Climate Smart Agriculture: Using Best Practices for adaptation and Mitigation in Asia

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GCISC, Pakistan
Agriculture contributes 10-12% of global GHG emissions

Not Agriculture BUT !!!
Food Production & Food security were mentioned in the Paris Agreement

Agriculture & land use appeared to be key strategies for mitigation & adaptation in majority of INDC’s

INDCs Commitment
80% agricultural Mitigation
90% agricultural Adaptations

Adaptation, Mitigation & Sustainable Food Security
Does a triple win solution exists???

Two degrees Celsius could decide our fate
Climate Smart Agriculture: Need for action!

Food security calls for Transition to Agriculture Production Systems

Systems which are

More productive
Use inputs more efficiently
Have less variability and greater stability in their outputs resilient to risks, shocks and long-term climate variability

Hunger of the World
62% Asia

Each day 800 million people go hungry
Mitigation Targets & Adaptation Priorities in Agriculture

- Green: Mitigation target and adaptation priorities include agriculture
- Light green: Mitigation target includes agriculture
- Lighter green: Adaptation priorities include agriculture
- White: INDC does not cover agriculture
- Gray: No INDC

(Source CCAFS)
Adaptations in Agriculture

Country driven, forward looking, bottom up approaches

No Regret Options

More crop per drop technologies
WHY is Climate Smart Agriculture Important for Mitigation?

It will be impossible to stay within either a 1.5 or 2 degree C target if Agriculture does not contribute to emissions reductions.” (CGIAR)

GHG Emissions from Different Sectors - Asia
- Energy: 58%
- Industry: 22%
- Agriculture: 17%
- Wastes: 3%

Agricultural Emissions from Sub Sectors - Asia
- Enteric Fermentation: 60%
- Rice Cultivation: 21%
- Agricultural Soils: 16%
- Crop residue burning: 2%
- Manure Management: 1%
Climate smart agriculture through sustainable water use management: Exploring new approaches and devising strategies for climate change adaptation in South Asia

Project Partners

Project Objectives

To provide a conceptual framework to address food security under conditions of water scarcity

To introduce new, well-tested approaches for the construction of high-resolution climate change scenarios contributing to filling data gaps in the region

To mainstream climate change adaptation and mitigation related to agriculture and crop water management in developing countries of the Asia-Pacific region

Major Events Year I

<table>
<thead>
<tr>
<th>Date/Venue</th>
<th>Event</th>
<th>Estimated No. of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-12 November 2015, Islamabad, Pakistan</td>
<td>Project inception meeting</td>
<td>50</td>
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<tr>
<td>May 30 - June 04, 2016, Kendy, Sri Lanka</td>
<td>Training Workshop</td>
<td>30</td>
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</tbody>
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Major Events Year II

<table>
<thead>
<tr>
<th>Date/Venue</th>
<th>Event</th>
<th>Estimated No. of participants</th>
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<tbody>
<tr>
<td>May 16-20, 2017, Islamabad-Pakistan</td>
<td>Final Workshop</td>
<td>30</td>
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<td>National Seminar</td>
<td>150</td>
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</tbody>
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Milestones and Deliverables

Tasks | Lead responsible | collaborators
---|------------------|---------------------
Task 1 | Data Collection & Site selection | All partner countries
Task 2 | Site selection | All partner countries
Task 2 | Statistical downscaling | Pakistan, Sri Lanka, UK
| Crop simulation modelling | Pakistan, Sri Lanka
Task 3 | GCM/RCM data acquisition and evaluation | Pakistan | All partner countries
| Development methodology & implementation | Pakistan, UK | All partner countries
| Climate extreme analysis | Pakistan | All partner countries
Task 4 | Climate change impact analysis | All partner countries

Monthly mean Precip
Next Steps.....Domesticating Paris Agreement

INDC’s Implementation

- Political will and effective governance
- Long-term mitigation strategies
- Integrated adaptation planning
- Climate finance frameworks
- Measurement, reporting & verification (MRV) systems
Thank You!