



**BUILDING RESPONSIBLE
GLOBAL VALUE CHAINS
FOR SUSTAINABLE
TROPICAL FRUITS**

Technical webinar series on avocado and pineapple value chains

Webinar #1: Climate change mitigation

Summary report

2 June 2021, 17.00-18.15 CET (UTC+2), on Zoom

BACKGROUND

This was the first in a series of technical webinars being organized by FAO's Responsible Fruits project in response to the priorities and interests of participants from the private sector. The webinars will provide an opportunity for peer learning on precompetitive issues, and the identification and sharing of good practices.

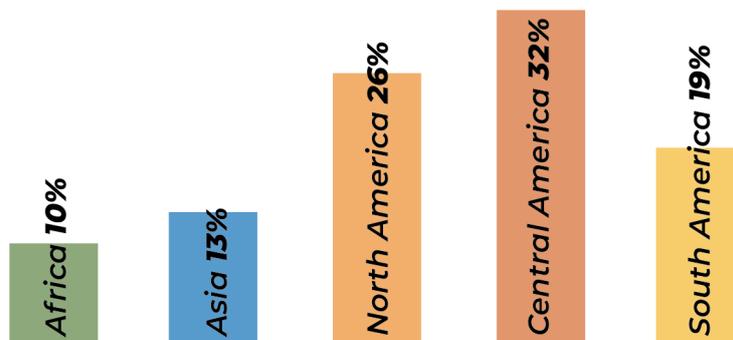
Participation

Thirty-one participants joined the webinar, representing producers and their organizations, packers, processors, exporters/importers and distributors. These included companies and organizations based in Africa, the Americas, and Asia.

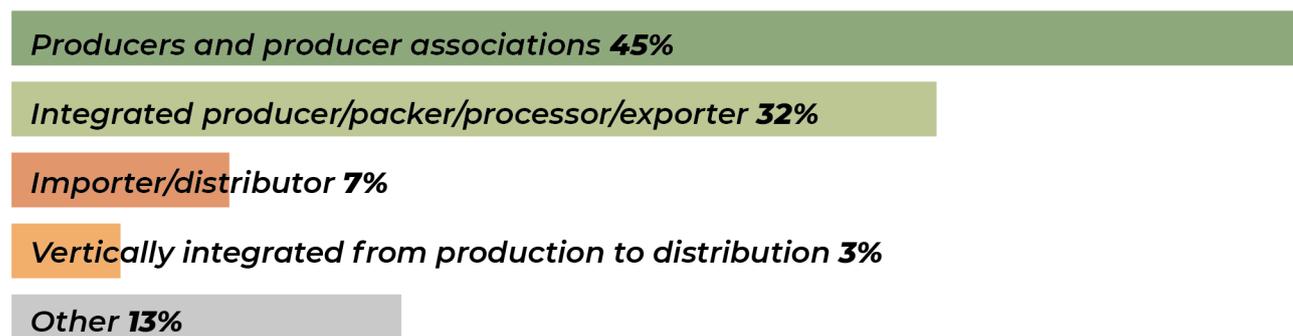
Gender



Geographic origins



Industry groupings



Organizing this peer learning event online avoided the greenhouse gas (GHG) emissions that would normally be associated with travel for a face-to-face event. A preliminary estimate using the ICAO Carbon Emissions Calculator¹ indicates that this event saved over 34,000 kg of CO₂ emissions.

Summary

The event agenda is presented in Annex 1.

- **Welcome and introduction**

Participants were welcomed to this first technical webinar organized by FAO's Responsible Fruits project. The webinar series and this webinar's topic were introduced. Climate change mitigation is part of a holistic strategy for sustainability and resilience in the avocado and pineapple value chains. The importance of this issue was highlighted by participants during the project's inception workshop on 9 March 2021, in preliminary findings from FAO's research on avocado and pineapple value chains, and through informal communications with industry. Furthermore, national regulations will increasingly require businesses to reduce their greenhouse gas (GHG) emissions in line with intergovernmental agreements, making it the right time to learn about available tools and methods. The importance of climate change mitigation as part of a larger sustainability strategy was emphasized. The opportunity to learn from other value chains such as banana was also presented.

- **The role of climate change mitigation as part of a holistic sustainability strategy** – Laure-Sophie Schiettecatte, Office of Climate Change, Biodiversity and Environment, FAO

The speaker introduced climate change, the associated economic, environmental and social risks, and the relationship to agriculture and food systems. It was noted that sustainable food systems, by definition, should be profitable, benefit society, and have positive or neutral impacts on natural resources. At the same time, environmental, social and governance (ESG) standards are now used as a means for measuring sustainability of a company or value chain, and these measurements are increasingly used to determine investments in a business. In this context GHG emissions and carbon footprint, as part of ESG standards, are increasingly important from a business perspective. Trend data and information on "early adopter" businesses provides a corresponding picture of growing interest in both ESG and net zero emissions. Examples were given of major companies in the agriculture and food sector that have committed to the 1.5 degrees target and other Science-Based Targets. See the speaker's presentation slides for details.

GHG accounting in value chains is categorized as Scope 1, 2 and 3, with each offering a business opportunity for mitigation. Scope 1 emissions are those derived from company owned or controlled sources. Scope 2 are indirect emissions from the generation of electricity, steam, heat, or cooling purchased by the reporting company. Scope 3 are all other indirect emissions that occur in a company's value chain. Scope 1 and 2 are mandatory for GHG accounting. There are also many factors that make it important for businesses to measure and report on Scope 3, including public sentiment, climate-related actions being taken by governments and judicial systems, potential competitive advantages, reducing risk, and responding to the demands of the world's youth.

¹ See <https://www.icao.int/environmental-protection/Carbonoffset/Pages/default.aspx>

- **Private sector experience: Developing a climate change mitigation strategy** – Julie Cournoyer, Fyffes PLC

Fyffes is a producer and trader of fresh tropical fruits, produced or sourced in Latin America and West Africa with main markets in Europe and North America. The company's Materiality Matrix exercise in 2018 identified climate change as a key issue and led to a sustainability strategy being put into place. The company recognizes the need to look at the impact of climate change on agriculture as well as the contribution that agriculture makes to climate change. Fyffes' sustainability strategy has 4 pillars of which one is focused on climate change, including reducing GHG emissions.

To initiate this work, Fyffes conducted a life cycle assessment (LCA) of their value chains to establish a baseline, gather data and identify "hotspots" for GHG emissions. This was expanded by a GHG emissions inventory for Scopes 1, 2 and 3 emissions. They continue to expand measurements in Scope 3. In the second inventory in 2020 Fyffes started to include emissions from suppliers' farms and also emissions from the distribution of fruit from farm to market for their own production. In the future they intend to include a broader range of Scope 3 emissions, including for inputs, employee air travel, etc.

Looking at different options for targets, Fyffes settled on an ambitious Science-Based Target, keeping global warming to within 1.5°C from pre-industrial levels. This would be approached by focusing on finding efficiencies and reducing all but the unavoidable emissions. In a later phase the company will look to move to net zero by 2050 through emissions offsetting or other means. The company is currently working on its detailed plan (with over 30 actions) of how to achieve these targets over the next five years, including plans for monitoring and moving on to more ambitious targets.

At the same time Fyffes is now looking at the other side of the coin, namely, how to mitigate the impact of climate change on its business. Fyffes is reviewing the Task Force on Climate-related Financial Disclosures' (TCFD) recommendations on risk evaluation and modelling. All of this is happening within the company not just because it is the right thing to do, but because it is important from a business longevity perspective. All of these actions will help to determine how Fyffes will continue to succeed in this new environment.

- **Measuring carbon footprints: Tool to reduce GHG emission in the banana sector that could be adapted to avocado or pineapple value chains** – Miguel Vallejo, Gestarse S.A.

The speaker introduced an automated tool designed by FAO for the banana sector, which is based on a methodological guide to reduce carbon and water footprints. For this presentation the speaker focused on the results of the carbon footprint function, but noted that in reality the two themes should be considered together due to their interaction (as was the case for the FAO led project). The pilot project organized by FAO, the World Banana Forum and Gestarse aimed to define measures to reduce GHG emissions and impacts on the quantity and quality of water used, and to generate recommendations for the dissemination of good practices in banana producing countries. While the tool has been implemented in the banana sector, it may be readily adapted to other fruits such as avocado or pineapple.

The project worked with plantations in Colombia, Costa Rica, Ecuador, Guatemala and the Dominican Republic to collect data and analyze GHG emissions. Details of the general characteristics of the plantations and data gathered are presented in the speaker's slides. The speaker explained that by systematizing and quantifying GHG emissions, banana plantations can optimize practices in their product operations and get better and more efficient results with less cost associated. In the future, it is expected that this data and analysis will guide companies to invest in specific areas for GHG reduction. The results of the analysis of the project are presented in the speaker's slides.

Following analysis, the project presented a five-step process for identifying and prioritizing recommendations to reduce GHG emissions. Examples of mitigation options were given, including application of nitrogen foliar fertilization, improving

the maintenance practices of irrigation equipment, diesel electric generators and vehicles, and the implementation of irrigation powered by photovoltaic solar technology.

In summary, the project found the need for the establishment of an internal information management system that ensures the quality of the data to measure the carbon footprint. The results represent the baseline of each plantation and allow the identification and implementation of specific GHG reduction measures. It is important to note that these are not comparable between plantations because of differences in terms of management and use of resources. Armed with this information, the companies and producers can develop specific strategies by plantation to reduce their carbon footprints. The speaker noted the importance of focusing first on cost-effective reduction measures based on the current reality and practices, and then considering investments in technology, equipment, etc. It was also reported that the costs of beneficial investments could be covered by savings derived from the use of more efficient equipment and less emission of GHG.

- **Q&A and discussion**

Following the three presentations there was a discussion. Several participants indicated they are comfortable with or working to measure Scope 1 and Scope 2. However, there was general agreement that attempting to measure Scope 3 is much more challenging. The participants considered some factors that limit companies from moving ahead on Scope 3 emissions measurements. Getting the necessary data is challenging when one is not in direct control of the operation. As an example, it was noted that in one's own operations it is possible to make data collection part of a manager's performance objectives, whereas this cannot be done with a partner organization. The challenges of measuring scope 3 can be overcome but it takes time. It was noted that sometimes training is required, and that a good relationship with suppliers and others in the value chain is needed to be able to validate data.

In discussing how companies respond to emissions "hot spots" identified through carbon footprint analysis, several examples were given. It was noted that considering fertilizer is very important because of the nitrogen content, but that it is also challenging because fertilizer has a direct impact on production. Some were looking at alternatives to diesel, which is used on-farm for many purposes, such as pumping water. Examples of alternatives included natural gas, biofuel and renewables, but these choices are highly dependent on the local context. Choices of shipping containers and innovations in refrigeration were identified. The method of applying inputs could also be important. Participants noted that drones are being used to increase the precision of application, with limitations such as inclement weather, in the Americas and in Southeast Asia.

The opportunity to include carbon fixation by avocado trees in the carbon footprint calculations was presented, including reference to work on this in Jalisco, Mexico.

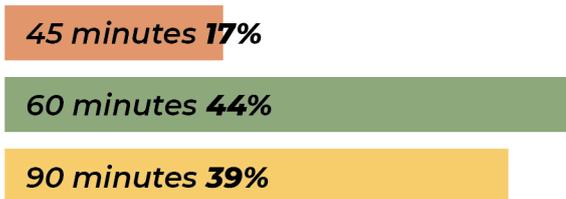
Regarding the use of the carbon footprint tool in plantations, the most important challenge that arose was to make the producers aware of the importance of managing their information, since in many locations, accountability for data is not well established. Likewise, not all plantations had good internet connection, which limited communication and progress in some pilot processes. However, this experience showed that when producers conclude the exercise of collecting data, they understand how to reduce fertilizers, combustion, and what alternatives exist. This increases their understanding of how data collection can be used to be able to make good decisions.

- **Wrap-up and next steps**

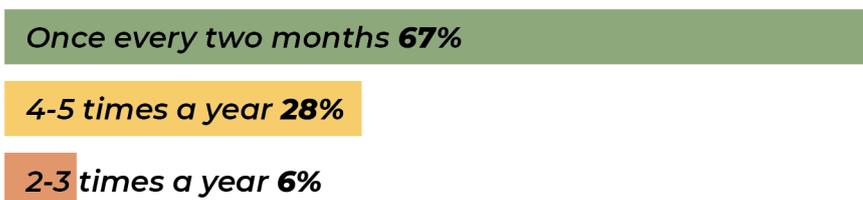
Participants are encouraged to contact the project team if they have an interest in working more closely on carbon and water footprinting.

A quick poll asked the participants three questions to inform how the project team should best organize technical webinars. Data was collected anonymously. The summary results presented here:

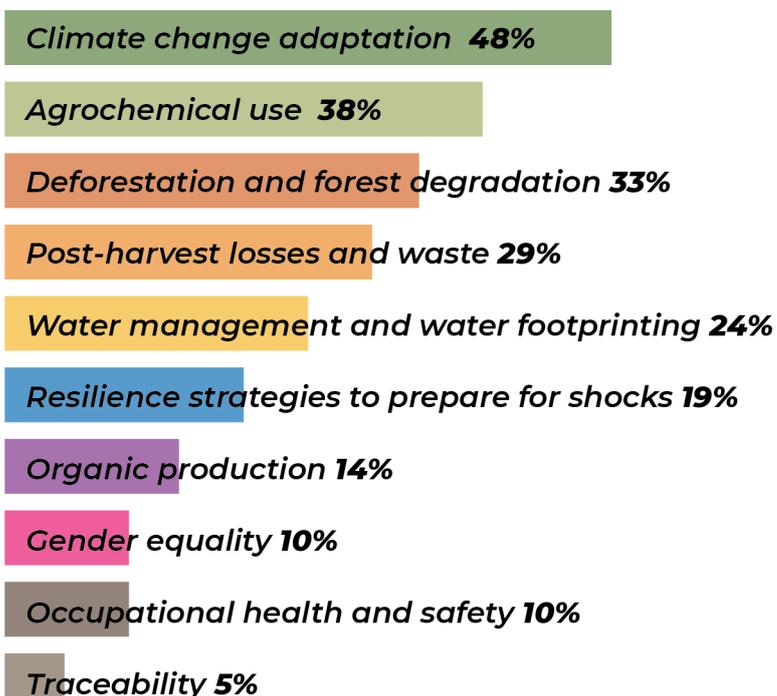
What is the ideal length of a webinar for you?



How often would you like to attend webinars?



Vote for two (2) topics for future sustainability webinars



Participants were informed that there would also be future opportunities to suggest topics for the project, including through the upcoming business survey, at other webinars, and by contacting the project team at any time.

In closing it was announced that the second webinar of this series would focus on due diligence and the OECD-FAO Guidance for Responsible Agricultural Supply Chains. It will take place on 13 July 2021, with further information to be provided by email.

Working languages

English, French, and Spanish with simultaneous interpretation.

Agenda

Time allocated	Section title	Speaker/Facilitator
2 min.	Housekeeping and announcements	Valentina-Perez Mardones , Outreach Specialist, Markets and Trade Div., FAO
5 min.	Welcome and introduction	Jesper Karlsson , Project Officer, Markets and Trade Div., FAO
10 min.	The role of climate change mitigation as part of a holistic sustainability strategy	Laure-Sophie Schiettecatte , Office of Climate Change, Biodiversity and Environment, FAO
15 min.	Private sector experience: Developing a climate change mitigation strategy	Julie Cournoyer , Fyffes PLC
15 min.	Measuring carbon footprints: Tool to reduce GHG emission in the banana sector that could be adapted to avocado or pineapple value chains	Miguel Vallejo , Gestarse S.A.
25 min.	Q&A and discussion	Marlo Rankin , Senior Researcher, Markets and Trade Div., FAO
3 min.	Wrap-up and next steps	Michael Riggs , Technical Advisor, Markets and Trade Div., FAO

For more information about the project or the webinar series, please contact: Responsible-Fruits@fao.org