

**ICOPE 2016
Summary and Conclusion**

**By J.P. Caliman
Head of Smart Research Institute
(PT. SMART R&D Division)**

Ladies and Gentlemen, dear Participants,

ICOPE 2016, with theme “**Sustainability Palm Oil and Climate Change: the way forward through mitigation and adaptation**” comes to its end.

From the theme and the objective of the conference, several questions were to be answered.

- 1. Can oil palm be potentially affected by climate change?**
- 2. Does oil palm have some potential for GHG mitigation?**
- 3. What practices should help in GHG mitigation?**
- 4. Are there technologies that can help to mitigate this potential contribution to climate change?**
- 5. What do we need to implement?**
- 6. How can oil palm adapt to future climate condition?**

1. The answer to the first question is: Yes

Oil palm can be affected. We already observe:

- changes in the seasonality of rains.
- changes in frequency of extreme climatic events, droughts, as well as high rains periods.
- change in temperatures.
- rise of CO₂

As an application of these changes, UNEP presented during the conference maps of Kalimantan showing the expected area suitable for oil palm in the future based on models.

2. The answer to the second question is: Yes:

I am use to say that oil palm has an "ecological potential"

However, we are still emitting a lot, as shown by LCA analysis, confirmed by most field

measurements done in plantation, for example during EFB decomposition, etc....
But there is a high variability between situations.

- Between mineral and peat ecosystems
- When trapping or not methane from POME treatment
- Regarding CO₂ emission from peat based on the quality of water management
- There are countries, regions, still indicating high rates of deforestation
- fertiliser efficiency can be improved to reduce emissions through optimized management

There is still a lot to learn because a high uncertainty in values of emissions (N₂O) is reported. There is a high need for additional observations, measurements ...

- we are burning

3. to question three, FAO country director for Indonesia, as well as presentations mentioned several key practices to mitigate GHG emissions, most of them are based on the concept of Ecological Intensification:

- looking for higher yield (replanting of poor performing area, especially for those independent smallholders with poor access to extension services, and better management of fertilizers,)
- improving recycling of nutrients
- improving the recycling of water products
- better water management of peat already developed in plantations
- no forest opening; stop deforestation
- developing methane capture to all oil palm extraction mills (-14%)
- zero burning policy
- conservation area, but alt iLUC (biochar in composting)
- with such practices United Plantation reports the company can reduce its emissions by 70%

4. Related to question four, there are technologies & tools are already available, and continuously improving:

- for the identification of area to be conserved (HCS, HCS⁺)
- for monitoring new development, slash and burn practices.(global forest watch LCA)
- for prevision of emissions: Palm GHG calculator*

However, we need to emphasize that the objective could not be to multiply standards, in developing difficult and complicated management or calculation tools,

as they will not be adopted by farmers on the ground.

5. The answer to question five “what do we need to implement” lies in the following points”

- we need stronger **Commitment**
- we need **Education & Training** about these alternatives (we need stronger extension services)
- we need economical **Incentive** sponsors in some cases:
 - the cost of fire used for land preparation is actually higher than the savings made
- we need more stringent **laws and regulations**.
- We need international support: what about COP, which seems still having a very low profile regarding agriculture
- we need to be better socially prepared:
- we need to implement sustainability approaches for ourselves not for the neighboring country
- the main challenge is poverty , which as to be prioritize (food, access to system and facilities, access to education, ...)
- we need collaborations at various levels (Ex: ICOPE)

The 5th ICOPE Conference has highlighted all these questions. Two important examples can be mentioned here”

A – The slash & burn practice

The solution, according to the panelists and the floor are:

- in social
- in legal
- in technical
- economical - incentives
- education & training / ext. Sce

It can be done (see other countries), although Indonesia has a challenging geographical situation, as well as social & economical specificities.

B - Peat Restoration

The Restoration Agency is taking a very pragmatic approach to achieve his objective of restoring degraded peat area. It is based on collaborations,

- collaborations with private Companies
- collaborations with R & D centers
- collaborations with Finance institutions

- collaborations with local communities as they are the pillar the agency wants to straighten

Regarding the challenging part of “Adaptation”: ICOPE discussed about 2 levels of adaptation:

1. At the industry level

The industry, in Indonesia, realizes that we may have reached an over-production level (for conventional utilization palm oil, ie food and cosmetic). The Biofuel Indonesian initiative and schemes with the Estate Crop Fund for palm oil is trying to bring additional solutions. We have been explained how it works and what are its objectives: HR, R&D, Promotion, Replanting programme, Support & Logistic

2. Adaptation at the oil palm level as a plant

There is a high level of potential & promising capacity of adaptation.

- against crop losses:
- for diseases resistance. In each continent research centers, public or private, showed significant progress. Fusarium resistance development showed the way; bud rot resistance was described during Icope 2014, and ganoderma is following the similar way
- planting material water stress is being looked at by several research intitutions
- for yield increase, at the plant level, at the area level through genetic & agronomy approaches
- agronomy practices for higher yield (Ex: Colombia) have been developed, especially about water management.

ICOPE is an event tackling important issues, either already in the spotlight like slash & burn practices, peat management / peat restorative.

Icope was one of the first place to discuss with planters about new concept, new issues we believe will become important in the future, such as landscape approach that was discussed in 2010, Ecosystem Services discussed in 2012, LCA discusses in 2014,)

This year we presented "water footprint" concept, which undoubtedly will become a preoccupation of oil palm farmers in the future.

Finally: 2 straightforward questions could be discussed:

1. Can oil palm contribute to fulfill Indonesia and other Palm Oil producing countries to achieve their commitment in terms of GHG emission reduction:

the answer is certainly yes: either through a voluntary approach , either though a

regulatory system

2. Can oil palm adapt to the change in climate:

The answer is certainly yes: work is in progress, and preliminary results are promising. However, we must remind that all has to be done to minimize the contribution of oil palm production to climate change

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