



Online Side event of the FAO Science and Innovation Forum organized by the European Commission Joint Research Centre on **“How can science support the Sustainable Cocoa Initiative?”**

**13. October 2022**

**14:00–16:00 pm CET**

## Summary Report

On the 13<sup>th</sup> October 2022, the European Commission Joint Research Centre organized an online side event as part of the [FAO Science and Innovation Forum 17 – 21 October 2022](#). The objective of the meeting was to discuss the role of science and research in enhancing the sustainability of the cocoa value chain.

### Opening remarks

**Mr. Pascal Tillie**, Economics of Agriculture Unit of the EC Joint Research Centre, opened the side event by providing a brief overview of the Sustainable Cocoa Initiative and the role of the EC Joint Research Centre in developing and providing research and evidence relevant to policy- and decision-makers in the European Commission and partner countries.

### Expert presentations

**Mr. Felix Rembold**, Food Security Unit of the EC Joint Research Centre, delivered a presentation on how satellite imagery contributes to the mapping and monitoring of forest cover and other land uses. Compared to other crops or plantations (such as palm oil), cocoa fields are not easily identified and mapped using satellite imagery. The complexity arises from the continuum of situations under which cocoa is grown, from full sun plantations to complex agroforestry systems where the large tree canopy prevents an easy detection of cocoa trees. Recent innovations in the field, such as the use of Artificial Intelligence, represent new opportunity to complete this task. However, they need to be supported by a validation process based on fieldwork and data collection that remains essential. In conclusion, state-of-the-art use of technologies combined with scientific innovations are necessary for robust cocoa plantation mapping, as long as they are backed with ground data. It is also important to adapt these tools and make them available for local stakeholders, who increasingly rely on technologies for the monitoring of their own activities and would highly benefit from the better sharing of research tools and results. Please find the presentation [here](#).

**Ms. Katharina Krumbiegel**, Economics of Agriculture Unit of the EC Joint Research Centre, focused on the application of sustainable agricultural practices at the farm level in the cocoa sector. To measure the extent of the use of sustainable agricultural practices in the cocoa sector, the study develops a scale that incorporates 10 indicators across the dimensions of agroforestry, soil conservation, pest and disease management and farm sanitation. It uses a representative data set of more than 1700 cocoa producers in Côte d'Ivoire and Ghana to assess whether farmer participation in certification schemes and/or farmer cooperatives leads to the use of more sustainable practices. As part of the economic analysis, a multinomial endogenous switching regression model was applied and the average effect derived for three participation options: 1) certification scheme only, 2) farmer cooperative only and 3) both. In Côte d'Ivoire, results show that either cooperative membership or joint participation in both a certification scheme and a farmer cooperative lead to a significantly higher SAP score. Given such positive effects, farmer cooperatives seem to play a particular role in supporting farmer to use more sustainable practices. In comparison, certification

scheme membership shows the highest effect in Ghana while cooperative membership seems to have less or no effect. This underlines the need to take into account the different country contexts and governance systems to ensure that the right mechanisms are in place to support farmers in their transition to more sustainable cocoa production. Please find the presentation [here](#).

### Panel discussion

**Ms. Adeline Dontenville**, European Forest Institute, guided through the discussion with the five panellists, who shared their perspectives in response to the expert presentations.

**Mr. Frank Okyere**, Kuapa Kokoo Farmer Union, Ghana, shared some of the approaches the farmer cooperative Kuapa Kokoo has supported their members to take up, including climate-smart cropping systems, integrated soil fertility and pest management and organic production practices. He shared his insights on the challenges farmer encounter when it comes to the adoption of more shade trees into their farms. Firstly, the tree tenure system in Ghana often discourages farmers to plant trees, as their experience with ownership rights over trees and their timber have been restrictive. Secondly, poverty and lack of access to labour leads to farmers being rather risk averse towards investments and farm management changes that require knowledge, labour and/ or financial resources.

**Mr. Nanga Kone**, Rainforest Alliance, Côte d'Ivoire, shared the experience of the Rainforest Alliance certification scheme in monitoring farmer's practices and progress over time. Rainforest Alliance monitors the cover loss in the area where they work, using satellite imagery and information about the most prevalent crops. This methodology is used to assess the deforestation risk in specific areas, and to better target the auditing activities of Rainforest Alliance. Mr. Nanga emphasized the need for further research on farmer's perceptions and barriers to take up agroforestry practices. In addition, he underlined the importance of the concept of living income to ensure economic sustainability of cocoa production and called for a reflection on the suitability of approaches and methodologies currently used and applied.

**Ms. Leonie Bonnehin Verrier**, Olam Food Ingredients (OFI), Côte d'Ivoire, detailed the experience of OFI with data collection and challenges to monitor cocoa chain sustainability. She briefly described the traceability system in place for cocoa farmers supplying OFI and highlighted the need for collaboration between the private and public sector, as well as the necessity to ensure the compatibility of any traceability system with the EU Regulation. OFI has a partnership with the Global Forest Watch in order to assist them with the evaluation of deforestation risk and monitor cocoa farms. In case a high risk of deforestation is detected for a country or a region, OFI has a remediation program that can be deployed to prevent actual land degradation in their supply chain. However, the panellist stressed the importance that all stakeholders collaborate and share their experience and lessons learnt from implementing traceability systems and forest monitoring mechanisms, in order to make them as efficient as possible.

**Mr. Micheal Owusu Manu**, Cocoa Research Institute of Ghana (CRIG), shared CRIG's experience with regards to supporting farmers in implementing best practices. The main cocoa cropping systems that CRIG recommends to farmers is now agro-forestry. This is not only because of forest degradation or deforestation, but because agro-forestry is associated with agronomic benefits that in the end have a positive impact for farmers as well: reduced pest pressure and consequently reduction of pesticide application, improved soil quality and fertility, and extended cocoa tree life. However, it is important to acknowledge that farmers can find it difficult to plant and maintain trees in cocoa fields. In addition, the question of the ownership of large trees in agricultural land has long been an issue preventing their adoption by farmers. Poverty levels among cocoa farmers is another obstacle to the uptake of sustainable farming practices. Finally, he advocated the empowerment of cocoa farmers through cooperative membership, since farmer cooperatives can be registered and trained by the official extension services.

**Mr. Régis Méritan**, Directorate General International Partnerships, European Commission, highlighted the efforts already undertaken by cocoa-producing countries in establishing cocoa traceability and monitoring systems and emphasized their roles in enhancing sustainability in the cocoa value chain. These systems will also support compliance to the proposed EU regulation on deforestation-free products, setting specific targets for reducing deforestation through commodities such as cocoa, coffee but also soy or beef. However, he underlined that efforts by the EU not only target land expansion but also on-farm management through the promotion of agroforestry practices. Here environmental targets should align with the ability of farmers to maintain production levels to provide a continued income source from cocoa. The farm gate price of cocoa remains the main driver of income and thus determines the poverty level of the cocoa farming community.

Improving cocoa farmers' livelihoods, together with the preservation of forest and protection of environment, should remain the core preoccupation of all stakeholders and policy makers active in the field. Addressing the social and environmental challenges associated with the cocoa supply chain will not be possible if cocoa prices remain at a low level.

### Questions and answers session

As a response to the presentations and the panel discussion, the event participants were particularly interested in the linkages between the JRC's work on mapping and monitoring of forest cover to the proposed EU regulation on deforestation-free products. **Felix Rembold and Frederic Achard** provided some clarifying insights. Satellite imagery and mapping shows both the cutting and planting of forest areas, therefore both gross and net deforestation can be observed. The definitions used by the JRC regarding deforestation, forest, plantations etc. are in line with the definitions used by the proposed EU regulation which in turn relies to the extent possible on concepts defined by the Food and Agriculture Organization of the UN (FAO).

In response to the questions about farmer cooperatives in the cocoa sector, **Katharina Krumbiegel** confirmed the challenges to identify their functioning and governance quality across Ghana and Côte d'Ivoire. Cooperatives were not differentiated according to their functionality in the study. Rather the formality of the relationship between the farmer and the cooperative was considered (e.g. through registration). Follow-up questions in the questionnaire probed for the existing governance structures of cooperatives and farmers engagement within the cooperatives. Nonetheless more detailed research is still required to assess the functioning of farmer cooperatives, their ability to engage farmers and to foster joint decision-making as well as the provide quality services and support to farmers. Ms. Krumbiegel further clarified that two indicators were identified to measure the use of agroforestry practices on cocoa farms, namely whether there were 1) at least 15 shade trees per ha and 2) at least 2 different tree types per ha.