

## ICRISAT: UPHOLDING COMMITMENT TOWARDS CLIMATE-RESPONSIBLE AGRICULTURE

### *PM kick-starts 50<sup>th</sup> Anniversary Celebrations of ICRISAT*

(Ministry of Agriculture)

February 11, 2022

*“In these five decades, you have helped the agriculture sector in a large part of the world, including India. Your research and technology have made farming easy and sustainable in difficult situations.”<sup>1</sup>*

**-Prime Minister Narendra Modi**

Prime Minister Narendra Modi visited the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) campus in Patancheru, Hyderabad on 5 February 2022 and kick-started the 50th Anniversary celebrations of ICRISAT. The Prime Minister also inaugurated ICRISAT’s Climate Change Research Facility on Plant Protection and ICRISAT’s Rapid Generation Advancement Facility, which are dedicated to the smallholder farmers of Asia and sub-Saharan Africa. The Prime Minister lauded ICRISAT for their

contribution in helping agriculture in a large part of the world, including India. He appreciated the contribution of ICRISAT in water and soil management, improvement in crop variety, on-farm diversity and livestock integration. He also praised their holistic approach in integrating farmers with their markets.<sup>2</sup>

The Prime Minister highlighted that the worst affected by climate change are the people on the last rung of development with little resources. He reiterated India’s request to the world to pay special attention to climate changes. He talked of **LIFE - Lifestyle for Environment; P3 - Pro planet people movements** and **India’s net zero target by 2070.**



<sup>1</sup>[PM’s address at the launch of 50th Anniversary celebrations of ICRISAT in Hyderabad, Telangana | Prime Minister of India \(pmindia.gov.in\)](https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=1795778)

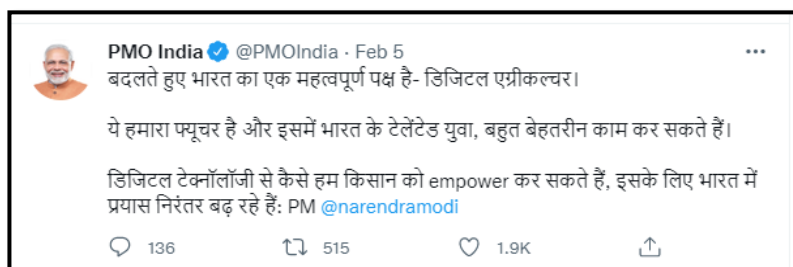
<sup>2</sup><https://www.pib.gov.in/PressReleaseDetail.aspx?PRID=1795778>

## Introduction: ICRISAT

[International Crops Research Institute for the Semi-Arid Tropics \(ICRISAT\)](#) is a non-profit, non-political organization that conducts agricultural research for development in Asia and sub-Saharan Africa with a wide array of partners throughout the world.<sup>3</sup> It is headquartered in Hyderabad, Telangana, India, with offices in Mali, Nigeria, Niger, Kenya, Malawi, Ethiopia, Mozambique and Zimbabwe.

By bringing scientific and evidence-based robust solutions, ICRISAT and its [partners](#) help empower the people to overcome the following major issues:

- **[Poverty and Hunger](#)**: Creating long-term solutions by helping people grow their own crops, making farming profitable, enabling farming technologies and techniques, better linkages to markets to sell, helping build new agri-businesses<sup>4</sup>
- **[Malnutrition](#)**: Bringing highly nutritious foods that are rich in iron, zinc, calcium and proteins into the farms<sup>5</sup>
- **[Environmental Degradation](#)**: Working with rural communities to intensify their production in ways that combats degradation of the environment<sup>6</sup>
- **[Empowering Women](#)**: Providing rural women training, making available affordable processing equipment and connecting women to credit facilities and markets, helping them set-up agribusiness ventures<sup>7</sup>
- **[Climate Change](#)**: Finding solutions to help communities cope with dry land stresses, understanding the impact of dry land stresses, undertaking crop simulation models, developing value chains for crops, better farm management, providing climate modeling and decision making tools<sup>8</sup>
- **[Digital Agriculture](#)**: Delivering targeted and timely information to farmers, leading to better, faster and cheaper delivery through digital technology.<sup>9</sup>



<sup>3</sup>[1 India and ICRISAT English scr.pdf](#)

<sup>4</sup>[Overcoming poverty & hunger – ICRISAT](#)

<sup>5</sup>[Reducing malnutrition – ICRISAT](#)

<sup>6</sup>[Preventing environmental degradation – ICRISAT](#)

<sup>7</sup>[Empowering women – ICRISAT](#)

<sup>8</sup>[Coping with climate change – ICRISAT](#)

<sup>9</sup>[Digital Agriculture: Pathway to Prosperity – ICRISAT](#)

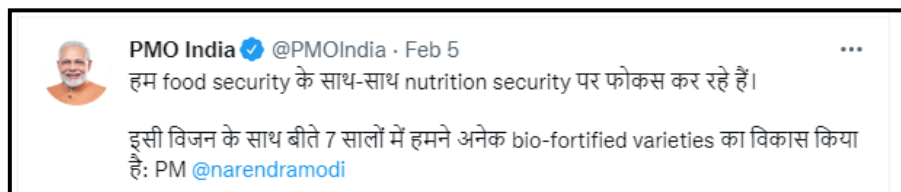
## ICRISAT in India

A strong national research capacity and skilled scientific community made India the ideal location for ICRISAT's headquarters. The [Indian Council of Agricultural Research \(ICAR\)](#) was also keen to have an international agricultural research centre in the country to complement its capacities and partner with it in improving agriculture. Further, many of India's poorest people live in the country's semi-arid tropical region.<sup>10</sup>

Keeping the above aspects in mind, a Memorandum of Understanding was signed between the Government of India (GoI) and Consultative Group for International Agricultural Research (CGIAR) on 28 March 1972. Over the years, India has been a steady supporter of ICRISAT through its membership in the [CGIAR](#). In 2013, India made a strong investment of approximately USD 6.7 million towards ICRISAT's research activities.<sup>11</sup>

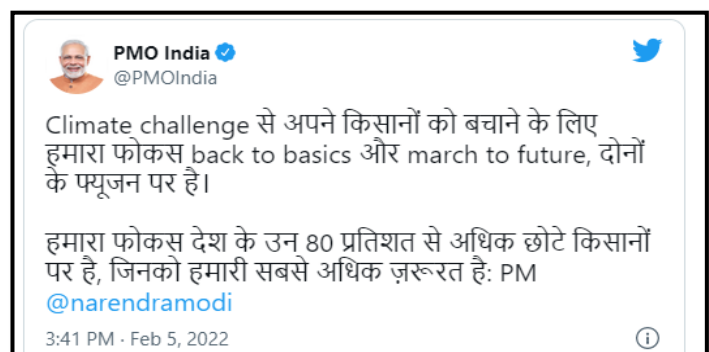
ICRISAT and its partners have developed a **four-pronged science based-strategy to tackle poverty, drought and land degradation**.<sup>12</sup>

1. Growing drought-tolerant and climate-resilient crops
2. Action to replace affected crops with those that are more drought-tolerant.
3. Efficient management of natural resources
4. Empowering stakeholders through capacity building, enabling rural institutions and formulating policies



## Semi-Arid Tropics in India

**Semi-Arid Tropics (SAT)** cover 6.5 million square kilometres of land in 55 countries, inhabited by over 2 billion people, 644 million of them being the poorest of the poor.<sup>13</sup> These regions suffer low-to-medium rainfall, lack of irrigation and have poor soils. The SAT is the largest region in India with 70 per



<sup>10</sup>[India | EXPLOREit@ICRISAT](#)

<sup>11</sup>[31 India and ICRISAT English scr.pdf](#)

<sup>12</sup>[India | EXPLOREit@ICRISAT](#)

<sup>13</sup>[India | EXPLOREit@ICRISAT](#)

cent of the country's total cropped area. This region supports 40 per cent of the population and contributes about 45 per cent to total food supplies.<sup>14</sup> Most of India's poorest people live in the country's semi-arid tropical region which suffers from shortages of water and recurrent droughts. As a result, agriculture in a large part of the semi-arid areas still remains under low productivity; and low output conditions aggravate poverty. **Sorghum, millet, cowpea, chickpea, pigeonpea and groundnut are among the vital crops** that feed the people living in the semi-arid tropics.<sup>15</sup>

### ICRISAT - Areas of Specialization in India<sup>16</sup>

Vigorous collaboration between the Indian National Agricultural Research and Extension System (NARES) and ICRISAT is focused on four major areas:

- (1) Genetic resources conservation, evaluation and utilization;
- (2) Enhancing crop productivity and sustainability under both favourable and dryland stress environments;
- (3) Improving systems productivity and livelihood for fragile and dry environments including socio-economic and policy options; and
- (4) Strengthening research for development farmer linkages.

### Projects in India<sup>17</sup>



Source: [India| EXPLOREit@ICRISAT](mailto:India_EXPLOREit@ICRISAT)

<sup>14</sup>[RA 00381.pdf \(icrisat.org\)](#)

<sup>15</sup>[Biotechnology in the Semi-Arid Tropics \(icrisat.org\)](#)

<sup>16</sup>[31 India and ICRISAT English scr.pdf](#)

<sup>17</sup>[India| EXPLOREit@ICRISAT](mailto:India_EXPLOREit@ICRISAT)

ICRISAT is currently implementing over 67 projects generously supported by the Government of India, State governments, public-private foundations and institutions, which are being carried out in collaboration with the Indian national agricultural research and extension system (NARES).

- **Nutritional interventions to improve dietary diversity** in the tribal households of Telangana
- **Community based fodder management** options and innovative methods to control stray cattle and wild animals in targeted rice fallow areas (TRFAs) in Odisha and Chattisgarh
- Scaling-up of spent malt activity in five new locations and ongoing four locations; and safe drinking water for the selected villages
- Improving **chickpea** adaptation to environmental challenges in Australia and India
- Improving dietary diversity through introduction of **Nutri-Food basket in tribal households** of Adilabad, Mancherial, Komaram Bheem-Asifabad Districts of Telangana - Transitioning tribal households from nutrient deficient diets to diverse nutritional
- Sustainable agricultural development through **value addition and linking tribal farmers to markets** in Adilabad district of Telangana - **transitioning tribal farmers from traditional to modern agriculture**
- Scaling-up and popularization of **high yielding pigeon pea hybrids** for enhancing productivity of small and marginal farmers of Maharashtra, Karnataka and Odisha states of India
- Providing technical assistance to Government of Andhra Pradesh for baseline survey in Rayalaseema zone under RythuKosam project



For more projects, [Click Here.](#)



Groundnut cultivation in Andhra Pradesh

### Major Impacts of India-ICRISAT Partnership<sup>18</sup>

- From 1976-2014, 225 improved varieties of crops have been released by Indian partners (using breeding material from ICRISAT), raising production and incomes of millions of smallholder farmers.

<sup>18</sup>[31 India and ICRISAT English scr.pdf](#)



Young school children in rural India eating millet chappatis



Rajasthan farmers grow pigeonpea and cook it into high-protein dal

Source: [31 India and ICRISAT English scr.pdf](#)

- 41,796 national germplasm accessions have been repatriated from ICRISAT to the [National Bureau of Plant Genetic Resources \(NBPGR\)](#).
- 43 high-yielding chickpea varieties have been developed and released in India through ICRISAT partnership with State Agricultural Universities in India, leading to a chickpea revolution in Andhra Pradesh, where production increased eight-fold in the past 15 years.
- ICRISAT and Indian national programme scientists developed pigeon pea hybrids (first in any grain legume in the world) based on cytoplasmic-nuclear male sterility (CMS) technology.
- Of the more than 30 sorghum hybrids cultivated during the rainy season on three million ha in India, 55% are based on ICRISAT-bred parental lines or derivatives.
- About 6.0 million ha area in India is under pearl millet hybrid cultivation, and 60% of about 100 pearl millet hybrids developed since 2000 by the NARS and seed companies in India are based on ICRISAT-bred material.

For more, [Click Here](#).

#### References:

- [www.icrisat.org](http://www.icrisat.org)
- [31 India and ICRISAT English scr.pdf](#)
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