

INNOVATE
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*Transforming Lives
through the
Global Rice Sector*

IRRI

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

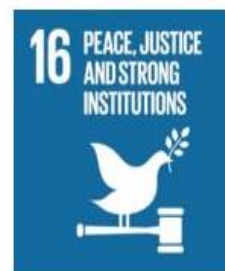
Paddy yields in South Asia

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

Sources: a) <http://data.worldbank.org>; b) psdonline 2016 data, USDA; c) Bhutan RNR Statistics, 2015; d) Bangladesh Bureau of Statistics; e) NSSO, 2014; f) Nepal, MoAD, 2015; g) Rice Almanac, 2013



SUSTAINABLE DEVELOPMENT GOALS



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



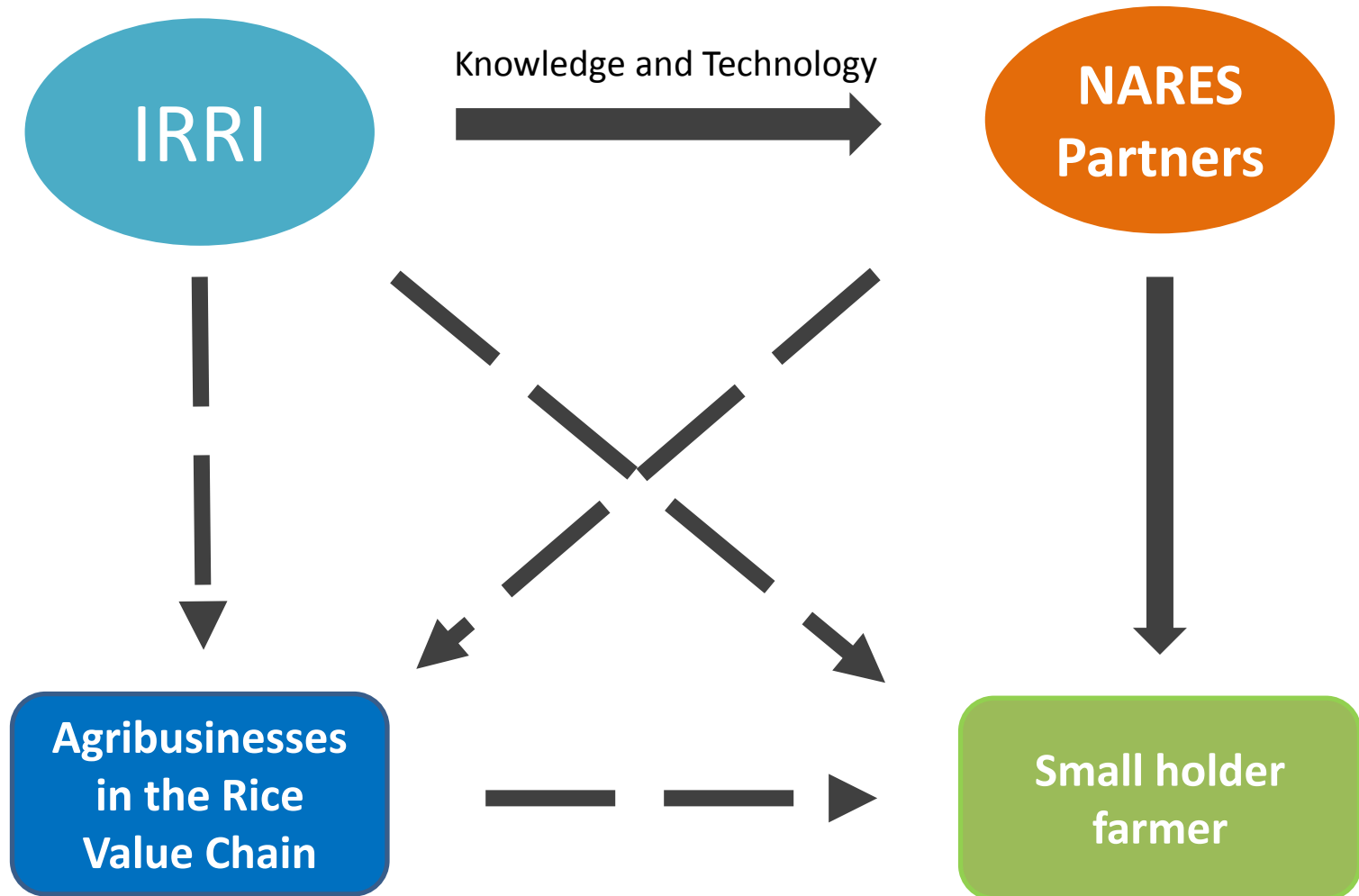
Rising populations, increasing economic inequality, land degradation, climate change impacts and water stress means that achieving the SDGs will need concerted and sustained cooperation and effort in the Region.

IRRI South Asia Regional and Country Strategies

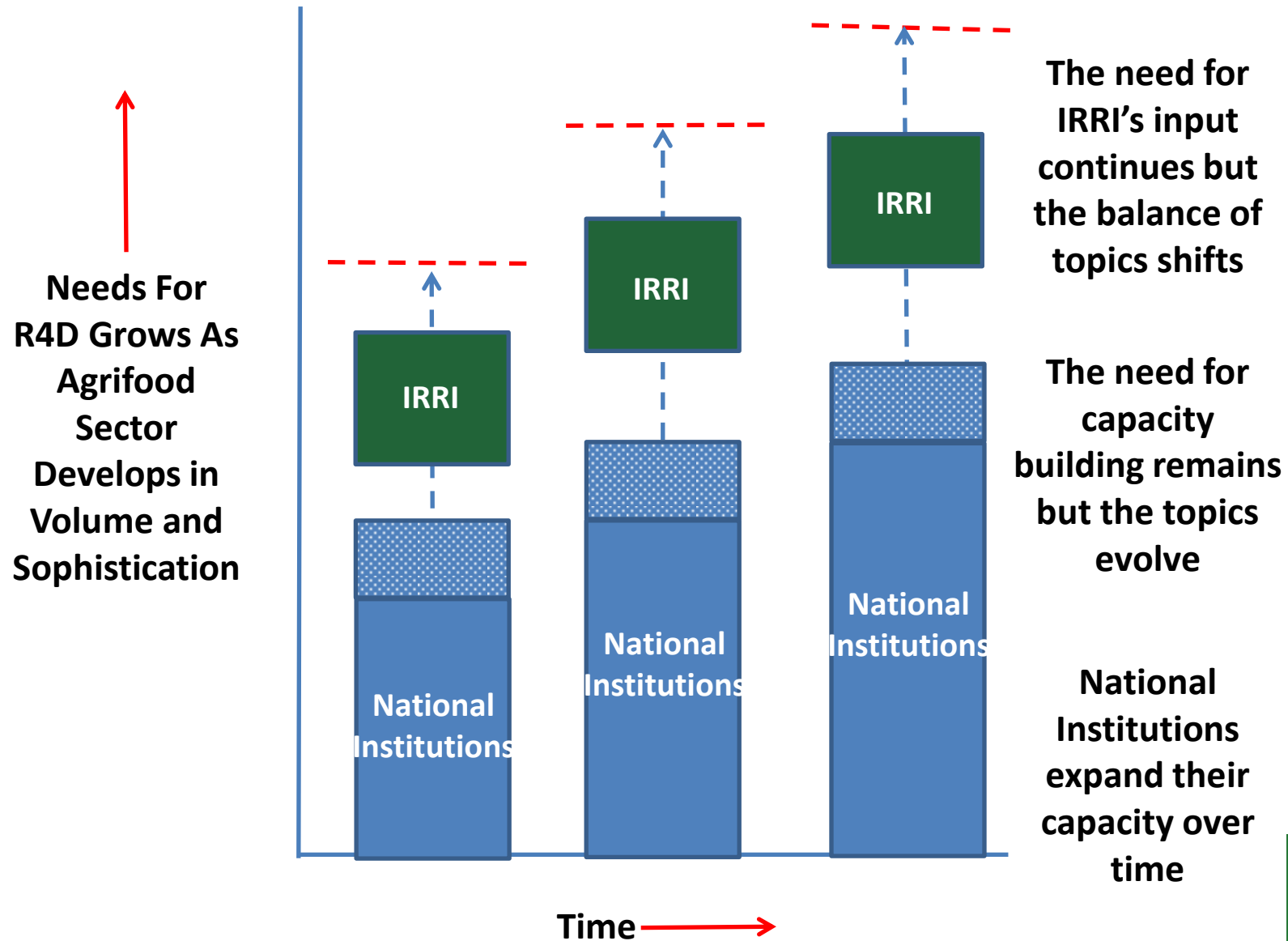
- IRRI has strong partnerships with NARES, investors and private sector in all countries in the region
- Our regional strategy for South Asia is predicated on the presumption that all its partners will benefit from synergies and efficiencies
- IRRI can use its “honest broker” role to facilitate south-south collaboration



The agricultural innovation system has changed – there is a new paradigm



Where IRRI can add value to National Systems





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

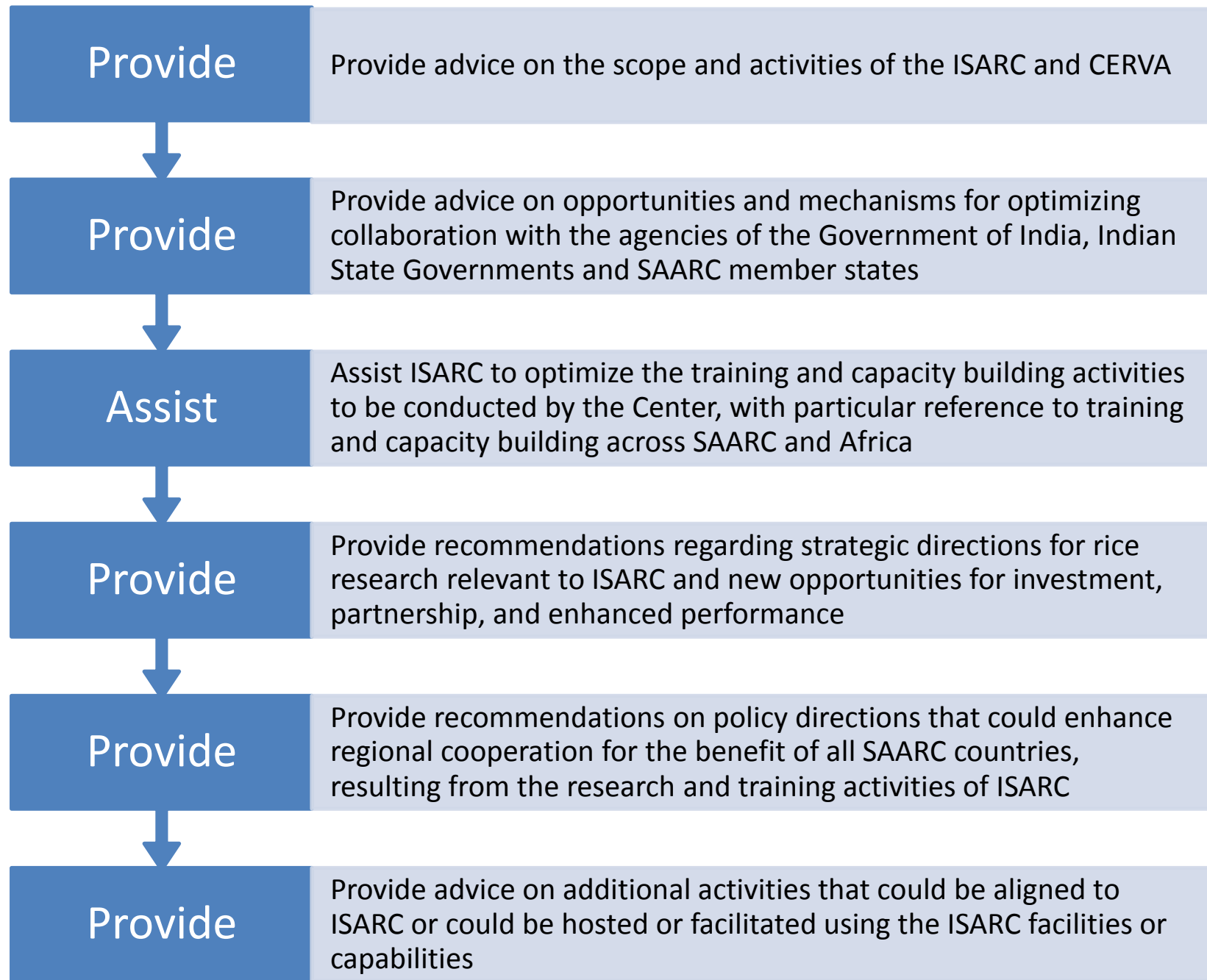
Research at ISARC: Products

- **Centre for phenotyping excellence**
 - Abiotic and biotic stresses – regional focus
 - Varietal solutions to meet regional production profiles
 - Hybrid rice varieties
 - Integrated solutions development
 - 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**



A person's hand is shown holding a single rice seedling against a green background. The background is a soft-focus image of a person's face and hand, with a green overlay. The text is centered in a white box.

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