

**Title of coalition:**

## Coalition on Sustainable Productivity Growth for Food Security and Resource Conservation

**Main objective of the coalition:**

Agriculture faces the daunting challenge of producing more food to meet the nutrition needs of a growing world population while at the same time dealing with climate change and ever-tightening natural resource constraints. This challenge is made even more complex by the fact that unless safe and nutritious food is affordable and reliably accessible, food insecurity and malnutrition will persist. In addition, unless farmers and farm workers make decent incomes, poverty will grow, and farming will fail.

Increasing agricultural productivity growth is one of the only ways to solve this multi-objective optimization problem. However, delivering on the potential of agricultural productivity growth requires a holistic, systems approach to resource conservation and efficiency. Siloed efforts to increase agricultural productivity often focus on single objectives and can have unintended consequences on other objectives. A coalition of action focused on *sustainable* productivity growth will help break silos and deliver on agricultural productivity growth's potential to accelerate progress across multiple objectives.

The Coalition for Sustainable Productivity Growth for Food Security and Resource Conservation (the SPG Coalition) will accelerate the transition to more sustainable food systems through agricultural productivity growth that optimizes agricultural sustainability across social, economic, and environmental dimensions. The SPG Coalition will advance a holistic approach to productivity growth that considers impacts and tradeoffs among multiple objectives.

This effort will directly advance SDGs 2.3 and 2.4, both of which call for increasing agricultural productivity. It has impacts on SDGs 1, 2, 8, 13, 15 and 16.

**Science based evidence to prioritize this coalition (scientific references):**

The importance of efficiency gains and productivity growth for meeting agriculture's multiple objectives is supported in a breadth and depth of scientific literature, including for example:

- Searchinger et al. (2019): *"Increased efficiency of natural resource use is the single most important step toward meeting both food production and environmental goals."*
- Folberth et al. (2020): *"This study shows that about half the land currently needed to grow food crops could be spared if attainable crop yields were achieved globally and crops were grown where they are most productive."*
- The EAT-Lancet Commission (Willet et al., 2019) found that food systems transformation requires sustainable intensification, including *"at least a 75% reduction of yield gaps on current cropland."*
- The 2020 State of Food Security and Nutrition in the World (FAO, 2020): *"Addressing low productivity in food production can be an effective way of raising the overall supply of food, including nutritious foods, by reducing food prices and rising incomes, especially for the poorer family farmers and smallholder producers in low-income and lower-middle-income countries, like farmers, pastoralists and fisherfolk."*
- The UNFSS Scientific Group Paper on Achieving Zero Hunger (Valin et al. 2021): *"improvements in agricultural productivity, in particular total factor productivity (related to all production*



*factors), offers an opportunity to simultaneously lower the pressure on the environment and increase farmer income by decreasing the input requirements.”*

---FAO et al. 2020. *The State of Food Security and Nutrition in the World 2020*. Rome, FAO.

---Folberth et al. 2020 *The global cropland-sparing potential of high-yield farming*. *Nature Sustainability* 3 (4)

---Searchinger et al. 2019. *Creating a Sustainable Food Future*, World Resources Report

---Valin et al. 2021. *Achieving Zero Hunger by 2030*, A paper from the Scientific Group of the UN FSS

---Willet et al. 2019. *Food in the Anthropocene*, *Lancet* 2019; 393: 447–92

## Mechanisms of implementation (Global to National levels):

Coalition members commit to advancing, individually and in collaboration with other members, sustainable productivity growth through a holistic approach that considers impacts and tradeoffs among multiple objectives. The Coalition will provide a platform for sharing best practices; identifying knowledge gaps, research opportunities and collaborative opportunities; and disseminating information on SPG successes and challenges. Possible actions include:

- *Link productivity growth goals with resource conservation and climate goals*
- *Link conservation and climate goals with productivity goals*
- *Advance, implement, and promote Climate Smart Agriculture and Forestry*
- *Join or otherwise participate in the Agriculture Innovation Mission for Climate*
- *Advance progress in growing the nutritional productivity of agriculture*
- *Advance progress in conceptualizing and measuring sustainable productivity growth across objectives*

## Strategic partners (members, private sector, civil society, academia) as on November 15, 2021:

- **Member-States:** Australia, Brazil, Dominican Republic, Georgia, Ghana, Honduras, Ireland, Israel, Liberia, Paraguay, Philippines, Republic of North Macedonia, United States, Vietnam
- **UN Agencies:** Food and Agriculture Organization of the United Nations
- **Academic and Research Organizations:** Akademiya2063, Association of Public and Land-Grant Universities, Breakthrough Institute, Commission on Sustainable Agriculture Intensification, Forum for Agricultural Research in Africa, Global Plant Council, International Food Policy Research Institute, International Potato Center, The Regional Universities Forum for Capacity Building in Agriculture
- **Private Sector:** Agricultural Retailers Association, Alltech, American Feed Industry Association, American Seed Trade Association, American Soybean Association, Animal Agriculture Alliance, Animal Health Institute, Bayer, Biotechnology Innovation Organization, Corn Refiners Association, Corteva Agriscience, CropLife America, CropLife International, FMC Corporation, International Dairy Foods Association, KCoE Isom, Land O’Lakes, Inc., Local Bounti, MAIZALL, Meat & Livestock Australia, National Cattlemen’s Beef Association, National Corn Growers Association, National Cotton Council, National Council of Farmer Cooperatives, National Dairy Producers Union Russia, National Grain and Feed Association, National Milk Producers Federation, National Pork Producers Council, National Turkey Federation, North American Meat Institute, Nutrien, Sugar Association, Syngenta, The Fertilizer Institute, United Fresh Produce Association, U.S. Council for International Business, U.S. Dairy Export Council, U.S. Grains Council, U.S. Meat Export Federation, U.S. Roundtable for Sustainable Poultry & Eggs, U.S. Soybean Export Council
- **Foundations and other Organizations:** AgroNigeria, 2Blades Foundation, DivSeek International, Farm Journal Foundation, Global Institute of Food Security, International Service for the Acquisition of Agri-biotech Applications, International Fertilizer Development Center, Inter-American Institute for Cooperation on Agriculture, National Association of State Departments of Agriculture, Solutions from the Land, Supporters of Agricultural Research Foundation, World Resources Institute



### Monitoring and Evaluation (clear quantifiable indicators and targets linked to SDGs)

Coalition members are responsible for implementing actions, tracking progress, and reporting on achievements and lessons learned. Countries are responsible for reporting on progress meeting the Sustainable Development Goals, including the six goals impacted by the Coalition for Sustainable Productivity Growth: SDGs 1, 2, 8, 13, 15 and 16. This SPG Coalition will directly advance SDGs 2.3 and 2.4, both of which call for increasing agricultural productivity.