Research Partners

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Title: **Fulfilling the promise of solar irrigation in India**

Date: 23rd February 2023

Time: 2-3.30 pm

Venue: Board Room, India Habitat Centre

Background

Solar irrigation has the potential to provide energy and water security to farmers, enhance productivity and incomes, and decarbonize the agricultural sector – enabling countries to achieve some of the UN's sustainable development goals (SDGs). In 2019, India launched one of the largest solar irrigation initiatives in the world, called the PM-KUSUM scheme. The scheme aims to provide clean energy to 38 lakh (3.8 million) farmers and contribute towards India's updated nationally determined contribution (NDC) target of achieving 50% of installed power generation capacity from non-fossil fuel sources by 2030.

Despite the scheme's immense potential, its rollout has been slow so far due to several reasons, such as the disruption caused by the covid-19 pandemic, under-priced agricultural electricity supply and financial constraints faced by farmers, private developers and state governments. In addition, there are complicated interconnections between water, energy and food —often called the "water–energy–food nexus" or WEF nexus — where interventions in one area can cause unexpected impacts on another, as well as on ecosystems, requiring careful implementation of the scheme. The recent extension of the timeline of the PM-KUSUM scheme until 2026 provides an opportunity to examine what has worked and what hasn't and deliberate on the optimum path forward for solar irrigation.

In order to achieve the socio-economic objectives of solar irrigation schemes, a GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) supported research consortium has been working to support state governments in sustainably implementing the scheme, in cooperation with India's Ministry for New and Renewable Energy (MNRE). The consortium consists of IISD (International Institute of Sustainable Development), TERI (The Energy and Resources Institute), CEEW (Council on Energy, Environment and Water) and CUTS (Consumer Unity & Trust Society). The consortium is planning to launch a new guidebook on decentralized solar plants in the coming months along with a white paper on agrivoltaics, to complement its previous guidebook which focused on solar pumps.

The research consortium is hosting a thematic track***, 'Fulfilling the promise of solar irrigation in India',*** at the World Sustainable Development Summit (WSDS), to provide a platform for experts and thought leaders to deliberate and discuss ways in which solar irrigation can be scaled up in India in the coming years. The main objectives of the track will be to share insights from recent research on solar irrigation, identify challenges where there is a need for more research, forge collaborations between research organizations and donors, and provide recommendations to policymakers.

About the World Sustainable Development Summit (WSDS)

The World Sustainable Development Summit (WSDS) is the annual flagship Track II initiative organized by The Energy and Resources Institute (TERI). Instituted in 2001, the Summit series has a legacy of over two decades for making 'sustainable development' a globally shared goal. The only independently convened international Summit on sustainable development and environment, based in the Global South, WSDS strives to provide long-term solutions for the benefit of global communities by assembling the world's most enlightened leaders and thinkers on a single platform. The 22nd edition of the annual flagship event is being held from 22-24 February 2023 in New Delhi. The Summit deliberations will focus on the umbrella theme: Mainstreaming Sustainable Development and Climate Resilience for Collective Action.