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Roundtable on Sustainable Palm Oil

# A Proposed Tool for Assessing Carbon Sink and Emission Associated with New Planting Development: Progress Update

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## Outline of Presentation

- Why a new tool is needed
- General characteristics
- Progress update
- Challenges
- Next Steps

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## Why a New Tool is Needed

- RSPO P&C review taskforce has proposed a new criterion – requiring the identification and estimation of potential sources of emission and sinks of carbon associated with new planting developments.
- New developments should be designed to minimise emissions and maximise sequestration, carbon stock conservation and emission avoidance.



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## General Characteristics

- Contain practical and relatively simple methodologies that can assist palm oil producers.
- To be used alongside or part of the existing HCV assessment and soil data collection under Principle 7.



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## Characteristics of the Tool (Cont.)

- Compatible with other tools and guidance developed by the RSPO, e.g.:
  - ✓ Palm GHG tool
  - ✓ Land use classifications and emissions factors being developed by the GHG WG2
  - ✓ Oil Palm Plantation Carbon Stock Calculator developed by RSPO, World Agroforestry Centre and Indonesian Soil Research Institute



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## Methodology in Developing the Tool

- Literature review of existing methodologies in carbon stock and GHG emission relevant to new oil palm planting development.
- Interviews with relevant parties to gather experience in carbon stock and GHG emission assessments – producers, consultants, academic institutions, NGOs.
- Seek input from remote sensing experts in Indonesia and Malaysia on how to use readily available imagery to estimate carbon stocks.



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## Progress Update - Interviews

No.	Organisation	Type of Assessment	Year of Assessment	Location of Assessment	Purpose of Assessment	Main methods
1.	WWF-Indonesia	C stock at a landscape level for the whole of Kalimantan	2012	Kalimantan (Indonesia)	REDD+	Remote sensing (MODIS) and sample plots of above-ground biomass and below-ground biomass.
2.	Forest Research Centre (FRC), Sandakan	C stock in lowland dipterocarp forest on mineral soils	2001-2007	Sabah (Malaysia) – Deramakot FR and Tangkulap FR	Comparison of C stock in 2 different parcels of production forest under reduced impact logging and conventional logging; REDD+	Remote sensing (Landsat, SPOT) and sample plots of above-ground biomass.
3.	World Resources Institute (WRI)	Landscape level forest cover assessment for Kalimantan (Forest Cover Analyser & Suitability Mapper)	Forest Cover Analyser: 2001-2005, 2004-2008, 2008-2010 Suitability Mapper: different years for different datasets.	Kalimantan (Indonesia)	Multi-purpose – mainly intended to assess forest resources and suitability for different land use options (e.g. oilpalm)	Forest cover change data using Landsat and MODIS (60m). Land cover data for 2010 from Sarvison using radar.

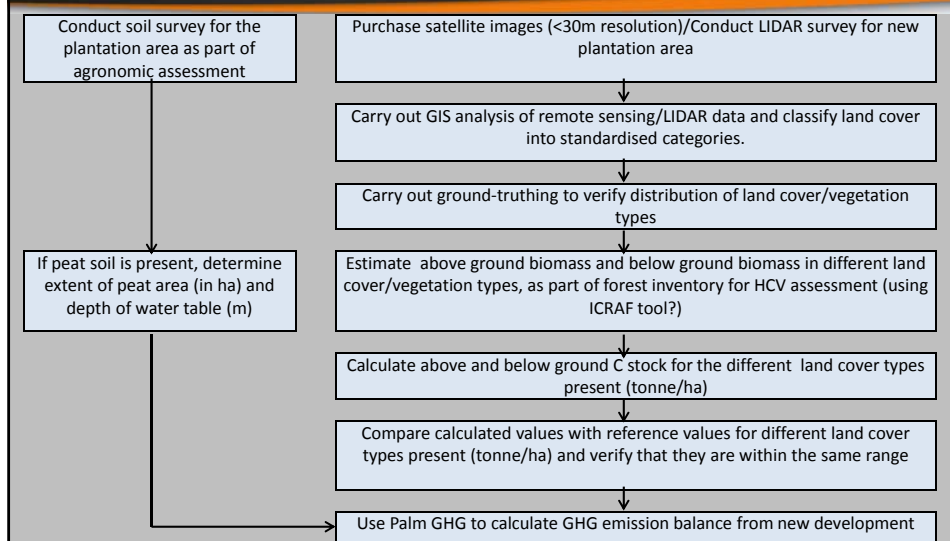
## Progress Update – Interviews (cont.)

No.	Organisation	Type of Assessment	Year of Assessment	Location of Assessment	Purpose of Assessment	Main methods
4.	New Britain Palm Oil Limited (NBPOL)	Plantation-specific covering C stock and GHG emission for the whole lifecycle of an oil palm plantation.	2009	PNG - West New Britain and mills in PNG, covering c. 38,000ha	To assess the carbon footprint of NBPOL's operations, towards delivering its "zero net carbon emissions" commitment.	Sample plot studies with above-ground biomass values derived from model developed by Chase & Hansen (2010) and reference C sequestration values from published sources.
5.	Centre for International Forestry Research (CIFOR)	Plantation-specific covering C stock and GHG emission for the whole lifecycle of an oil palm plantation.	2012-to date, with another 9 months to go.	Tg Puting in Kalimantan (shallow peat) and Jambi Barat in Sumatra (deep peat).	To assess carbon footprint of oil palm plantations on peat.	Direct measurement of carbon flux using chamber method.

## Progress Update – Interviews (cont.)

No.	Organisation	Type of Assessment	Year of Assessment	Location of Assessment	Purpose of Assessment	Main methods
6.	ICRAF	Plantation-specific looking at C stock.	2010	Sample plots in 25 plantations located in all provinces in Sumatra except Bengkulu, all in Kalimantan and one in Sulawesi.	To address the issue of palm oil as feedstock of biofuel in response to EU regulation.	Sample plots to investigate 3 factors: soil type (mineral/peat), vegetation (forest/non-forest) and management type (Plasma, Nukleus & independent).
7.	Olam International	Plantation specific C assessment covering C stock and GHG emission.	2011 and 2012	Gabon – two sites just outside of Libreville (total 38,000ha) and another site assessed in Moulia (35,000ha)	To comply with requirements for new planting by the government of Gabon.	Forest inventory and LIDAR.

## Progress Update – Draft Flowchart of Processes Involved



## Challenges

- Diversity of land use classifications in use e.g. GHG WG2, Compensation Taskforce, published sources
  - Which to use?
  - Is standardisation across HCV and C applications possible?
- Reference emission levels – what values to use and can we get a consensus?
- Simplicity vs. Accuracy & Reliability



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## Next Steps

- Tool Development – draft to be ready by mid November 2012.
- Consultation with the BHCV Compensation Taskforce on 29 Nov 2012.
- Submission to P&C Review Taskforce – Jan 2012.



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