program. **Action:** IPEWG to participate in a ½ day workshop with R&D on this topic in November; IPEWG also requests a visit to the Enviro Nursery at that time to discuss protocols for seed/wilding collection and nursery activities prior to field or pot trials	**Output D3.2** Plan for establishment of a large R&D program on water-tolerant species
D4. Fire	**Activity D4.2 –** Review of existing data and information on fire and fire risk mitigation • Both CIFOR and the Australian National University are looking for evidence of Community behavioral change as a result of participating in the FFVP **Action:** APRIL and IPEWG should look for ways to collaborate more intensively with communities, companies and local government and disseminate more widely the findings that raised awareness and rapid response to fires appear to be as significant as watertable depth in preventing large-scale fires.	**Output D4.2** Improved understanding of the main factors that increase and decrease incidence of fires
D6. Natural forest condition and management	**Activity D6.2b** – develop a management and monitoring program for all natural forest • A framework for the management and monitoring of APRIL conservation forest areas is currently being piloted in Sector Langgam • Once the work process detail is confirmed, the program can then be rolled out to RAPP concession areas – by year end 2017 • Supplier concessions will be targeted for completion by the end of 2018 • Results of data analysis and modelling on the extent of edge effects in peat forest should be fed into conservation planning	**Output D6.2** Effective management of remaining natural forest

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	Action: IPEWG recommends the process map for this work be more broadly shared for awareness raising and inputs from external stakeholders, particularly within Indonesia .	
1.2 Resource Mapping	**1.2.1b –** Develop DEMs and other outputs **1.2.2a –** Review of LiDAR outputs • The technical team continues developing DEMs from the collected LiDAR data for use within specific projects. Examples will be shared at the November meeting. • A consultant has been hired to conduct a 3rd party Quality Control review of the data collection and analysis. The report is almost complete and will be available for review prior to the November meeting. • The remote sensing data acquisition strategy is actively under review and will be workshopped at the November meeting with the IPEWG. **Action: The IPEWG recommends** sharing the data with external parties within Indonesia, I.e. BRG, Universities, etc. and reiterated the importance of sharing APRIL's growing expertise and learning with LiDAR with Indonesian practitioners **Action**: IPEWG and APRIL to discuss the updated strategy in November	**Output 1.2.2** Development of greater capacity and understanding among practitioners and users of resource mapping information
1.4 Clear Communication	**1.4.1** – IPEWG to work with APRIL to help ensure clear understanding of the science underlying peatland management and to improve communication of the work of IPEWG and APRIL on peatland management IPEWG noted that APRIL has posted the *APRIL-IPEWG Peatland Roadmap V3.2, June 2017* to the APRIL Dialog website and on the APRIL Sustainability Dashboard. IPEWG noted that an internal memo has been circulated within APRIL confirming that the Roadmap now represents APRIL's approach to peatland management. The memo also confirms that the 'eko hydro' approach will no longer be referenced. IPEWG and APRIL will undertake a progress review and produce a progress report at the end of the year to provide a clear overview of what progress has been made and what still needs to be done. This will be repeated annually as long as IPEWG continues. IPEWG is drafting 3 Briefing Notes on peatland management topics to be made available for public consumption by year end 2017. Topics are: 1. Peatland Plantation Modelling 2. Tree species for Wetter Peat 3. GHG fluxes in plantation environments (will include their measurement by flux tower and other means). Further Briefing Notes will follow in 2018. IPEWG and APRIL will aim to submit the first scientific papers for publication by the end of 2017	**Output 1.4.1** Clear communication internally and externally about the Peatland Roadmap, the challenges of peatland management and the science-based approaches to address or mitigate these challenges

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Component 2 - Responsible Peatland Operations		
2.2 Modeling plantations and landscapes	**2.2.1** – develop, test and refine models which will allow predictions to be made of the impacts of different management strategies for (a) responsible management and (b) a new vision for peat landscape management. • IPEWG presented a model based on known parameters and processes described in independent research papers to illustrate the 'mechanical' contributions of peat soil to subsidence. • 85% of the subsidence process is a result of oxidation driven by mean water table; and the remainder is affected by litter input and decay, consolidation, and shrinking and swelling of peat caused by fluctuating water table. **Action:** IPEWG agreed a workshop in November to discuss (a) how the results of the model should inform improvements in operational management, (b) how to upscale the Plantation model for larger areas (~ 100 compartments) and (c) how it fits with other modelling and data management activities. **Action**: IPEWG will prioritise publication of the model based on experience and results from using data from three climatically-different locations including APRIL	**2.2.1** Model which can be used to predict the implications of different management strategies
2.2 Modeling plantations and landscapes	**2.2.2** – Drainability and flood risk assessment / mapping APRIL provided a brief update on the purchase of the Danish Hydrological Institute's MIKE SHE software: • One capacity-building training session was already completed in Singapore • A model is currently under construction for PPD which will take 3-5 months to allow time to verify base parameter measurements • The software provides for operational planning across the landscape - specifically for water balance and impacts of water spread over the landscape; and can incorporate the vegetation component of water use – Leaf Area Index and evapotranspiration. It can provide for what is happening to the water flow. **Action:** This work must interface closely with the ongoing work on the Plantation Simulator since there are overlaps in what the two models will do. **Action:** IPEWG suggests APRIL seek to build multi-lateral partnerships with academics and government to build greater capacity in Indonesia.	**Output 2.2.2** An understanding of the areas of peat at greatest risk from subsidence and the timeframe for changes
Component 3 – Developing a Vision for Managing Peatland Landscapes		
Senior Management Discussions		
Peatland Regulations Update	Management update included: • There has been no change in peatland regulations since the February 2017 release. There remains a need for the 'definitive map' to be ground verified • Permen 17 – the process of RKU revision by APRIL is still ongoing with the Ministry of Environment and Forestry. • Regarding the regulation on land swap - questions were raised on the availability of the land and timing or sequence for the swap	

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Dayun / Pelalawan	• All required work and conditions stipulated by the MOEF for the Dayun Block administrative sanction have been completed and reported back to government. APRIL continues to await government verification of actions for the sanction to be lifted.	
Pulau Padang	• The PPD community dispute is not yet resolved but the government lead Task Force has been closed down and the responsibility to resolve village boundary issues has been handed back to the regional level bureaucracy. APRIL will provide support as requested.	
The Nature Conservancy (TNC)	• TNC's proposal for Phase II of the Landscape planning work surrounding the Kampar Peninsula is being finalized. The priority is Kampar Peninsula, while allowing for a broader analysis of Kampar's significance in relation to other landscapes.	
IPEWG Tenure	• The IPEWG is approaching the end of its initial 2-year term and APRIL is now undertaking a review of the IPEWG's objectives, accomplishments, structure and responsibilities with the aim of agreeing on the role of the IPEWG going forward over the next 2 years. One of the aims is to have greater representation of Indonesian scientists. **Action:** It was agreed that APRIL will provide IPEWG members with a formal view on the next phase of the IPEWG by the end of September, and that a workshop to agree both the structure and objectives of 'IPEWG Phase 2' will be held during the November meeting.	
Stakeholder engagement	IPEWG informed APRIL that Greenpeace had written to each of the IPEWG members requesting an update on progress made by IPEWG and APRIL. IPEWG discussed the specific issues raised and will be responding directly, as well as indirectly through its 2 Year Progress report, due out following the November 2017 meeting.	
IPEWG Meeting Schedule		
Next Meeting(s)	Meeting 8 – on-site review from Tuesday – Friday, Nov 28 – Dec 1, 2017 in Kerinci, Indonesia. Provisional timetable – Tues/Wed discussions, Thurs field visits, Friday (which is a public holiday in Indonesia) review and discussion with senior management. For IPEWG members who arrive on Monday, Nov 27, 2017, arrangements will be made to work alongside APRIL staff on the several collaborative work streams, prior to the official start of the IPEWG meeting. The focus of Meeting 8 is: • Review progress and identify objectives and priorities for IPEWG Phase 2 • Agree on the makeup of IPEWG Phase 2 • Make progress on recommendations on best practices on peat • Work with APRIL staff on specific workstreams It is intended that by the end of the meeting all parties can plan and budget in advance of 2018. The Stakeholder Advisory Committee (SAC) has requested that the first physical IPEWG meeting of 2018 should overlap with the SAC meeting to allow direct communication between all members.	