IRRI South Asia Regional Centre (ISARC) and South-South Cooperation

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Common issues across South Asia

• Yield gap compared with the global best in class
• Need for sustainable intensification of rice-based production systems to meet future demand
• Rural to urban migration and resulting increase in cost of agricultural labour
• Feminization of agriculture and limited access of women farmers to technologies, productive resources and services
• Urbanisation – increase in slums dwellers and middle-class consumers
Common issues across South Asia

• Increasing importance of non-farm incomes
• Increasing importance of the private sector in rice value chain with market liberalization
• Poor nutrition of rice consumers
• Resilience of rice-based systems to climate change and water stress (droughts and floods)
• Increasing number of people in the working age population
## Paddy yields in South Asia

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (millions)</th>
<th>GNI per capita, Atlas method (current US$)</th>
<th>Milled rice consumption kg per person per year</th>
<th>Paddy production (million tons)</th>
<th>Paddy Yield (tons/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>32.53(^a)</td>
<td>610(^a)</td>
<td>17(^g)</td>
<td>0.62(^b)</td>
<td>2.70(^b)</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>160.9(^a)</td>
<td>1,190(^a)</td>
<td>152(^d)</td>
<td>51.9(^d)</td>
<td>4.60(^d)</td>
</tr>
<tr>
<td>Bhutan</td>
<td>0.774(^a)</td>
<td>2,380(^a)</td>
<td>172(^g)</td>
<td>0.07(^c)</td>
<td>3.37(^c)</td>
</tr>
<tr>
<td>India</td>
<td>1,311(^a)</td>
<td>1,600(^a)</td>
<td>66(^e)</td>
<td>159(^b)</td>
<td>3.59(^b)</td>
</tr>
<tr>
<td>Nepal</td>
<td>28.51(^a)</td>
<td>730(^a)</td>
<td>122(^f)</td>
<td>4.66(^f)</td>
<td>3.20(^f)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>188.9(^a)</td>
<td>1,440(^a)</td>
<td>17(^g)</td>
<td>9.96(^b)</td>
<td>3.75(^b)</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>20.96(^a)</td>
<td>3,800(^a)</td>
<td>103.8(^g)</td>
<td>3.45(^b)</td>
<td>3.46(^b)</td>
</tr>
</tbody>
</table>

SDG #2: Zero Hunger

- Ensure access by all people, in particular the poor and people in vulnerable situations, including infants, **to safe, nutritious and sufficient food** all year round

- Ending **all forms of malnutrition**, including achieving **targets on stunting and wasting** in children under 5 years of age

- Increasing investment, including through **enhanced international cooperation**, in **agricultural research** and extension services, technology development and plant and livestock gene banks to enhance agricultural productive capacity

- Doubling the agricultural productivity and incomes of small-scale food producers, **in particular women**...

- Ensuring **sustainable food production systems** and resilient agricultural practices...that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters
Meeting the SDGs in South Asia is going to be a big challenge

Rising populations, increasing economic inequality, land degradation, climate change impacts and water stress means that achieving the SDGs will need concerted and sustained cooperation and effort in the Region.
IRRI South Asia Regional and Country Strategies

- IRRI has strong partnerships with NARES, investors and private sector in all countries in the region
- Our regional strategy for South Asia is predicated on the presumption that all its partners will benefit from synergies and efficiencies
- IRRI can use its “honest broker” role to facilitate south-south collaboration
The agricultural innovation system has changed – there is a new paradigm
Where IRRI can add value to National Systems

The need for IRRI’s input continues but the balance of topics shifts

The need for capacity building remains but the topics evolve

National Institutions expand their capacity over time

The need for R4D grows as the Agrifood Sector develops in volume and sophistication

The need for capacity building remains but the topics evolve

National Institutions expand their capacity over time
IRRI South Asia Regional Centre at Varanasi
Vision for ISARC

A high impact IRRI centre of excellence in South Asia which is recognised as such by key stakeholders throughout the SAARC region and Sub-Saharan Africa.
Objectives of the IRRI South Asia Regional Centre

- Centre of Excellence on Rice Value Addition (CERVA)
- Node of IRRI Education
- Broader programs of research and development
CERVA: Products

- State-of-the-art grain quality laboratory facility to deliver R&D services for public and private sectors
- Rice value addition for:
  - Improving nutritional quality
  - Biofortification
  - Understanding heavy metal contamination
  - Improving grain quality
  - Post-harvest loss and processing
  - Improving rice value chains
  - Understanding and meeting market demand
IRRI Education: Products

• Short courses on rice based agri-food systems at ISARC
• Scholars and internships at ISARC
• IRRI Education products delivered outside Varanasi
• Products delivered to:
  – Private sector
  – NARES partners in India
  – International students from SAARC and Sub-Saharan Africa
  – State and National government officials
Research at ISARC: Products

• Centre for phenotyping excellence
  o Abiotic and biotic stresses – regional focus
  o Varietal solutions to meet regional production profiles
  o Hybrid rice varieties
  o Integrated solutions development
  o G*E*M optimization

• Agronomy research on systems intensification and optimization
Research at ISARC: facilities

- Molecular marker demonstration laboratory
- Regional dihaploid centre
- Mechanization, post-harvest and seed processing experimental facility
- Soil and plant analysis laboratory
- GIS remote sensing laboratory
- Demonstration farm
- Containment facility
ISARC Coordination Committee: Draft Terms of Reference

Provide advice on the scope and activities of the ISARC and CERVA

Provide advice on opportunities and mechanisms for optimizing collaboration with the agencies of the Government of India, Indian State Governments and SAARC member states

Assist ISARC to optimize the training and capacity building activities to be conducted by the Center, with particular reference to training and capacity building across SAARC and Africa

Provide recommendations regarding strategic directions for rice research relevant to ISARC and new opportunities for investment, partnership, and enhanced performance

Provide recommendations on policy directions that could enhance regional cooperation for the benefit of all SAARC countries, resulting from the research and training activities of ISARC

Provide advice on additional activities that could be aligned to ISARC or could be hosted or facilitated using the ISARC facilities or capabilities
INNOVATE
CATALYZE
TRANSFORM

Transforming Lives through the
Global Rice Sector

IRRI