ICOLE 2010
Summary and Conclusion
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Ladies and Gentlemen, dear Participants,

With more than 400 participants from 15 countries, the International Conference on Oil Palm and the Environment (ICOPE) is once again a success.

The objective of ICOPE is to:

“highlight environmental issues, to share experience on possible solutions, not only for the benefit of the environment, but also for the palm oil industry itself”.

I believe that valuable information has been shared during the last 2 and half days of the conference. But our objective will be realised only if we use these information when we get back to our respective places.

The theme of the 2010 ICOPE conference was:

Measurement and mitigation of environmental impact of palm oil production.

We have covered the theme, but I am sure that we could still present tens of supplementary valuable papers. The important point is that we now have a better understanding, when we talk about GHG emission, carbon footprint, ecological intensification, etc … What do the all mean ? How can we measure we or simply assess them, how difficult is it… ?, we do not have all answers yet, or tools to measure them.

Five sessions were organized:

- Oil palm and climate change
- Oil palm and biodiversity
- Measurement of environmental impact of oil palm plantations
- Ecological intensification of oil palm plantations
- Smallholders and the environment

SUMMARY OF THE PRESENTATIONS

The first session (Oil palm and climate change) was a forum with panel members representing the Government, Climate Change expert, the Civil Society, Research Institution, RSPO, the Oil Palm Industry.

The second session (oil palm and biodiversity) was most interesting:

Jeff Sayer, from IUCN and currently professor at the James Cook University, emphasised that Conservation of Biodiversity requires economic growth. Indeed observation he made either in Africa, or in Malaysia, indicated that prosperous oil palm plantation did contribute to conservation of the neighbouring conservation value areas, either through financial, technical or logistic involvement.
When conservation was the objective, landscape approach, coupled with participation of all stakeholders for planning, usually resulted in success. Modelling landscape scenario was one of the tool used for these studies.

Morray Mc Leish from World Resources Institute, and Ketut from Sekala did present an interesting paper on a tentative land swap scheme in progress; this could result in avoiding deforestation of a concession allocated to future oil palm cultivation.

The process includes looking for degraded land with pedo-climatic conditions suitable for oil palm cultivation, then to organize a social survey based on Free Prior Informed Concept principle. This is the type of project which is mentioned by many, as a possible way to reduce pressure on the forests.

Sophie Persey from the Zoological Society of London, reminded us that although deforestation due to oil palm plantation extension represented 14 % of the total deforestation during the period 1990-2005, the risk on biodiversity loss was high, as only 15% of the biodiversity found in Forests, was conserved in oil palm plantations.
She emphasised the importance of sharing knowledge, as she recognized that progress in information about the impact of oil palm plantation on biodiversity has been achieved. We welcome the Zoological Society of London’s initiative to set up a website focusing on biodiversity. I am sure that Sophie will not complain to me if I call on everyone here to contribute to the success of this initiative.

Gary Paoli from Daemeter reminded us about the concept of HCVF, which he considered was much better known now by plantation companies. He confirmed that if properly applied, the current recommendations could reduce negative impact of oil palm development by reducing fragmentation of natural landscape, protecting endangered ecosystems, and conserve habitats of endangered species. Depending on the level of commitment of companies, Biodiversity could either be in danger, or present a zero net impact, or in the best case show a long term positive impact. Gary’s recommendation to plantation companies is to do a risk assessment right at the beginning of the project, even before purchasing the land.

In this session on Biodiversity, the final presentation by Hermien Roosita, first deputy of Environment minister of the republic of Indonesia and bp Barano from WWF demonstrated the Sumatra Island Spatial Planning. They reminded us that ecosystems of this island were at the critical stage. This plan is to make a balance between protected area, and agricultural area based on population density. The Vision for Sumatra ecosystem was based on 9 criteria which included the emblematic Sumatra tigers, Sumatra elephants, Sumatra rhinoceroses, and orang-utans. This is an example of what should be done urgently in all other big islands.
The third session focused on the measurement of Green House Gases. The session started with an academic presentation of the state of the art methodology measurement of GHG flux, above the canopy of the tree cover.

Jason Beringer from Monash University in Australia described the theoretical basis of such measurement, and the calculation, which he considered, provide estimation of carbon sink with 10% minimum accuracy. He also mentioned about the limitation of the method, and its applicability in oil palm plantation.

An estimation of the carbon foot-print of CPO production, based on LCA, but with an accounting system that included measurements on the ground of Carbon stocks, as well as an estimate of carbon source and sink was presented by Sonya Dewi from ICRAF. Currently only the production of the oil palm fruit as well as their process in palm oil mill extraction were considered. Results indicated that only land conversion with relative low carbon stocks could result in acceptable level of carbon foot-print, acceptable for biofuel production. A number of 40 tonnes/ha of carbon has been mentioned. However the level of variability was still high, and consequently studies were still in progress and were being extended to various situations in Indonesia. The objective of the second phase study would be to get more site specific data, so that aggregation at the national level could be envisaged.

Chan Kook Weng from MPOB has updated us on the latest development regarding GHG emission reduction targets and accounting system, that Indonesian and Malaysian governments have taken. The important point to keep in our mind is that LAMA (Local Appropriate Mitigation Action), NAMA, and GAMA, although done on a voluntary basis would have to be MRV (Measurable, Reportable, and Verifiable).
The ISO international standards, which is the voluntary scheme proposed by RSPO last November, to initiate a contribution of palm oil production to the mitigation of climate change was presented. This approach has provided the way forward to solve the multitude of GHG accounting issues impacting the quantification of GHG emissions reductions measurements in the oil palm industry. However there were still issues presented by Chan, like high cost, the problem of data availability, time consuming to do the LCA study and learning process (problem of human resources once again).

LCA method is one of the most common method to assess the cost of a product in terms of Carbon, energy, ... . However Ng from MPOC mentioned a high variability in LCA results done in palm oil production, ranging from 19 to 72 %. They believed that was most important to push for a national life cycle inventory in order to get consistent set of data.

Bp Pujianto from SMARTRI presented an indicator developed to assess the trend of organic carbon in the soils. Based on an input/ouput (source / sink) balance, the indicator compared the quantity of organic matter returned to the soil with the quantity that should be applied to reach a theoretical optimum level. This indicator would represent an operational tool for field management.

Session four: Ecological intensification of oil palm plantations

Robert Habib from Cirad did a clear presentation of the concept of Ecological Intensification, which was considered as an other key part of the solution for a move towards sustainability. Ecological Intensification aimed to achieve an higher level of production in an eco-friendly way. Ecological Intensification consisted of 4 main principles:

- Maximizing biomass production,
- optimizing functional of biodiversity,
- supporting biogeochemical cycles (including reducing losses, recycling nutrients, increasing microbial activity favourable to nutrient absorption for example),
- and anticipating the social, economic and political implications.

Moving from a “ready to use” system to a tailored system, more site specific was one of the key solution.
Alain Rival from Cirad explained to us how biotechnologies could contribute to ecological intensification. While conventional breeding has resulted in yield growth reaching 1% a year during the last 50 years, biotechnologies should be the next approach for yield improvement in the future. Additionally, biotechnologies should facilitate the identification of genes with interesting agronomical traits like resistance to stress and diseases.

Cecile Bessou from CIRAD, presented the study of David Combaz, as a preliminary study regarding the development of a Biodiversity Assessment Grid for established oil palm plantations. Far from the idea of comparing biodiversity due to land use change, one of the final objectives of the programme would be to define practices having a best positive impact on biodiversity. The first phase presented in this conference was focusing on the variation and distribution of vascular plant diversity. In the area observed, about 91 species were found, allowing an estimated 96 to 121 actual species, 50% dicotyledones; 25% monocotyledones, and 25% of pteridophytes. The importance of borders and river-banks effect should be mentioned. However investigations were still in progress to define the ecological and management factors having an impact on biodiversity. We proposed to study the ecological service that this biodiversity could provide.

Saurin Hem from IRD and his team presented how palm kernel meal, a by-product of oil extraction, could be recycled as food for fish production, thanks to an insect Hermetia illucens. The interesting part of this pilot project, beside the recycle principle, was the involvement of local population in such activity, which led to a better social integration of oil palm plantation and factories in a region.
Session five: Smallholders and the environment

This session was devoted to Evaluation and Certification of smallholders.

Geraldo Rodrigues from EMBRAPA presented APOIA, which could be considered as a sustainability index, as it included all aspects of sustainability. Indeed it has been designed and adjusted in line with RSPO principles and criteria. It has been tested in several situations in South America and in Sumatra. It allowed identifying shortcomings, for the management of field practices to focus on.

If RSPO certification process in big companies is relatively new, we can say that certification for smallholder is at initial stages, i.e. just in preparation. So we feel important to have two presentations on this important topic:

- Aryo Gustmono from Mutuagung Lestari, reminded us the importance of the certification for smallholder sending the fruit to a certified mill. He presented key recommendations for the success of this exercise, especially regarding training, support from nucleus, but also highlighted the problem of financing measures to be taken, as well as the cost attached to certification.

- Bp Iman from BSI did make a comprehensive presentation about the various technical aspects and challenges to prepare the audit. He also pointed out the results of applying best practices in smallholders situation, both in terms of situations on the ground, but also in terms of yield performance.

Bp Asril from RSPO liaison office in Indonesia, did an interesting presentation about the smallholders environmental practices in oil palm plantation in Indonesia. The importance of HCVs with recommended field practices was extensively presented, as well as pollutions and emissions risks.

Dr Ngando, from Cameroun, explained to us that smallholder production of palm oil in Cameroun achieved significantly lower performance compared to big plantation. They represented 50% of total planted area, but produced less than 20% of national palm oil production.
Research and development programme were focussed on how to improve this performance from the field to the mill.

Ladies and gentlemen, it is time now to close this conference, but before that, I would like to thanks:
All participants,
All presenters,
All posters authors
All the Moderators
All the Panellists
Special thanks also go to the steering committee, the organizing committee, and not forgetting our sponsors.

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