

# International Rice Research Institute (IRRI)

July 13, 2022

**In news**– Recently, a Memorandum of Agreement was signed between the Department of Agriculture & Farmer Welfare & IRRI on commencement of Phase -2 activities of IRRI South Asia Regional Centre (ISARC) to scale up the existing partnership for food and nutrition security in the South Asian region.

## **Phase -2 activities of IRRI South Asia Regional Centre (ISARC)-**

- **The second phase of the ISARC programme proposes to increase farmers' incomes**, improve food and nutrition security, health, and well-being of small/holder farmers through increased system productivity, reduced yield gaps, enhanced climate resilience, mechanized and digital farming, improved market linkages, modernized value chains enabling entrepreneurship for women and youth, and capacity development.
- **Activities toward meeting the objectives of the 2nd Phase will be carried out through a trans disciplinary approach and leveraging cutting-edge technologies in three thematic areas over 5 years viz.,**
  - Centre of Excellence in Rice Value Addition (CERVA).
  - Centre of Excellence in Sustainable Agriculture (CESA).
  - Center for Education in Innovation and Research for Development (CEIRD).
- **Main objectives include**
  - **The development, dissemination, and popularization of high-yielding stress-tolerant and bio-fortified rice**, particularly **high zinc and low glycemic index rice**.

- **Supporting national and regional rice breeding programmes** to advance rice lines of specific and certified grain quality.
- **Promotion of climate-smart varieties**, natural resource management practices, and resilient agriculture through integrated geospatial data systems and tools.
- **Improvement of nutrient use efficiency (NUE)**, soil health, and water productivity in diversified rice agri-food systems.
- **Development of inclusive value chain-based business models** (including farmer producer companies, business linkages, and entrepreneurship).
- **Development of evidence-based strategies to improve women's economic empowerment.**
- **Enhancement of local capacities, knowledge, and skills of all stakeholders** through innovative human capital development solutions.
- **The Phase II activities follow the long-time cooperation between the Government of India and IRRI.**
- ISARC also provides training on grain quality, nutritional quality and food safety.
- **Broader Programme for Research and Partnership (BPRP) was launched for undertaking breeding for climate resilience**, bio-fortification, improvement of traditional landraces, seed systems to enhance varietal replacement, etc.

### **International Rice Research Institute (IRRI)-**

- It is an international agricultural research and training organization with **its headquarters in Los Baños, Laguna in the Philippines**, and offices in seventeen countries.
- IRRI is **known for its work in developing rice varieties that contributed to the Green Revolution in the 1960s**

which preempted the famine in Asia.

- IRRI was established in 1960 with the support of the Ford Foundation, the Rockefeller Foundation, and the Government of the Philippines.
- The Institute **aims to reduce poverty and hunger, improve the health of rice farmers and consumers**, and ensure environmental sustainability of rice farming.
- It advances its mission through **collaborative research, partnerships, and the strengthening of the national agricultural research** and extension systems of the countries IRRI works in.
- IRRI is one of 15 agricultural research centers in the world that form the CGIAR Consortium of International Agricultural Research Centers, a global partnership of organizations engaged in research on food security.
- **It is also the largest non-profit agricultural research center in Asia.**
- IRRI is pursuing the development of **“golden rice”**.
- Geneticists inserted a gene into the rice plant that **allows it to produce beta carotene, which makes its grains yellow.**
- Because the human body converts beta carotene to vitamin A, **golden rice has the potential to dramatically improve the lives of millions of people around the world, particularly in Africa and Southeast Asia**, where vitamin A deficiency is an especially common malady that can cause blindness and increases the risk of death from disease.

#### **About ISARC-**

- **The ISARC was established following the Union Cabinet approval** in 2017.
- In 2017, the Union Cabinet had approved the establishment of ISARC at the campus of the National Seed Research and Training Center (NSRTC) in Varanasi.

- The Cabinet had also approved the establishment of the ISARC and the operation of IRRI in India.
- Subsequently, the Memorandum of Agreement was signed in August 2017 between the DA&FW and IRRI. .
- The agreement was for 5 years from 2017-22 with a provision to extend for another 5 years subject to both sides mutually agreeing for the same.
- **ISARC is the first and biggest research Centre of the IRRI across the world outside Philippines.**
- Since most rice varieties are high in GI and most of the Indians consume rice, the popularization of low GI rice varieties will reduce or even reverse India's increasing trend of diabetes.