MACS-G20  Working Group on Agricultural Technology Sharing (ATS)

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   Rational and Objectives

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Part I Introduction of Agricultural Technology Sharing (ATS)
Rationale

2012 1st MACS
Deliberated on establishing GRCPs
- Access to global collective action
- Access to technical documentation
- Access to germplasm collections
- Improving genetic and genomic data and agricultural innovation

Agreed to further evaluate merits and potential of establishing GRCPs

2014 3rd MACS
Reaffirmed support for GRCPs and agreed a subset of members would conduct a pilot project to establish information sharing mechanisms

Rationale for the necessity but have not yet discussed in detail

2016 5th MACS
Propose GRCP-ATS as a pilot to identify ways to strengthen collaboration and technology sharing

More GRCPs could be agreed for progressing in future years
Rationale

- There are agriculture technology platforms but sparse and not well connected.
- To serve ordinary users of these technologies, such as smallholder farmers, entrepreneurs, private sectors, we need a user friendly, integrated technology information platform to:
  - COLLABORATE
  - COOPERATE
  - EXCHANGE
  - SHARE

  For Rapid Agricultural Innovation

That is why we need....
14. ……We agree to set up a working group on Agricultural Technology Sharing (ATS) led by China to map and analyze strengths and weaknesses of existing knowledge and information sharing mechanisms as well as to develop a proposal. …..
Agricultural Technology Sharing Platform

China, as a responsible member of the global community, is willing to contribute to global poverty elimination, ensure food security, improve nutrition and promote sustainable agriculture.

Agricultural Technology Sharing Platform is dedicated to share agriculture technology supply and demand for collaboration, cooperation and innovation in agriculture across the world.
Objectives of ATS

Promote MACS cooperation mechanism:

➢ To encourage **practice and knowledge-sharing** among G20 members, interested countries and international organizations;

➢ To act as **public platform** to improve access on agricultural technologies, facilitate technology support, share experience in skills;

➢ To bring **efficiency for rapid search** of sparse resources for scientific endeavor and technology generation from global good;

➢ To construct sources of information ready for **cross-search and integration** of specific problems.
Objectives of ATS

Support South-South Cooperation:

➢ To share key experiences on what has worked and what has not worked;
➢ To promote technology transfer;
➢ To contribute to capacity building;
➢ To explore new modalities beyond traditional bilateral cooperation.
Features

- Enable differently constructed sources of information to be seamlessly integrated
- Act as a directory of shared information collated by partnering countries and representative organizations
- Encourage and emphasize the need to optimize policy making for enhancing agricultural technology innovation systems
- Bring in regulatory mechanisms pertaining to security, safety and protection of property rights for data and information as also technologies
- Consolidated standards for sharing and exchange of agricultural data, information and technology
Part II
Progress of ATS Working Group
ATS Working Group

10 G20 economies

China, Australia, Germany, India, Indonesia, Italy, Japan, Spain, Russian Federation, Republic of Korea

6 International Organizations

OECD, FAO, IFPRI, CABI, GFAR, GODAN
Developing ATS Procedure

- Concept Paper as accepted by 5th G20 MACS at Xian
- Needs Analysis Survey by CAAS in consultation with the Working Group
- Presenting Interim reports to Meeting of G20 Agricultural Deputies
- Needs Analysis Survey responses
- Conceptual Model of the Agricultural Technology Sharing Platform
- Develop ATS proposal
- Present ATS in G20 Linked Open Data Workshop
- Present ATS Proposal in 6th G20 MACS at Potsdam
<table>
<thead>
<tr>
<th><strong>Know What</strong></th>
<th>Related projects and activities that indicate the knowledge domains</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Know Who</strong></td>
<td>Organizations/Institutions/experts, projects are engaged in the technology</td>
</tr>
<tr>
<td><strong>Know Where</strong></td>
<td>Contact details of Institutions or Organizations and experts</td>
</tr>
<tr>
<td><strong>Know How</strong></td>
<td>Technology available</td>
</tr>
<tr>
<td><strong>Know Why</strong></td>
<td>Why the area problem is being solved</td>
</tr>
</tbody>
</table>
## Need Analysis-Know What

### Key agricultural technologies areas to focus on

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Agricultural technologies areas</th>
<th>Ranking by HODs</th>
<th>Ranking by others</th>
<th>Ranking by all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Climate Change</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Sustainable Improvement of Crops and Incomes</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Transboundary Diseases and Pests</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Water Conservation and Use</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>Combatting Desertification</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Biodiversity</td>
<td>6</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

**Needs Analysis Survey open to delegations in 5th MCAS**

22 Respondents, 15 Heads of Delegation
Need Analysis-Know What

The other key areas suggested by respondents were technologies:

- that help manage and improve value addition chains, reduce and use waste and biomass from food and non-food products
- that improve nutrition and food safety especially of the poor
- for sustainable Intensification
- plant (and animal) breeding technologies
- that facilitate global trade in agricultural commodities and products
- that enable resource poor especially women to participate in agribusiness
- Innovations in technology mapping and dissemination
- technologies that improve labor use efficiency
Need Analysis-Know Who and where

What kind of technology information needed

- Brief description of technologies and innovations developed in the key area, 19 out of 22 respondents
- Institutions/Organizations involved in the Key area, 19/22
- Brief Project Outputs and Technology developed, 17/22
- Contact details of the Organizations, 16/22
- Expert group/Experts involved in the key area, 16/22
- Contact details of Expert group, 13/22
- Respective funding projects undertaken in the Key area, 12/22
- Bibliography on the project, 8/22
## Need Analysis-Know Why

### Gap Analysis of Current Models

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Information</th>
<th>TECA</th>
<th>Agropedia</th>
<th>AGRIS</th>
<th>CIARD. RING</th>
<th>Agriprofiles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Brief Descriptions of Technology and Innovations</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>(Keyword Tag)</td>
<td>Yes/?</td>
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<tr>
<td>2</td>
<td>Institutions Involved in Key Area</td>
<td>?</td>
<td>?</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Brief Project Outputs</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>Contact Details of Organization</td>
<td>?</td>
<td>?</td>
<td>Yes</td>
<td>Yes/?</td>
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<tr>
<td>5</td>
<td>Experts Involved in Project/Key Area</td>
<td>?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes/?</td>
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<tr>
<td>6</td>
<td>Contact Details of Experts</td>
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<td>?</td>
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<td>Yes/?</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>Respective Funding Projects</td>
<td>?</td>
<td>?</td>
<td>No</td>
<td>No/?</td>
<td>Yes/?</td>
</tr>
<tr>
<td>8</td>
<td>Bibliography</td>
<td>?</td>
<td>Yes/?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Gap Analysis

- Agriculture technology platforms are scattered and not connected
- Some information of the technology in platform is missing
- Researchers are the main users for most platforms, lack of service for smallholders, enterprises, policy makers
- Data is not equipped with metadata, not published in a machine readable format
- Lack of information and knowledge sharing standards and regulations
Need Analysis-Conclusion

- Strong demand for agriculture technology sharing to solve global issues
- No existing platform to narrow the gap between agriculture technology demand and supply
- Lack of standards and institutional arrangements to support agriculture technology sharing
- Necessity to develop ATS to
  - Enhance the equal access, adoption and extension of agriculture technology information
  - Support South-south Cooperation and agriculture technology sharing
  - Contribute towards SDGs
Schema of ATS Platform
Part III
Working Plan for ATS Platform
Work Plan

- ATS Working Group will further improve the proposal and workplan based on suggestions and comments from 2017 Potsdam MACS.
- ATS Working Group in close collaboration with G20 members and GFAR, FAO, GODAN, IFPRI, etc.
- 2018 G20 MACS ATS Workshop to be organized with consensus of participants.
Thank you!

MACS-G20 Working Group on Agricultural Technology Sharing (ATS)