Independent Peatland Expert Working Group

IPEWG

IPEWG Meeting 11

New IPEWG members

A highlight of the first meeting of 2019 was welcoming two new members to IPEWG:

Dr Fahmuddin Agus is a soil scientist at the Indonesian Soil Research Institute, Ministry of Agriculture of Indonesia working on climate change in relation to land use and land management systems and peat dynamics, especially in relation to subsidence and CO2 emissions as caused by drainage.

Professor Dwi Astiani is a tropical peatland and forest ecology expert and lecturer at the University of Tanjungpura, Indonesia

Dr Fahmuddin and Prof Dwi attended the meeting as observers before confirming their agreement to join IPEWG as full members. Their experience and insights were already greatly appreciated and will be a real asset to IPEWG.

IPEWG meeting with SAC representatives

One day of the IPEWG meeting was spent with two members of the APRIL Stakeholder Advisory Committee (SAC) – Pak Joe Lawson and Ibu Erna Witoelar - providing an opportunity to discuss the role of each group and how best to work together effectively. This was very useful on both sides, allowing IPEWG to share some of the important science and SAC to share thoughts on stakeholder engagement and balancing social and environmental considerations. There were also discussions on the importance of working at a landscape level and of outreach and engagement within Indonesia with scientists, government and others working with peatlands. IPEWG are very grateful to Pak Joe and Ibu Erna for making time to join the meeting and share their insights and expertise.

Water table management

As noted in previous meeting notes, water table depth is central to good peatland management, crucial for meeting Indonesian regulations, growing Acacia successfully and minimizing peat subsidence and emissions. APRIL has established a large-scale trial to look at the impacts of water table depth on these factors in the field. Over the coming months and years this trial should provide a huge amount of data to improve operations within APRIL and beyond. The IPEWG team visited the field site where equipment is installed, trees have been planted and measurements are

underway.

Dissemination and outreach

After more than a year of collaboration between APRIL staff, IPEWG scientists and statisticians from the University of Indonesia analyzing APRIL data sets and then writing up the findings, the first subsidence paper *Rates and spatial variability of peat subsidence in Acacia plantation and forest landscapes in Sumatra, Indonesia* was published in Geoderma in December 2018.

IPEWG hopes this will be the first in a series of publications in journals and conference proceedings to share the excellent science being done by APRIL's Peatland Research Group.

https://www.researchgate.net/publication/330075630_Rates_and_spatial_variability_of_peat_subsidence_in_Acacia_plantation_and_forest_landscapes_in_Sumatra_Indonesia

Summary Report

IPEWG Meeting 11
Meeting Notes
March 25- 27 Kerinci

Participants

IPEWG: Dr Ruth Nussbaum, Prof. Supiandi Sabiham, Prof. Susan Page, Prof. Chris Evans, Prof. Ari Lauren, Prof. Dwi Astiani & Prof. Fahmuddin Agus.
SAC: Joe Lawson, Erna Witoelar.
APRIL: Praveen Singahvi, Lucita Jasmin, Mark Werren, Tim Fenton, Taufan Chrisna, Dr Chandra Deshmukh, Dr Luke Esprey, Yogi Suardiwerianto, Adibtya Ayshari, Sofyan Kurnianto, Riyadin Hendratno, Riri Yuliani.
IPEWG Secretariat: Addriyanus Tantra, Craig Tribolet.

IPEWG Work plan Progress Updates

Discussion Overview Notes
Component 1 – Building a Science-based Understanding and Minimizing Impacts **Workstream 1.1 Data Collection and Analysis**
1. Subsidence and carbon balance **Analysis of existing subsidence data:** The first subsidence paper, *Rates and spatial variability of peat subsidence in Acacia plantation and forest landscapes in Sumatra, Indonesia,* was published in Geoderma[1]: The paper notes the significant relationship between mean rate of subsidence and water table depth as well as a clear relationship between distance to nearest canal and subsidence rates. • Plantation: 4.2cm/yr-1 • Forest <300m: 4.0cm/yr-1 • Forest >300m: 2.0cm/yr-1 Results suggest that a mean water table at 40cm would potentially see a 30% reduction in subsidence rates as well as a reduction in carbon emission rates. **Action**: Work is now starting on scoping the second paper which will explore temporal variability. A draft outline will be discussed at the IPEWG video-call in June. **GHG flux monitoring**: presentation on methane data, IPEWG noted importance of comparing against IPCC standards and published papers to ensure like for like comparisons. • Native forest – source in dry, sink in wet • Plantation - <1yr source, >1yr neutral (noting that this incorporates CO2 uptake by the growing tree crop, so does not imply that the peat itself is in balance) • Mixed – source. **IPEWG recommendations**: look at scope to understand avoided emissions; link to developing Winrock methodology; carry out some 'back of envelope' calculations for C for discussion at the next meeting.
2. Hydrology and Water table management

[1] https://www.researchgate.net/publication/330075630_Rates_and_spatial_variability_of_peat_subsidence_in_Acacia_plantation_and_forest_landscapes_in_Sumatra_Indonesia

Discussion Overview Notes
a) High water table trial: Trial has been installed and is in first stages of measurement. IPEWG provided operational guidance on emission factors and recognized sector standard factors should be referenced. A field visit included a review of the intensity of measurement activities as well as an update on the experimental design. **b) Lysimeter trial** – the installation of the subsurface boundary sheeting is installed for the 2 plots (30 m x 20 m x 4 m deep). One plot will have the WT set at 40 cm and other at 80 cm. The heavy plastic walls are driven 50 cm into the mineral soil base below the peat soil with the purpose of excluding water intrusion from the surrounding peatland although early results show there may be some leakage. IPEWG noted that rooting and stability issues are not part of current trial design but would be useful to look at in parallel. **ACTION:** Look at opportunities to arrange a 'Water Table Management' workshop that could also consider physical properties of peat, particularly soil moisture. Also provides an opportunity to reach a broader range of stakeholders (eg. communities and smallholders);
3. Growing trees on wetter peat No updates provided.
4. Fire SP updated progress of Fire Management Paper which initially will be a literature review from Sara Thornton and includes collaboration with Rachel Carmenta and CRT. Initial comments relate to the lack of academic publications related to peatland fire and fire management and more specifically fire prevention. **Action**: Review of draft paper during next IPEWG meeting
5. Greenhouse Gases See notes under Section 1.1 above.
6. Natural forest condition and management update Introduced Riri Yuliana as the newly promoted Conservation Askep. Noted that work has been delayed while the position was being filled but that the RAPP plans, management matrices and mapping are all complete and initial community outreach has commenced. For Supply Partners the estate-based management matrices are complete while the planning and mapping is being completed in Q2. Community engagement training complete but initial outreach in Q3. **IPEWG advises:** collaborating with neighboring companies, organizations, NGOs and local governments to align and cooperate on approaches to address encroachment.
7. Social Issues and Community Development APRIL is developing its understanding of fibre smallholder models. Originally risk that the peatland regulation would have a significant impact on APRIL's production capacity and that smallholders could make an important contribution. There has been a shift in thinking related to the reality of small holder supply. **IPEWG discussion:** how to frame concerns and explain the scientific outcomes for local, community organizations is important, aligning with their values and concerns, eg. environmental issues and forest conservation are not high priority values for community members. Carbon sequestration and subsidence are unlikely to be well understood or valued by communities.

Discussion Overview Notes
Workstream 1.2 Resource Mapping
No updates provided.
Workstream 1.3 Managing impacts of activities in existing concessions
IPEWG discussed progress against the original restoration plan and noted that the current plan is not in line with original commitment. Presentation on Peat Proper Rating. APRIL noted current landscape work: Flora and Fauna International Kampar landscape work, Tanah Air Beta Landscapes Workshop (Jeff Sayer), TFA 2020 looking to highlight Provincial success as part of Forest Positive message, Fire Klaster approach, Mapping out the future of the APRIL 1:1 commitment (timeline and locations).
Workstream 1.4 Clear Communication
IPEWG identified the balance between advising and campaigning, frustration that good science internally is not being reported and informing policy and broader practice; IPEWG bridging local and global, linking science and action and bringing research into public space more quickly – different levels of scientific effort ("IPEWG and SAC are APRIL's best kept secret – but can be a secret no longer"). **IPEWG ACTION:** develop technical briefings and provide information that is more specifically designed to inform specific stakeholders (eg. BRG). **IPEWG ACTION:** seminar series for APRIL peatland science team at Universities in Indonesia. Identify other conference opportunities with a focus on Indonesia. **IPEWG ACTION:** Develop the APRIL Peatland Research Group (and including IPEWG as part of that) including a planned outreach program recognising that APRIL is not a research company.
Component 2 - Responsible Peatland Operations **Workstream 2.1 Best Management Practices**
2.1 Modeling plantations and landscapes to be used to predict the implications of different management strategies **Hydrological Modelling** – modelling data and poster were presented and noted significant differences between this and other published model outputs. IPEWG discussed the various results and agreed that the various inputs were appropriate and noted opportunity to start combining some of the various peatland data sets.
Workstream 2.2 Modelling plantations and landscapes
No updates provided.
Component 3 – Developing a Vision for Peatland Landscapes
No updates provided.
Future IPEWG Meetings The next scheduled IPEWG meeting is 18th June 2019 by video-link The next on-site meeting for IPEWG is suggested for the week of 21 October 2019.