G20 Workshop on Agriculture and Climate Change
September 2nd, 2021

Concept Paper

Climate change is one of the greatest challenges of our time and its adverse impacts weaken the ability to achieve sustainable development.

A growing global population is driving up the demand for food, and the world will need to produce about 50 percent more food by 2050 to feed an estimated 9.7 billion people. Unprecedented changes in the Earth climate are creating enormous challenges to meeting the needs of the world's population.

Climate change affects agriculture in many ways, while agriculture and other land uses contribute to global anthropogenic greenhouse gas emissions (GHGs).

However, innovation and sustainable productivity growth can lower GHG emissions from agriculture and food production. Moreover, agriculture, forestry and other land use sectors also have the capacity to remove GHGs safely and cost-effectively from the atmosphere.

The global nature of climate change calls for a wider international cooperation to address adaptation to the adverse impacts of climate change. The global response to climate change will shape how to feed future generations.

At the upcoming G20 workshop, on September 2nd, 2021, the Italian G20 Presidency will propose a discussion on these topics with the purpose of sharing countries' experiences in this sector and taking stock of research on agriculture and climate change.

The focus of the workshop, indeed, will be the discussion on how climate impacts agriculture and how agriculture can become part of the solution to climate change.
To this end, the participants are invited to discuss on:

1) **Mitigating the impacts and adapting agriculture to climate change**

The idea of pursuing adaptation and mitigation jointly in climate change projects and policies is gaining prominence. Mitigation aims to reduce emissions or enhance the sinks of greenhouse gases, while adaptation aims to reduce the vulnerability of people and ecosystems to climate variation and change. Although they share the ultimate aim of reducing climate change impacts, each climate change strategy has different objectives and delivers benefits at different scales and rate. During the Workshops, the discussion is expected to cover optimal strategies to reduce the impacts of climate risks and adaptation measures and innovative solutions for building resilience. In a broader context, it will also focus on tools and methods available to predict the impacts of biotic and abiotic stresses associated with climate change and strategies and measures to mitigate the impacts and recover from these stresses.

2) **Policies, strategies and tools to make agriculture part of the solution**

Agriculture is a priority sector in many adaptation activities and has an important role in reducing climate change vulnerability. The discussion of this session is aimed at focusing on the concrete contributions of agriculture to climate change through relevant policies, strategies, tools and methods to make agriculture part of the solution. The participants are expected to share the sustainable practices, new technologies and innovations and success stories contributing to climate change mitigation.