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# COMMITTEE ON COMMODITY PROBLEMS

## Seventy-second Session

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### THE STATE OF AGRICULTURAL COMMODITY MARKETS (SOCO) 2018 AGRICULTURAL TRADE, CLIMATE CHANGE AND FOOD SECURITY

#### Executive Summary

Climate change is expected to have an increasingly adverse impact on many regions of the world. The agricultural sector of regions and countries in low latitudes is likely to be hardest hit, while those with temperate climates could actually see positive effects. This uneven impact across regions and countries, and the corresponding changes in food production and availability will affect international trade flows and trade routes.

The 2018 edition of The State of Agricultural Commodity Markets (SOCO) aims at deepening the discussion on the broad spectrum of policy instruments available to policy-makers implementing the Paris Agreement on climate change. It examines how various forms of domestic support and trade measures relate to climate change adaptation and mitigation; how they might be used in the future; and how the World Trade Organization's (WTO) rules shape policy choices.

#### Suggested action by the Committee

The Committee is invited to take note of and discuss the content of this document and the findings of the 2018 edition of SOCO, and to consider the following points for further action:

- Consider and recognize the role of agricultural trade in adaptation and mitigation to climate change and its contribution towards ensuring world food security, promoting agricultural productivity globally, and potentially reducing global greenhouse gas emissions;
- Underline the need to facilitate policy dialogue at the juncture of the Paris Agreement and the WTO agreements to strengthen the mutually supportive role of these multilateral accords; and

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- Stress the need to undertake further analysis of the implications of trade and related policies for achieving food security and nutrition objectives, as well as meeting the Paris Agreement target of keeping the rise in global average temperature to significantly below 2 °C.

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## I. Introduction

1. There is growing evidence that climate change will have an uneven and disproportionate impact on agricultural production across regions in the world. Higher temperatures and changes in precipitation are projected to have a negative effect on the agricultural sectors of countries in low latitude areas in Africa, Asia and Latin America, many of which already suffer from food insecurity and malnutrition. At the same time, climate change will likely bring positive impacts in regions with temperate climates, where warmer weather and a longer growing season will benefit agriculture.

2. International trade has the potential to transfer food from surplus to deficit regions, helping countries adapt to climate change and contributing towards food security. The role of trade is underlined by the 2030 Agenda for Sustainable Development, and the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC). Both accords call for a fair and transparent international trade system to contribute towards meeting the SDGs and keeping the increase in global average temperature to significantly below 2 °C.

3. The 2018 edition of The State of Agricultural Commodity Markets (SOCO) provides an in-depth analysis of the intersection of the Paris Agreement and the WTO agreements to enhance clarity and provide guidance on policy options that could strengthen the mutually supportive role of these accords in tackling climate change and food insecurity. Wide-ranging policy actions are necessary to strengthen the role of trade in ensuring food security and in promoting adaptation and mitigation to climate change. The uneven impact of climate change across the world and its implications for agricultural trade, especially for developing countries, underlines the need for a balanced approach to policies, which should enhance the adaptive role of trade, while supporting the most vulnerable.

## II. Developments in agricultural trade

4. In recent years, global agricultural markets have been characterized by the increasing importance of emerging economies. Over the past two decades, rapid economic growth and increases in per capita income in these economies fuelled the demand for agricultural products which, in conjunction with their large populations, have led to considerable increases in agricultural imports. Similar patterns of the growing presence of emerging economies in the global agricultural markets are observed in agricultural exports, highlighting the pace of structural change along the development path and improvements in agricultural productivity.

5. A key feature of the increased participation of middle- and low-income countries in global agricultural markets has been the rapid growth of South-South trade. By 2015, about half of the trade of middle- and low-income countries took place with other 'South' countries. At the same time, the shifting dynamics of trade reveal new challenges, notably in Least Developed Countries (LDCs), where the slow growth of agricultural productivity relative to the pace of population growth has turned some former net exporting countries into net importers or has deepened the net importing position of others – an issue of particular importance given the significance of agriculture to the economy, employment and food security in these countries.

6. Since the beginning of the 21st century, the expansion of agricultural trade was also facilitated by better market access with lower average applied tariff rates as countries endeavoured to meet their commitments under the 1995 WTO Agreement on Agriculture. Bilateral and regional trade agreements as well as domestic policy changes have also contributed towards improving market access. Trade-distorting domestic support in major developed countries has also fallen since 2000, while there was also significant reductions in the use of export subsidies. The implementation of the December 2015 Nairobi WTO Ministerial Conference decision to eliminate export subsidies for farm products should contribute to a more level-playing field in agricultural trade.

### **III. Impact of climate change on food security and the role of international trade**

7. Climate affects agriculture through various channels, and the impacts of climate change will vary significantly across crops and regions and over the time horizon. In the short term, an increasing likelihood of extreme events – such as droughts, floods and storms – with potentially damaging effects on crops and livestock are expected to affect production. In the long term, rising temperatures are expected to adversely impact yields in most tropical regions, while yields in temperate regions may benefit.

8. As a result, climate change could exacerbate existing inequalities and further widen the gap between developed countries (most of which lie in temperate zones) and developing countries (which are mostly found in the tropics). This means that countries in Africa, Asia and Latin America, many of which already suffer from poverty, food insecurity and various forms of malnutrition, will be disproportionately at risk.

9. As climate change impacts will be location specific with significant variations across crops and regions, international trade could play an important role in facilitating adaptation to climate change and promoting world food security. In the short term, by moving food from surplus to deficit areas, trade can provide an important mechanism with which to address production shortfalls due to extreme weather events, stabilize prices and promote food security. In the long term, international trade could contribute towards adjusting agricultural production in an efficient manner across countries and regions. Furthermore, trade can contribute towards better nutrition especially in regions where climatic factors may not allow for the production of a large variety of crops, by allowing for greater diversity in the food available to consumers.

### **IV. Agricultural trade and climate change: the policy framework**

10. The year 2015 signalled the approval of two landmark initiatives that recognized the need for countries to take collective action to promote sustainable development and combat climate change: the 2030 Agenda for Sustainable Development and the Paris Agreement of the UNFCCC.

11. Under the flexibility granted through the Paris Agreement, global climate action will largely be driven by countries' Nationally Determined Contributions (NDCs) – national policy frameworks through which countries communicate their proposed climate actions. How those commitments are pursued in practice – using measures ranging from subsidies to standards – will in turn affect production, trade and emissions and, in some cases, will need to be considered in light of multilateral trade rules.

12. There is no fundamental conflict between climate change policies and multilateral trade rules. The Paris Agreement explicitly states that measures taken to combat climate change should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. The 2030 Agenda for Sustainable Development reinforces the idea that an open, non-discriminatory, multilateral trading system and actions that protect the environment and promote sustainable development can and must be mutually supportive.

13. The WTO agreements recognize the importance of social and environmental objectives, notably through Article XX of the General Agreement on Tariffs and Trade (GATT) on General Exceptions which allows Members to take all necessary measures: “to protect public morals,”<sup>1</sup> “to protect human, animal or plant life or health,”<sup>2</sup> or “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production

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<sup>1</sup> GATT XX: (a)

<sup>2</sup> GATT XX: (b)

or consumption.”<sup>3</sup> However, the application of the rules in regard to treatment of identical agricultural products that differ solely in their carbon footprint remains untested.

14. The main challenge likely to be faced by adaptation and mitigation policies on agriculture relates to the non-discrimination principle, which prohibits discrimination, for example, of otherwise “like” products differing solely in their carbon footprint as a result of different processes and production methods (PPMs). Depending on their design and application, a number of measures, such as taxes and subsidies, which could be used to implement the Paris commitments, remains untested within the context of trade rules, as they could target processes and production methods.

15. In this regard, discussions could be pursued at the juncture of the Paris Agreement and the WTO agreements to strengthen their mutually supportive approach. At the same time, the policy space should also ensure that national measures do not negatively affect other countries, or unduly restrict trade and investment, especially in developing countries.

## **V. Climate change and domestic support measures**

16. Domestic support measures that distort trade, such as market price support and input subsidies, tend to increase production. Although such measures can enhance food availability on local markets, they can also result in surpluses that, in the case of large producing countries, can distort trade. Within the context of climate change, unless measures are taken to improve agriculture’s emissions efficiency (that is to reduce emissions per unit of output), the increase in production due to market price support would also result in an increase in total gas emissions.

17. Many government measures – including but not limited to research and development, extension, training, technical assistance and investments – can promote adaptation and mitigation to climate change, but also food security with no or minimal distortionary impact on trade. Investing in and promoting technological change and facilitating the adoption of climate-smart agricultural practices by farmers are key not only in enhancing productivity growth and promoting food security, but also in helping reduce emissions per unit of output. Additional efforts, however, may be needed to facilitate adaptation and mitigation in agriculture. For example, introducing new technologies to large numbers of farmers – who are risk-averse and face different constraints and incentives – will be challenging.

18. As climate change is likely to increase the frequency and severity of extreme weather events, agricultural insurance will be increasingly important for farmers to hedge against climate risk. However, the higher costs of conventional indemnity-based insurance relative to other risk management strategies, such as income diversification, make insurance unaffordable, especially for small family farmers. With insurance markets being often commercially unviable due to high costs, innovations in insurance schemes, as seen for instance in weather index-based insurance programmes that reduce costs, are vital for promoting investments that lead to sustainable agricultural productivity increases.

19. In many developing countries, spending on food is a major share of total consumer expenditure, and short-term price spikes due to climate-induced reductions in production can have serious implications for food security, especially for the poor and the vulnerable. In this context, food stocks can contribute to climate change adaptation.

20. Private stockholders hold inventories in line with their expectations on the price, purchasing food when prices are low and releasing stocks onto the market when prices are high. In this manner, stocks tend to buffer the impacts of fluctuations in supply. Public stockholding programmes have a long history. In many cases, their primary objective is to ensure food security and address emergency

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<sup>3</sup> GATT XX: (g)

food shortages. In other cases, buffer stocks – large public stockholding programmes that operate through domestic procurement to stabilize prices within a predetermined band – are used to support producer prices.

21. Large-scale buffer stocks tend to be costly and can, in some cases, distort international markets if governments decide to dispose of stocks through exports. Unlike such buffer stock schemes, relatively small public food reserves designed exclusively for meeting emergency food needs minimize distortionary impacts while helping to mitigate the impact of production shortfalls. Such food emergency reserves are less likely to disrupt private sector storage activity and, if linked to social protection mechanisms, can effectively target the poor and the vulnerable.

## **VI. The role of trade policies in adaptation and mitigation**

22. The impact of climate change on the comparative advantage of agricultural production in some countries means that pursuing self-sufficiency in food may not always be an efficient strategy.

23. In addition to implementing measures that will enhance sustainable agricultural productivity, well-functioning international markets can provide a reliable source of food and contribute towards improving food security.

24. International trade, in the short term, can provide a mechanism for addressing production shortfalls due to extreme weather events. In the long term, trade can contribute to the adjustment of agricultural production in an efficient manner across countries. Nevertheless, although trade can contribute to improving food security in the context of climate change, it may result in increasing the import dependence of countries in which agriculture is negatively affected.

25. Trade policies matter in promoting stability in international markets and in enhancing its buffer capacity in the context of climate change. Actions by countries that have significant volumes of exports or imports relative to the volume of world trade, in particular, can have a large potential impact on international price instability. For example, export restrictions can contribute to international price instability, particularly if they are imposed when world prices are rising.

26. Yet, the importance of exercising prudence in using trade policies is not confined to large market players. Weather-induced fluctuations in production, for instance, can often be positively correlated across countries in a given geographical region, compounding the impact on the international market.

27. In the context of climate change and given the demands that will be placed on global agricultural resources by an expanding world population and growing incomes, trade, in theory, could also support mitigation efforts and contribute to reducing global agricultural greenhouse gas (GHG) emissions, by ensuring that increased production is accompanied by enhanced emissions efficiency. In practice, however, this is not straightforward.

28. For example, if a country implements mitigation policies, which reduce emissions per unit of output, but also increase production costs and domestic prices, domestic producers will find themselves at a competitive disadvantage. Cheaper “like” imports from non-mitigating trade partners could displace domestic products.

29. Imported “like” products from non-mitigating countries may also have a higher carbon footprint than domestic ones, thus resulting in higher aggregate emissions (or emissions leakage, i.e. emissions generated as the result of increasing production elsewhere and supplying additional imports to the mitigating country). Thus, internalizing emissions costs in agriculture unilaterally, although justified, may not be effective without concerted global action, if imports from countries that do not mitigate can simply displace low carbon footprint domestic products. Trade can lead to lower emissions globally; but it can also increase emissions when their costs are not embodied in prices.

30. In theory, mitigating countries may try to minimize emissions leakage through the use of trade measures. However, efforts to address differences in emissions efficiency through trade policies should comply with WTO provisions, such as those that provide for most-favoured-nation (MFN) treatment and regulate the levels of tariffs on imports, and provide for equality of national treatment. Trade disciplines need to be taken into account together with the internalization of the social cost of emissions.

31. The Paris Agreement recognizes the need for joint action and cooperative approaches that involve the use of internationally transferred mitigation outcomes on a voluntary basis.<sup>4</sup> Nevertheless, the lack of a mechanism for determining the carbon footprint of agricultural products creates difficulties for the international trading system to play a role in mitigating efforts. Consensus on how to define and calculate carbon footprint, and measures to facilitate trade in low-carbon footprint products would be helpful in facilitate cooperative action.

## **VII. Technical Barriers to Trade (TBT) and Sanitary and Phytosanitary measures (SPS)**

32. Carbon labelling could help to shape consumer preferences, contributing to the transition to a low-emissions economy. Carbon labelling could provide a way to capture the emissions-competitive standing of food and agricultural products and guide consumers in the direction of low-emissions choices.

33. If a country were to require that all domestic and imported products be labelled on the basis of their carbon footprint – since labelling is required for both domestic and imported products – this would seem to be in line with the national treatment provisions of the TBT Agreement. However, since carbon footprint is not in essence a physical part of products (but is rather a consequence of the method of production, processing and transport), the implications of the TBT Agreement requirement for the equal treatment for imports of “like” products remain untested.

34. Although technical difficulties related to the measurement of carbon footprint of agricultural products are not insurmountable, the use of carbon standards and labelling, and the associated processing, monitoring and verification requirements, are, however, likely to impose additional costs on suppliers. This could place a burden particularly on family farmers and small-scale food processors in developing countries, who would require aid and technical assistance for capacity building.

35. Climate change will alter pest and disease distributions and agricultural trade flows in ways that cannot be predicted, increasing the uncertainty surrounding SPS threats. The obligation to base SPS measures on scientific principles is at the core of the SPS Agreement, yet the implications for many biological processes under different climate change scenarios are simply unknown. Scientific research concerning pests and diseases and their behaviour under climate change is in its infancy and knowledge gaps compound challenges for the efficient implementation of SPS measures.

36. The number of SPS measures notified to the WTO has been steadily increasing, reflecting both an increase in transparency and an increase in the number of new or changed SPS measures. Climate change may thus require WTO members to adapt their existing SPS measures or develop new ones in response to changes in pest or disease risks and to the growing uncertainty about these risks, thus contributing to increased regulatory activity. This would hinder trade especially for developing countries, unless appropriate risk assessment, surveillance, monitoring, diagnostics and border infrastructures are put in place.

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<sup>4</sup> Paris Agreement, Article 6, paragraph 2