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COMMITTEE ON COMMODITY PROBLEMS

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OECD-FAO PARTNERSHIP ON MEDIUM-TERM PROJECTIONS

Executive Summary

Since 2004, the Organisation for Economic Co-operation and Development (OECD) and FAO have been collaborating very closely to produce the annual *OECD-FAO Agricultural Outlook*, an annual joint report presenting ten-year projections of national, regional and global agricultural commodity markets. Ongoing innovation is needed to maintain an efficient collaborative process and a state-of-the-art modeling system. The main strategic objectives are to continuously develop the modeling tools and the collaboration with the OECD, to expand country coverage of the projection model to potentially all FAO Members, and to actively involve more countries in the outlook process.

Action sought from the Committee

The Committee is invited to consider the following:

- Recognize the importance of, and need for, the continued collaboration between FAO and the OECD on the medium-term outlook for agricultural commodities.
- Review the current state of this collaboration and provide guidance and recommendations as regards the continuation and strengthening of the OECD-FAO partnership on the medium-term outlook work to better serve the FAO membership.

Queries on the substantive content of the document may be addressed to:

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I. Introduction

1. The *OECD-FAO Agricultural Outlook* project is a collaborative effort that brings together the commodity, policy and country expertise of both organizations to provide ten-year projections of national, regional and global agricultural commodity markets. This collaboration between the OECD and FAO has been very successful and yielded a well-established product that is recognized as the world's leading medium-term agricultural outlook today. Nonetheless, ongoing innovation is needed to maintain an efficient collaborative process and a state-of-the-art modeling system to support the annual *OECD-FAO Agricultural Outlook* publication and an array of other products. Both organizations need to maintain a common vision that emphasizes the joint nature of the Outlook work whilst giving room for specific projects to be developed in each institution.

2. The evaluation of FAO's work in commodities and trade (2007) commented positively on the joint medium-term projection work by FAO and the OECD. The Evaluation Team recommended that the Commodity Simulation Model (COSIMO) project should be enhanced and continued. The Independent External Evaluation (IEE) of FAO referred to this evaluation and picked on this recommendation.

II. History of the outlook

3. Since 2004, FAO and OECD have worked in partnership to produce, annually, the *OECD-FAO Agricultural Outlook* report, which has become a high-profile publication for informing policy debates and resource planning. This history has been significantly shaped through close collaboration between the OECD and FAO Secretariats and collaborating member countries, specialized commodity groups and other international organizations. This year, we are commemorating the tenth anniversary of the joint outlook work. However, OECD's Aglink model started 20 years ago as an effort to link the national models of member countries, prompted by the need to analyse the GATT Uruguay Round Agreement on Agriculture. Through this centralized management of national outlook models, it became possible to provide a consistent picture of global agriculture as a base for such policy analyses.

4. FAO has also been undertaking medium-term projections since the 1960s, using various models, which have been expanded and improved over the years, often with direct support from member countries. After publishing the last issue of the *Medium-term prospects for agricultural commodities* in 2003, FAO discontinued its World Food Model based medium-term projections and joined OECD to produce a joint agricultural outlook report.

III. Governance of the OECD-FAO Agricultural Outlook

5. The collaboration between the OECD and FAO is governed by a partnership agreement that specifies the respective responsibilities of each party with respect to country coverage and crucial process steps. Accordingly, each organization has developed its individual procedures to maintain and produce the databases, models and projections for the countries and regions under its responsibility.

6. In the OECD side, the process of producing the joint outlook is primarily governed by two bodies. The *OECD Group on Commodity Markets* reviews the baseline projections and key findings, while the *Working Party on Agricultural Policies and Markets* (APM) focuses mostly on the final text of the publication. It issues a recommendation to declassify the document, which is then published under the responsibility of its Secretary-General.

7. FAO does not work in the same manner with its member countries. It may be noted, however, that FAO Members who are also OECD Members contribute to the process through their OECD affiliation. A number of country collaborators contribute to the baseline and review the projections, but no formal evaluation or clearance process exists within FAO. The main results are presented each year to FAO management and relevant staff members for review and possible feedback.

8. The medium-term projections work by the Trade and Markets Division (EST) contributes to FAO's Strategic Objective 4 "Enable inclusive and efficient agricultural and food systems", by providing projections on likely developments in global commodity markets covering production, consumption, trade and prices. These insights are critical in informing debates on, and negotiations of, agricultural trade-related agreements. The *OECD-FAO Agricultural Outlook* has also been designated as a corporate technical activity under Objective 6 on technical quality, knowledge and services, which establishes the publication as one of the main knowledge delivery mechanisms of the Organization.

IV. Differences in the approaches of OECD and FAO

A. Questionnaires vs. model-based projections

9. The OECD maintained Aglink model has been developed out of individual country models that were supplied by the respective governments. Country questionnaires are used to maintain an up-to-date database and to gather outlook projections. The country questionnaires are designed to ensure that the database reflects the latest national commodity market developments, including domestic agricultural support and trade policy regimes.

10. Since FAO covers a much larger number of countries and also regional aggregates, such an approach is not possible. The projections for the individual countries and regional aggregates that are covered by the FAO-maintained Commodity Simulation Model (Cosimo), are developed primarily in-house by FAO experts. FAO uses its market monitoring and review capacity to generate a global database to support the projection exercise. The initial projections, which are produced by the model, are reviewed and revised by FAO commodity experts and national institutions from collaborating countries to account for factors that are not captured in the model.

B. Model structure - customized models vs. template

11. Based on the differences in country involvement, the model building process also differs between the OECD and FAO. In Aglink, the structure of the individual country models is very specific to each country. The market structure and policies are represented in a very detailed form. Models are endorsed by the respective collaborating agency and updates to the equation structure and parameters are done infrequently, mostly to include new policies.

12. FAO uses a more template approach with similar equation specifications and fewer structural differences between individual modules. All country models are generated from a single source, and updates are done every year. Elasticities and other model parameters differ from country to country. As country specific information becomes available through collaborators, it gets incorporated into the model generator for more accurate results.

V. Baseline process

13. The joint outlook process starts with the stand-alone modules that are produced by each organization as described above. These differences need to be accounted for in the outlook schedule and the sequence of steps each side follows. This applies especially to the exchange of critical information which is needed to complete the standalones phase, such as macroeconomic data and international reference prices.

14. Once all country modules function correctly, they are merged into one global model and database. Extensive tests are performed to ensure that the merged model correctly replicates the individual country projection results. Once this is ensured, the model is brought into a global market equilibrium by endogenizing the global reference prices. This first model-based approximation of the baseline is subsequently subjected to an extensive review by specialists from both organizations, collaborating countries and other experts. The final baseline projections that form the basis of the

OECD-FAO Agricultural Outlook publication are the result of a broad consensus among all relevant stakeholders.

VI. Publication process

15. The publication of the *OECD-FAO Agricultural Outlook* is governed by a special publication agreement between the two organizations. It specifies that publishing services for the Outlook are provided by the OECD and the book is published as an OECD publication, under the responsibility of the Secretary-General of the OECD. The layout has to conform to all OECD publishing rules. Hard copies are sold by the OECD for €49 per unit. FAO receives copies for distribution to all decentralized offices and Members at only €3.50 per copy.

16. The Outlook is published in English, French, Spanish and Chinese. The OECD covers the cost for the French edition; the Spanish and Chinese versions of the report are jointly financed between the OECD and FAO.

17. Additionally, the executive summary is published as a hand-out in the same four languages. FAO is leading this effort, but both organizations are involved in the design and reach a consensus on the layout.

18. The *OECD-FAO Agricultural Outlook* publication is launched every year in late June-early July, during a press conference held jointly by the Director-General of FAO and the Secretary-General of the OECD. Because of the special focus on China and India in the previous two years, (2013 and 2014), representatives from these countries took part in the launch events. After the global release of the joint publication, regional events are held for wide dissemination of the results. These events are organized by the OECD and FAO local offices or by national partners.

VII. Special features

A. Thematic chapter

19. A special focus chapter on an issue of high relevance to commodity markets has become an important feature of the Outlook report. In the last two editions of the report, the OECD and FAO worked with China (2013) and India (2014) on a special country feature. The special feature chapter allows a more in-depth review and analysis of a specific subject than is possible in the commodity chapters thus enriching the content of the outlook. It has also been an area of intense collaboration between the two organizations, exposing their differing interests and objectives while providing a platform for reaching a consensus.

20. The focus on large countries, and especially those with a recognized and extensive experience in agriculture to share with the rest of the world, has been encouraged by the heads of the two organizations. It is planned that Brazil will be the focus country in 2015 and a regional focus on Southern Africa is under discussion for 2016.

B. Scenario analysis

21. Scenario analysis is increasingly used to examine the uncertainties around the projection path that can arise from alternative policy or non-policy settings or different market conditions. The Aglink-Cosimo partial equilibrium model provides the capability to quantify the likely impacts of real or potential shocks to commodity markets such as macroeconomic events, abnormal weather, natural disasters and policy changes. The topics of interest for scenario analysis conducted by the OECD tend to focus on policy issues of their member countries, such as biofuel regulations in the US and EU. FAO's scenario work has mainly focused on global developmental issues such as narrowing the yield gap in developing countries. A selection of these studies is typically introduced in the main outlook publication, but such studies are also published in separate outlets, like working papers.

VIII. Modeling system

22. The current TROLL based modeling system is a combination of tools that are programmed in the simulation software TROLL and MS Excel. This combination is deemed to be suitable for the tasks specified in the strategic objectives of the outlook work.

23. The system used in FAO allows an efficient generation, execution and review of databases, parameters, standalone modules and linked models. These processes are automated and can be performed from a central point by any analyst. Model output can be visualized and modified with several Excel-based tools. Ongoing developments within this framework are going to improve its capabilities and address the strategic objectives' requirements as they emerge.

24. The OECD uses a different set of tools that support of the main model. They are GAMS and MS Excel based and are geared to their more country-oriented process.

25. Alternative software options are currently explored by FAO and the OECD. Because a migration to a new platform will incur considerable costs, any potential alternative platform has to offer considerable benefits with respect to the strategic objectives.

IX. Strategic goals of FAO's medium-term outlook work

26. Based on the successful collaboration in previous years, the following priorities remain central to FAO's medium-term outlook work:

- keep the *OECD-FAO Agricultural Outlook* firmly established as the global reference publication for medium-term projections and market analysis for the agricultural commodities;
- supplement the global projections with regional outlook publications that are submitted to the FAO Regional Conferences for discussion;
- maintain state-of-the-art modeling tools to simulate emerging issues and developments in global agriculture and provide scenario results that are relevant to decision-makers in member countries;
- increasingly involve FAO member countries in the generation of the baseline, the identification and analysis of emerging issues, and enable them to use the modeling framework.

27. According to FAO's Strategic Objectives, further development of the medium-term modeling framework should focus on the following objectives:

- Because the decentralization focus of FAO puts increased emphasis on direct country activities, it is envisaged to develop and disseminate interfaces and tools that allow easy access to data and analyses and on-demand generation of projections by all FAO member countries.
- Working with member countries and decentralized offices requires increased capacity building efforts. Improved documentation and teaching material have to be developed and offered to all interested partners (stakeholders).
- FAO regional and country offices and their projects should be considered important clients of medium-term outlook activities. Regional and country work plans that are geared towards the direct support of their activities should be developed.
- The Trade and Markets Division (EST) has become a focal point for policy work within FAO and the projections team should tailor its analysis capabilities to this type of work.
- Many of our client countries have large shares of their agriculture not covered in the current model, particularly fruits, vegetables and cash crops, along with locally important crops from a food security and nutrition perspective, such as pulses and cassava. The Cosimo framework should develop features that enable inclusion of these sectors (directly or through links) to

contribute to food security and undernourishment projections based on dietary energy supply and food components.

X. The way forward

28. It is planned that after ten years of successful partnership, FAO and the OECD will exchange and discuss their strategic visions and plans for the future. The close collaborative nature of this joint work requires a high-level coordination between the two organizations on any future developments in order to maintain a common base for the Outlook. For instance, teams in both organizations need to agree on the continuation of a common modeling system that allows them to fulfil their respective mandates while delivering on the joint outlook work in the most efficient and effective way.

29. On the governance side, the establishment of some governing mechanism that represents both organizations might be considered, to carry out the vision of the joint Outlook work forward. The CCP may play a role in this respect.

30. The Committee is invited to consider the following:

- recognize the importance of, and need for, the continued collaboration between FAO and the OECD on the medium-term outlook for agricultural commodities; and
- review the current state of the OECD-FAO partnership on the medium-term outlook and provide guidance and recommendations as regards its future, with the objective to better serve FAO membership.