8th Meeting of G20 Agricultural Chief Scientists
(26th April 2019, Tokyo, Japan)

Concept paper:
International Collaborative Partnership to Scale Up and Out Climate-smart Technologies through Social Experiment-like Approaches

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Agriculture is a sector vulnerable to climate change, and also an emission source.

![Greenhouse gas emissions by economic sectors](image)

*Our action is needed*

IPCC, AR5 Synthesis Report, 2014
Useful technologies for both “adaptation” and “mitigation” technologies have been developed and are in place:

- Impact assessment on agriculture
- New varieties and management practices
- Weather index insurance
- Soil carbon sequestration
- Livestock and crop management to reduce N2O and/or CH4 etc...

Aim to achieve a triple-win:

- Improvement of Production
- Adaptation to Climate Change
- Contribution to Mitigation
Technologies must be put in practice on a large scale but...

Introducing new technologies to farmers is often difficult.

Climate-smart technologies and their on-site adoption
Approaches for scaling up and out climate-smart technologies

- research institution (natural science)
- collaboration
- research institution (social science)
- climate-smart technologies
- supporting policies/schemes
  - alternate wetting & drying
  - soil C sequestration
  - environmental labeling
  - environmental payment
  - carbon credit
- etc...
- On-site social experiment-like approaches
  - farmers
  - scientists
  - other stakeholders
    - private sector, local government, consumers, etc...
- international collaboration
- optimization in the target area
- adoption, scaling up and out of practices and technologies
Proposed actions by Japan at G20 MACS 2019

1. **International workshop** to share G20 country experiences and the latest information

2. Identify suitable technologies for scaling up and out, and strengthen **international research collaboration**

   promote pilot projects in social experiment-like approaches

3. Strengthen collaboration with relevant international organizations