



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



RESEARCH
PROGRAM ON
Water, Land and
Ecosystems



For more information contact:

Nitasha Nair (n.nair@cgiar.org, mobile: +91 9724310654)

World's First Solar Irrigation Cooperative Receives Award Unique concept in Gujarat felicitated by the state government

May 9, 2016, Anand – Chief Minister of Gujarat, Smt Anandiben Patel awarded a certificate of appreciation to the Dhundi Saur Urja Utpadak Sahakari Mandali (DSUUSM) at the launch of the 2016 edition of *Krushi Mahotsav* or Agriculture Festival in Anand, Gujarat today.

The *Mandali* which holds the distinction of being the world's first solar Irrigation cooperative is being felicitated for providing to its members risk-free climate smart income from energy sales to the local DISCOM. The idea of Solar Pump Irrigators' Cooperative Enterprise (SPICE) was developed by the IWMI-Tata Water Policy Research Program (ITP), a partnership between the International Water Management Institute (IWMI), and the Tata Trusts with support from the CGIAR's Research Program on Climate Change, Agriculture and Food Security (CCAFS). IWMI had successfully piloted a single farmer SPaRC (Solar Power as Remunerative Crop) model in Anand district last year in which the farmer's solar irrigation pump was connected to the electricity grid presenting him with the choice to sell the surplus power generated when the fields are not being irrigated. The idea has now been further refined and institutionalized with the formation of Dhundi Solar Pump Irrigators' Cooperative Enterprise.

Speaking at the occasion, Dr Tushaar Shah, from IWMI said, "We are excited that the government is recognizing the potential of the solar irrigation cooperative model and supporting us. This concept will not only benefit the farmers by supplementing their incomes but will also benefit the environment by incentivizing farmers to conserve groundwater and instead sell the surplus power generated. If we solarize India's 20 million grid-connected electric pumps that farmers currently use to pump groundwater, it would save the country around Rs 60,000 - 70,000 crores of farm power subsidy as well."

The solar cooperative, DSUUSM, was formed earlier this year around mid-February by bringing together six small vegetable farmers in the village of Dhundi in Gujarat. Each farmer installed a solar irrigation pump in their fields by contributing a partial amount with IWMI pitching in the rest. The solar pumps were connected to the power grid of the state DISCOM, Madhya Gujarat Vij Company Limited (MGVCL) and a 25 year power purchase agreement was signed recently which allows the farmers to sell back the surplus energy at a rate of Rs 4.63 per kWh equivalent of solar energy. "Once full benefits of the Dhundi pattern of solar irrigation are recognized, we expect that the government and DISCOMs will be willing to replicate it and offer farmers a more remunerative price for their surplus energy sales." Said Dr Shah. The current installed capacity of the Dhundi solar cooperative is 56.4 kW and the IWMI team plans to expand it to 100 kWp over the next few months.



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



RESEARCH
PROGRAM ON
Water, Land and
Ecosystems



Pravinbhai Parmar, the secretary of the Dhundi Solar Cooperative who received the award said, “I am proud that our *Mandali* has received this prestigious award from the Chief Minister and I am excited to be a part of this project.”

With Indian government’s goal of achieving 100 GW of solar capacity by 2022, the SPICE model offers a potential way of capturing the power of the sun and moving closer to the target.

Additional information

- SPaRC’ing a Revolution – A 5 min introductory video - <https://goo.gl/s5yhwr>
- The **International Water Management Institute (IWMI)** is a non-profit, scientific research organization focusing on the sustainable use of water and land resources in developing countries. It is headquartered in Colombo, Sri Lanka, with regional offices across Asia and Africa. IWMI works in partnership with governments, civil society and the private sector to develop scalable agricultural water management solutions that have a real impact on poverty reduction, food security and ecosystem health.
www.iwmi.org
- **The IWMI-Tata Water Policy Program (ITP)** is a partnership between the International Water Management Institute (IWMI), Colombo and The Tata Trusts, Mumbai. The program presents new perspectives and practical solutions derived from the wealth of research done in India on water resource management. Its objective is to help policy makers at the central, state and local levels address their water challenges – in areas such as sustainable groundwater management, water scarcity, and rural poverty – by translating research findings into practical policy recommendations. Through this program, IWMI collaborates with a range of partners across India to identify, analyze and document relevant water-management approaches and current practices.
- **The CGIAR Research Program on Water, Land and Ecosystems (WLE)** combines the resources of 11 CGIAR Centers, the Food and Agriculture Organization of the United Nations (FAO) and numerous national, regional and international partners to provide an integrated approach to natural resource management research. WLE promotes a new approach to sustainable intensification in which a healthy functioning ecosystem is seen as a prerequisite to agricultural development, resilience of food systems and well-being. This program is led by the International Water Management Institute (IWMI), a member of the CGIAR Consortium and is supported by CGIAR, a global research partnership for a food-secure future. wle.cgiar.org
- **The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)**, led by the International Center for Tropical Agriculture (CIAT), brings together the world’s best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important



RESEARCH PROGRAM ON
**Climate Change,
Agriculture and
Food Security**



RESEARCH
PROGRAM ON
**Water, Land and
Ecosystems**



interactions, synergies and tradeoffs between climate change, agriculture and food security. www.ccafs.cgiar.org.