

On behalf of:



Federal Ministry
for the Environment, Climate Action,
Nature Conservation and Nuclear Safety

IKI



INTERNATIONAL
CLIMATE
INITIATIVE

of the Federal Republic of Germany

giz

Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

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International Water
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Fraunhofer
ISE

Scope of Technical Assistance Call for RE- Developer, Institutional & PM-KUSUM Projects - IGCA

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Scope of Call

The Indo-German Cooperation on Agrivoltaics (IGCA) is a consortium comprising the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the International Water Management Institute (IWMI) India and the Fraunhofer Institute for Solar Energy Systems (ISE). The project is implemented on behalf of the International Climate Initiative (IKI) of the Federal Government of Germany. Within the Federal Government, the IKI is anchored in the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety (BMUKN). The project aims to support the upscaling of agrivoltaics through the development and field testing of viable business models, financing mechanisms, capacity development and policy alignment.

A key component of IGCA is the facilitation and implementation of agrivoltaics projects on the ground across diverse ecological regions of India (focusing on Gujarat, Madhya Pradesh, Maharashtra, Odisha, Assam and beyond). This is done in close collaboration and coordination with the Ministry of New and Renewable Energy (MNRE), Government of India. Through this call, IGCA invites proposals from RE-Developers, institutional bodies, research institutes and PM-KUSUM scheme awardees for technical assistance on existing and planned agrivoltaics projects. Please refer to another call for a consultancy service for organizations thinking about expanding into agrivoltaics without a currently planned project [here](#).

The objective of the technical assistance is to support projects in the design and optimization stage. As the originator of the idea of agrivoltaics, Fraunhofer ISE has more than 14 years of experience and has worked on over 100 projects in more than 30 countries. Fraunhofer ISE has developed design tools based on light simulation and crop yield simulation models. These tools, along with Fraunhofer ISE's extensive project experience, will be used to help the awardees design and optimize their agrivoltaic systems as detailed below.

Technical assistance is open to projects with diverse technical, financial and institutional designs. Priority will be given to: (a) women-led agrivoltaics projects; (b) innovative business models that demonstrate high scaling potential; and (c) projects located in geographies of high policy priority.

Applicants will be invited to submit brief proposals via an online form, including the applicant's background and the proposed project development plan, including the current technical, agricultural, financial and institutional design. Proposals will be reviewed through a two-stage selection process: (1) shortlisting of online proposals by an IGCA internal review committee; and (2) submission and presentation of documentation and detailed proposals by shortlisted applicants to the IGCA steering committee for final selection and award.

Key Dates:

Initial Announcement	25 th August 2026
Online Applications Open	21 st October 2026
Information Sessions	November 2026
Online Application Deadline	31 st January 2027

Shortlisted Applicants Announced	March 2027
Final Round of Presentations	April 2027
Technical Assistance Awards Announced	April 2027

1.1 Eligibility

The call is designed to support the following actors:

- RE-Developers,
- Institutional bodies
- Research institutes
- PM-KUSUM scheme awardees;

Additionally, applicants should have:

An existing solar installation with a clear plan for expansion / enhancement to agrivoltaics

OR

A confirmed plan to establish an agrivoltaic system within twelve months of award.

OR

Further, if the abovementioned categories or eligibility criteria do not fit your description, please refer to another call for a consultancy service for organizations thinking about expanding into agrivoltaics without a currently planned project [here](#).

1.2 Expectations from awardees

As the call is part of the IGCA project, the awardee is also expected to coordinate with the IGCA team to fulfil the goals of the project.

- Designate a focal point for coordination with the IGCA consortium and technical experts.
- Ensure meaningful farmer participation and collaboration throughout project planning, design and implementation.
- Ensure agricultural production under agrivoltaic systems.
- Support IGCA team to track farm-level outcomes such as income, output and costs.
- Support IGCA team to document operational experiences, challenges, and lessons learned.
- Contribute to knowledge-sharing and dissemination activities facilitated by IGCA.

1.3 Scope of potential support in brief

The primary objective of this call is for Fraunhofer ISE to provide technical assistance in navigating through the process flow for developing and implementing currently planned commercial Agri-PV projects to developers, institutional bodies, research institutes, PM-KUSUM awardees and state nodal agencies in India.

Please refer to another call for a consultancy service for organizations thinking about expanding into agrivoltaics without a currently planned project [here](#).

Fraunhofer ISE can provide the services listed below. The exact nature and type of services for a specific project from this will be decided with the awardees in

one-to-one consultations. This will depend on the needs of the awardees, implementation timeline, and available resources.

- **Site-specific feasibility consultation:**

Fraunhofer ISE will help with selection of optimal implementation location by evaluating regional solar irradiation and local agricultural constraints in consultation with local stakeholders.

- **Agriculture analysis or crop selection for retrofitting agrivoltaics:**

While the crops common to the climate zones in India may have established cropping patterns, further assessment will be made to evaluate the feasibility and suitability of these patterns in relation to their integration into agrivoltaics. Existing patterns may therefore be directly integrated or replaced or optimized to be better incorporated, or new patterns could be developed. Agricultural analysis will be carried out by Fraunhofer ISE in consultation with regional agricultural experts from local universities and participating farmers wherever available and possible within the implementation timeframe.

- **Light simulation, agriculture yield prognosis & system design:**

Fraunhofer ISE has developed appropriate methods and tools for the irradiance simulation based on the raytracing software Bifacial-Radiance to estimate the PV yield as well as the light distribution below PV modules/ between PV module rows. Additionally, Fraunhofer ISE has developed appropriate tools using crop yield simulation models to be able to approximate the effect on yield for a few specific crops in an agrivoltaic system based on data collected globally. Fraunhofer ISE will simulate the system design parameters for these crops to evaluate energy and agricultural yield changes to develop the framework conditions for the optimized technical design. Wherever crop yield simulations are not possible, literature meta-analysis will be conducted to help design the optimum system.

- **Project implementation consultation:**

The conceptual design is a pre-basic design optimizing the key system design parameters. It doesn't have the aim to fulfil engineering and construction planning, nor does it replace such. It serves as a foundation for further planning. The conceptual designs will help the implementing local partner or EPC organization implementing the system to develop the structural designs and standard mandates for construction of any kind of solar system. Fraunhofer ISE will support the local EPC and/or the awardee wherever necessary with agrivoltaics related novelties based on its experience of implementing agrivoltaics systems globally.

- **Monitoring & sensor layout concepts:**

One of the key goals of the project is to develop an enabling environment for agrivoltaics in India. Hence wherever possible, monitoring of the

installed system will be carried out to document the learnings for further uptake. This will be carried out in close consultation with the implementation partners wherever possible. Fraunhofer ISE will develop a standardized agrivoltaics monitoring methodology. Relevant parameters of the microclimate will be recorded and phenological development, yield and quality of the plants will be investigated along with energy generation tracking. Local agricultural research institutes around the country will play a key role in the operation phase with data collection and analysis along with Fraunhofer ISE. The monitored data will be compiled and visualized on a dashboard hosted possibly by the Centre of Excellence or a similar institute in the Indian agrivoltaics ecosystem.

- **Techno-Economic evaluation & optimization:**

Fraunhofer ISE will develop the methodology and conduct economic analysis of the implemented system wherever possible. Electricity and crop yield will be analyzed comparatively to analyze the economic viability of not only the implemented system but also to identify the optimum and viable system configuration for India in the different contexts of grid connection and type of crop culture considered providing inputs for development of replicable sustainable business and financial models.

- **Social analysis:**

To ensure successful design and implementation of agrivoltaics projects, human-centered approaches taking into consideration local, cultural, and historical contexts as well as socio-economic and -demographic structures are essential. Active engagement with relevant stakeholders from planning, decision-making to implementation and operation phases is relevant for providing information, enabling feedback and discussions, thereby increasing acceptance of technologies. Fraunhofer ISE will conduct a social analysis for the implemented system wherever required and possible. To examine changes in socioeconomic, social, and gender-related aspects due to project activities, two surveys will be conducted, one before installation, one after installation.

- **Energy system analysis:**

Fraunhofer ISE has developed approaches using commercially available software such as iHOGA and Polysun to integrate and optimize the planned agrivoltaics system into a farm's energy system. Energy demand of the farm or the surrounding region will be analyzed in regard to system design and/or type of grid connection based on inputs from local partners wherever required and possible. The goal of this task is to not only analyze systems implemented for their energy distribution but also to analyse different models to identify suitable framework conditions and business models for uptake of agrivoltaics in India.

- **Water and soil management assessment:**

Fraunhofer ISE will prepare a water balance based on local rainfall and predicted crop water requirements to assess the water management for the implemented system wherever required and possible. The water saving impact of the designed open system because of the shadowing and improved microclimate will also be evaluated.

As mentioned previously, the exact nature and type of services for a specific project from this list will be decided with the awardees in one-to-one consultations depending on the needs of the awardees, implementation timeline and available resources.

1.4 Selection Process

The selection process will involve two stages:

- Stage 1** Submission of a brief project proposal via an online form here: [IGCA Technical Assistance Award - Call for proposals – Fill out form](#) until 31st January 2027
- Stage 2** Submission and presentation of documentation and detailed proposals by shortlisted applicants to the IGCA steering committee for final selection and award

1.5 Required information from applicants

IGCA team requests the following information wherever available from the applicants to help evaluate their proposals in the online form referenced above. Reference documents wherever available will be requested supporting the online form from shortlisted applicants before the final presentation to the steering committee.

- Project Scope & Location: Information on specific geographical region, state, agro-climatic zone and land area (hectares)
- Agricultural Parameters: Target crop types planned for cultivation under or between the PV modules, current farming practices, and information on irrigation infrastructure
- Grid & Electrical Integration: Details regarding grid connection availability and proximity to grid, voltage levels, power evacuation plans, and whether energy storage (BESS) or captive consumption is required
- Energy Parameters: Information on total target capacity (MWp) and preferred system design or constraints for technical design
- Project Timeline & Milestones: Expected project phases, installation timeline, and commercial operation date (COD) goals.
- Regulatory & Permitting Status: Current land-ownership status and applicable state or central policy incentives (e.g., PM-KUSUM integration)
- Social dimensions: Brief note on partners or stakeholders involved in the project (for eg: role and coordination plan with farmers, O&M plan, involvement of marginalized groups or role of woman farmers, etc.)

- **Project Highlights:** Brief note on the project motivation and value additions if any (for eg: innovative business or financing models, generation of hydrogen, biogas, carbon credits, etc.)

The proposal will be evaluated based on the selection criteria described in 1.6 below.

1.6 Project selection criteria

The proposals will be evaluated based on criteria and weights enlisted below:

Criteria	Description	Weight
Project Scope and Location	Geographical region and climate zone	15%
Technical Design	Agricultural, energy and grid & electrical integration parameters	25%
Project design	Project timeline and milestones, regulatory & permitting status	25%
Social Dimensions	Farmers involvement and collaboration plan; community participation; O&M mechanisms; gender and social inclusion	15%
Project Highlights	Innovations in financing sources and business models and value additions	20%

1.7 Contact details:

In case of any question or required guidance, please contact:

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