

Terms of reference (ToR) for the procurement of services below the EU threshold

CONFIDENTIAL

Technical Support for Research, Knowledge Dissemination, Policy Support and Institutional Strengthening of the Centre of Excellence on Agrivoltaics in India

Project number/
cost centre:
G-012455-003
12455990000
Tender number
7000023346

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0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
FK	Expert
FKT	Expert days
KZFK	Short-term expert
ToRs	Terms of reference

1. Context

As an emerging economy, India's electricity demand is increasing rapidly. To reduce greenhouse gas emissions, the Indian government has set an ambitious target of 500 GW of installed non-fossil fuel-based capacity by 2030, with around 300 GW coming from solar energy alone. Agrivoltaics, the simultaneous use of arable land for agriculture and electricity generation through solar photovoltaics (PV), can play a key role in reaching this target. This approach offers the potential to mobilise additional land for the expansion of solar-based power generation while ensuring food security and avoiding potential land conflicts. Through the expansion of agrivoltaics in India, farmers and rural communities will be empowered to play an active role in India's energy transition and benefit through new employment opportunities, increased and more diversified incomes. Their resilience to climate impacts is enhanced through crop protection, and improved microclimate and water regulation. The main identified barriers to the uptake of agrivoltaics in India so far are the lack of scientific data on India-specific contexts, awareness, capacities, suitable business models and financing instruments as well as clear legal and policy frameworks.

About Indo-German Cooperation Agrivoltaics (IGCA) project

The Indo-German Cooperation on Agrivoltaics Project (IGCA) is a consortium comprised of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH as a lead agency, the International Water Management Institute (IWMI) India and Fraunhofer Institute for Solar Energy Systems (ISE) as implementing partners. The consortium will work on the identified barriers above. The project aims to accelerate the adoption and scaling of agrivoltaics across India, creating sustainable benefits for rural communities while ensuring food security is maintained. The project will showcase the successful deployment of agrivoltaics in different regional and socio-economic contexts, inform and capacitate farmers, policy makers and solar developers, and support the establishment of new financing mechanisms as well as an enabling legal and policy framework for agrivoltaics.

The Centre of Excellence (CoE) for AgriPV is jointly led by ICAR-Indian Agriculture Research Institute (IARI) and the National Institute of Solar Energy (NISE), in agreement with Ministry of New and Renewable Energy (MNRE). The CoE focuses on optimizing land use, enhancing energy efficiency, increasing agricultural productivity, and promoting sustainable rural development through AgriPV systems. It also works towards developing a crop productivity matrix specific to AgriPV systems and establishing a robust framework for AgriPV implementation in India. CoE conducts applied research aiming to support the large-scale adoption of AgriPV systems by generating reliable research evidence, building national knowledge and technical capacity, supporting awareness initiatives, developing technical and agronomic standards/guidelines, and providing clear, data-based inputs for policymaking.

The objective of this assignment is to support the Centre of Excellence (CoE) on AgriPV for advancing research, innovation, technical excellence, and institutional capacity to accelerate the sustainable adoption of AgriPV in India.

Through close collaboration with **MNRE, ICAR, the Ministry of Agriculture & Farmers' Welfare (MoA&FW), GIZ, Fraunhofer ISE, IWMI**, state institutions, and other key stakeholders, the assignment will generate India-specific scientific evidence, strengthen research and monitoring across AgriPV demonstration sites, develop technical standards, guidelines, and policy recommendations, build national and regional capacities, and facilitate knowledge dissemination and institutional coordination. The assignment will also support the establishment and strengthening of Regional Centres of Excellence (R-CoEs) on AgriPV, enabling a coordinated national ecosystem for research, capacity building, policy support, and technology transfer. Collectively, these efforts will accelerate the evidence-based,

sustainable, and large-scale adoption of AgriPV across diverse agro-climatic regions of India, **with a particular focus on the states of Madhya Pradesh, Maharashtra, Gujarat and 3 other states (to be finalised in consultation with MNRE)**, contributing to enhanced agricultural productivity, renewable energy generation, climate resilience, and sustainable rural development.

2. Tasks to be performed by the contractor

The contractor is responsible for providing the following services:

This collaboration will be structured around four interconnected Work Packages (WPs), each with specific objectives, key deliverables, and indicative timelines.

Work Package 1: Advanced Research & System Optimization across IGCA AgriPV Demonstration Sites

- **Objective:** To generate high-quality, India-specific data and insights on AgriPV system performance, crop suitability, and synergistic benefits through research and development across **selected existing AgriPV demonstration and upcoming AgriPV systems to be established under the Indo-German Cooperation on Agrivoltaics (IGCA) project**, including the existing 100 kWp AgriPV system and additional AgriPV installations across different agro-climatic zones in India, with a focus on the states of Madhya Pradesh, Maharashtra, Gujarat and 3 other states (to be finalised in consultation with MNRE). In total, the consultant will be required to assess and analyse data from **22 sites**. Under this work package, the consultant required to work in coordination with CoE AgriPV scientist, Fraunhofer and IWMI for all the activities and deliverables, as required.
- **Activities:**
 - **1.1 Crop Selection & Performance Monitoring (Multi-site, Multi-season):** Assess crop performance across selected IGCA AgriPV sites representing diverse agro-climatic conditions, system configurations, and multiple cropping seasons. Analyse the data and information on crop growth, physiological parameters, biomass, and yield under varying shading regimes, and compare with open-field control plots. Conduct integrated seasonal assessments of agricultural productivity, energy generation, water use efficiency, soil health, nutrient dynamics, and microclimate (temperature, humidity, radiation, and light spectrum), economic performance, social and environmental impacts to identify synergies, trade-offs, and performance thresholds across crops, regions, and AgriPV system designs.
 - **1.2 AgriPV System Design & Operational Optimization:** Analyze, optimize and synthesize insights on AgriPV system parameters such as panel orientation, tilt, height, spacing, tracking options, and layout, across sites to balance agricultural productivity and energy yield. Also perform the energy yield calculations using softwares such as PVSyst, SAM, RETScreen, etc. (or similar ICT available at NISE/IARI)
 - **1.3 Refinement of Crop Productivity Matrix:** Integrate empirical evidence from IGCA demonstration sites, and insights from existing national and international AgriPV systems, to continuously refine and expand a

comprehensive Crop Productivity and Suitability Matrix for AgriPV in India. The matrix will be developed for priority agro-climatic zones, for the focus states of Madhya Pradesh, Maharashtra, Gujarat and 3 other states (to be finalised in consultation with MNRE), and will indicate:

- Suitable crop types
- Expected yields under AgriPV
- Recommended system configurations and shading levels

1.4. Scientific monitoring and evaluation (M&E): Close cooperation with Fraunhofer Institute for Energy Systems (ISE), Freiburg Germany on developing scientific monitoring and evaluation (M&E) framework of agrivoltaics projects to assess and document their technical, agricultural, and socio-economic impacts as well as lessons learned.

- **Key Deliverables:**

- **1.1 Seasonal and Annual Technical Assessment Reports:**
 - **Total Six seasonal assessment reports: Two seasonal performance assessment reports per year** (or as per the number of cropping seasons across the selected sites), covering analysis of data from **22 IGCA and other relevant AgriPV sites**.
 - **Three consolidated annual technical report** integrating seasonal findings, comparative analysis with open-field controls, and recommendations on crop performance, agricultural productivity, energy generation, water use efficiency, soil health, microclimate, and optimized AgriPV configurations across different agro-climatic zones.
- **1.2 Technical Guidelines for AgriPV System Design and Optimization:** Develop and submit a comprehensive Technical Guidelines for AgriPV Installations document, based on the evaluation of 22 IGCA AgriPV systems and energy yield simulations using PVSyst, SAM, RETScreen, or equivalent tools. The guidelines shall provide evidence-based recommendations on optimal panel orientation, tilt, height, spacing, tracking systems, and layout, tailored to different crop types, agro-climatic zones, and system configurations, to maximize agricultural productivity and solar energy generation. The guidelines shall cover the focus states identified under the project, with additional states finalized in consultation with MNRE.
- **1.3 Crop Productivity & Suitability Matrix**
Develop a validated Crop Productivity and Suitability Matrix covering at least six priority states (including Madhya Pradesh, Maharashtra, Gujarat, and three additional states to be finalized with MNRE), incorporating evidence from 22 IGCA demonstration sites and national/international case studies. The matrix shall provide recommendations on suitable crop types, expected yields under AgriPV, recommended system configurations, and optimal shading levels for different agro-climatic zones.

Work Package 2: Comprehensive Knowledge Dissemination & Outreach

- **Objective:** To widely disseminate research findings, best practices, and practical knowledge on AgriPV to a broad spectrum of stakeholders, leveraging the extensive ICAR & IARI network.
- **Activities:**
 - **2.1 National & Regional Workshops:** Organize and participate in national-level workshops and regional workshops (across relevant agro-climatic zones), targeting agricultural extension officers, solar developers, state government institutions, policymakers, practitioners and researchers.
 - **2.2 Training modules:** Support IWMI and GIZ in developing specialized training modules for diverse audiences, including farmers, practitioners and relevant researchers.
 - Integrating key aspects on basic understanding of AgriPV, types of AgriPV systems, crop suitability, installation processes, operation and maintenance, financials.
 - **2.3 Webinars Series:** Host a series of webinars on emerging topics in AgriPV, featuring national and international experts.
 - **2.4 Support to Delegation Visits and Knowledge Exchange (at IARI and NISE campuses):** Support for multiple delegation visits (during the course of the contract), including showcasing Agri-PV systems at IARI and providing technical information to visiting delegates.
 - **2.5 South-South Exchange & International Collaboration:** knowledge sharing with other relevant countries through bilateral meetings, webinars, communities of practice, or other forums to exchange experiences, innovations, and best practices in AgriPV, and explore opportunities for joint initiatives.
 - **2.6 Maintenance of CoE AgriPV website with content and knowledge materials**
 - **2.7 Coordinate and organize the annual review meetings of the CoE AgriPV,** in consultation with CoE (IARI and NISE), MNRE, ICAR, MoA&FW and IGCA, to review progress, discuss key learnings, and align future priorities.
- **Key Deliverables:**
 - **2.1** Conduct 3 National level workshops and 10 State level workshops.
 - **2.2** Coordinate with IARI and NISE scientists to compile and provide technical inputs for at least three (3) specialized AgriPV training modules developed by IWMI and GIZ. Review and validate technical content to ensure scientific accuracy, relevance to Indian conditions, and incorporation of lessons learned from IGCA demonstration sites.
 - **2.3** Conduct 12 Webinars, reaching a broad online audience, reaching energy and agriculture department at state level. Atleast 50 participants should join each of the webinar.

- **2.4** Provide technical coordination and support for at least four (4) high-level delegation visits per year (in total 12 over the course of the assignment) to the AgriPV demonstration system at IARI (and NISE, as required), including coordination with IARI and NISE, preparation of technical briefing materials, facilitation of site visits for the visiting senior Government of India, State Government, German Government, and other national and international delegations.
- **2.5** Coordinate with IARI and NISE for participation in at least 10 South-South knowledge exchange engagements (virtual mainly or in-person in Delhi), including bilateral meetings, webinars, or communities of practice. This shall include preparation of technical presentations, briefing materials, documentation of key discussions, and summary notes capturing lessons learned, best practices, and opportunities for future collaboration in Agrivoltaics.
- **2.6** Quarterly update reports, briefs, and other knowledge products for publication on the COE website ([CENTRE OF EXCELLENCE FOR AgriPV IN INDIA](#)).
- **2.7** Facilitate and participate in at least five (5) CoE AgriPV ministerial review meetings during the contract period, including preparation of meeting agendas, technical presentations, briefing materials, documentation of key discussions, action points, and follow-up recommendations in coordination with IARI, NISE, MNRE, and GIZ.

Work Package 3: Policy Support & Standardization

- **Objective:** To validate evidence-based policy recommendations and develop technical standards for AgriPV in India.
- **Activities:**
 - **3.1 Development of Technical Guidelines and Minimum Standards for AgriPV:** Develop a comprehensive AgriPV technical guidelines incorporating minimum technical and agronomic standards to ensure agricultural productivity, environmental sustainability, and social safeguards. Incorporate technical recommendations on system design, crop suitability, land use, environmental safeguards, operational requirements and linking with policy relevant inputs and recommendations. The final guidelines shall be submitted to the relevant Government of India ministries and institutions, including MNRE, ICAR, MoA&FW, and other relevant authorities.
 - **3.2 Technical Inputs for National and State AgriPV Policy Recommendations:** Provide evidence-based technical inputs, data analysis, and recommendations in coordination with ICAR, IARI and NISE to support MNRE, GIZ in the preparation of national and state AgriPV policy recommendations. Support policy consultations by synthesizing lessons learned from IGCA and other relevant demonstration sites, international best

practices, and emerging research to inform enabling policy and regulatory frameworks.

- **Key Deliverables:**

- **3.1** Develop 1 AgriPV Technical Guidelines document, including minimum technical and agronomic standards, and evidence-based recommendations on system design, agricultural performance, land use, environmental and social safeguards, and operational requirements. Including translations into at least 4 regional languages and accessible communication formats.
- **3.2** Technical inputs supporting the development of at least 3 national policy recommendation document and 5 state-level policy recommendations.

Work Package 4: Establishing & Strengthening Regional Centres of Excellence on AgriPV

Objective:

To leverage ICAR and IARI extensive national network of agricultural research institutions, State Agricultural Universities (SAUs), and extension centres to establish and strengthen **Regional Centres of Excellence (R-CoEs)** on AgriPV. These centres will act as regional hubs for research, demonstration, capacity building, and stakeholder engagement, ensuring localized expertise and sustainable adoption of AgriPV systems across diverse agro-climatic zones. One R-CoE has already been confirmed in Madhya Pradesh, while two R-CoEs needs to be identified and established during the course of the assignment.

Activities:

- **4.1 Institutional Mapping & Selection:** Identify and assess suitable host institutions, in consultation with GIZ, MNRE, IARI, and NISE, for establishing two additional Regional Centres of Excellence (R-CoEs) on AgriPV, considering agro-climatic diversity, institutional capacity, research infrastructure, and stakeholder engagement potential.
- **4.2 Strengthening Capacity Building measures for R-CoEs:** Adapt GIZ developed training modules and deliver AgriPV training modules, technical guidance, and knowledge products to strengthen the capacities of R-CoEs, including faculty, researchers, extension officers, and other stakeholders, in alignment with the standards and best practices of the Centre of Excellence on AgriPV.
- **4.3 Integration into State Programs:** Facilitate collaboration between CoE, R-CoEs and state agriculture and renewable energy departments to integrate AgriPV into state-level programmes and initiatives and organize periodic coordination and review meetings to strengthen institutional partnerships and implementation.
- **4.4 Technical Coordination and Knowledge Exchange:** Provide ongoing technical support to the R-CoEs through regular coordination meetings, facilitate knowledge exchange between the National CoE, R-CoEs, NISE, and research institutions such as CAZRI, and disseminate technical knowledge and best practices across the six focus states (Madhya Pradesh, Maharashtra, Gujarat, and three additional states to be identified in consultation with MNRE).

- **4.5 Monitoring, Documentation, and Reporting:** Monitor the progress and performance of the R-CoEs, document key activities, outcomes, lessons learned, and good practices, and prepare periodic technical reports and recommendations to support continuous improvement and long-term sustainability of the R-CoEs.
- **4.6 CoE AgriPV Blueprint & Institutional Framework:**
Develop a blueprint / white paper for establishing and operationalising a Regional Centre of Excellence (CoE) on AgriPV, covering:
 - Governance and institutional structure
 - Coordination mechanisms between agriculture and energy departments
 - Roles of central and state agencies
 - Formation of technical and policy working groups
 - Knowledge management and stakeholder engagement mechanisms

Key Deliverables:

- **4.1** Rationale and Institutional Assessment Report for the Establishment of 2 Regional Centres of Excellence (R-CoEs) on AgriPV, including the selection methodology, evaluation criteria, assessment of shortlisted institutions, stakeholder consultations, justification for the recommended host institutions, and an implementation roadmap for establishing the two R-CoEs.
- **4.2** Adapted AgriPV capacity-building and training modules for the Regional Centres of Excellence delivered through technical workshops, virtual meetings, stakeholder consultations, knowledge exchange meetings. At least 5 regional training sessions conducted, reaching government officials, extension officers, researchers, farmers, and other relevant stakeholders.
- **4.3** State-level institutional collaboration established to integrate AgriPV into state programmes, including facilitation of coordination with State Agriculture and Renewable Energy Departments, facilitation of regular state-level coordination and review meetings, and regular technical exchanges with the R-CoEs, Central Arid Zone Research Institute (CAZRI) and focus states to strengthen institutional partnerships, support implementation, and provide technical guidance.
- **4.4** Quarterly progress review and knowledge exchange meetings conducted with the R-CoEs, and the Central Arid Zone Research Institute (CAZRI), with periodic technical progress reports documenting implementation status, key outcomes, lessons learned, best practices, and recommendations for strengthening the R-CoEs.
- **4.5** One CoE AgriPV Blueprint

Work Package 5: Dedicated support for the 100kWp system at IARI

Objective:

Deploy Key expert 2 (for 1 year) at IARI to work under the guidance of IARI scientists and provide support for the day-to-day operation, monitoring, agronomic management and research activities of the installed 100kWp AgriPV system.

Activities:

5.1 Agronomic Management

- Support planning and supervising the implementation, and monitoring of crop cultivation, irrigation, nutrient management, and plant protection activities under the AgriPV system in consultation with IARI scientists.
- Monitor crop growth, health, and productivity, maintain experimental plots, and assist in field trials, demonstrations, and research activities.
- Maintain records of agronomic operations, crop observations, and field data to support research and reporting.

5.2 Operation and Monitoring of the AgriPV System

- Conduct monitoring and visual inspection of the AgriPV system, including tracker functionality and associated infrastructure, and promptly report any operational issues.
- Record system performance, energy generation, and environmental observations using the designated monitoring platforms, and support preventive maintenance activities in coordination with the IARI.

5.3 Coordination, Documentation and Technical Support

- Assist IARI scientists in research, monitoring, data collection, analysis, and preparation of technical reports related to Agriphotovoltaics.
- Coordinate with researchers, students, and other stakeholders to facilitate smooth implementation of operational, research, and demonstration activities.
- Prepare and maintain daily, weekly, and monthly progress reports, operational logs, and other documentation, and provide technical and logistical support for training programmes, field visits, and knowledge dissemination activities.

Key Deliverables:

- **5.1** Maintain daily data and operational records covering crop management activities, system performance, energy generation.
- **5.2** develop 12 monthly technical performance reports documenting agronomic activities, key observations and recommendations for improving agricultural and energy performance.
- **5.3** Submit quarterly technical progress reports summarizing research support activities, operational performance, crop observations, lessons learned, and recommendations to improve AgriPV system operation and research outcomes.
- **5.4** Develop and maintain a comprehensive digital database of agronomic and energy data generated from the AgriPV system
- **5.5** Maintain daily, weekly, and monthly operational logs, meeting records, and technical documentation, and provide timely technical inputs for reports, presentations, publications, and other knowledge dissemination activities related to the AgriPV demonstration system.
- ❖ Coordinating the logistics of IARI and NISE scientists including travel and accommodation

Meeting documentation and communication materials, including minutes of meetings, attendance records, photographs, key recommendations, action points, and presentation (PPT) materials, prepared and submitted for all coordination, review, and knowledge exchange meetings.

The contractor shall be required to schedule weekly technical-level meetings, take detailed notes of these meetings, and participate in other relevant IGCA meetings aligned with the activities of the Centre of Excellence (CoE), as per requirements.

The contractor will be responsible for implementing all the above-mentioned activities and deliverables in close coordination with IGCA consortium partners, IARI, and NISE.

The contractor shall provide evidence of all workshops, stakeholder consultations, and meetings conducted under the assignment by submitting the participant list, meeting agenda, photographs, event report/minutes, and post-event evaluation results, including participant feedback forms developed in consultation with GIZ.

Additionally, the contractor shall submit an Inception Report, including a detailed activity plan and implementation timeline.

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Milestones/process steps/partial services	Deadline/place/person responsible
Submission of Inception Report including detailed workplan, methodology, and timeline for implementation of all Work Packages	15.11.2026
AgriPV Demonstration Site Assessments - Initial assessment of 2 sites	31.06.2027
Additional assessment of 6 AgriPV demonstration sites and preliminary analysis of crop performance and system optimisation	31.12.2027
Assessment of 10 additional AgriPV demonstration sites and continued data analysis	31.10.2028
Assessment of remaining 4 demonstration sites and consolidated research findings	28.02.2029
Crop Productivity & Suitability Matrix	30.01.2029
Workshops & Knowledge Dissemination Activities - 1 national/state-level workshop conducted	30.09.2027
Additional 4 workshops conducted and knowledge dissemination activities initiated	31.05.2027
5 additional workshops conducted across relevant regions	31.05.2028
Remaining 3 workshops conducted and dissemination outputs consolidated	28.02.2029
Development of Technical Guidelines and Minimum Standards for AgriPV	31.08.2028
Establishment of Regional Centres of Excellence (R-CoEs) - Facilitation/establishment of first R-CoE	30.04.2027

Facilitation and establishment of second R-CoE	28.02.2028
Submission of Monthly Technical Performance Reports – 12 reports	Monthly throughout 2027
Submission of Quarterly Technical Progress Reports – 4 reports	Quarterly throughout 2027
Submission of Final Technical Report with consolidated performance assessment, lessons learned and recommendations	31.12.2027

Period of assignment: from 1.11.2026 until 30.04.2029.

GIZ may invite bidders to deliver a technical presentation to provide a comprehensive overview of their proposal.

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

The tenderer is required to present and explain its approach to **steering** the measures with the project partners (1.3.1) and its contribution to the **results-based monitoring system** (1.3.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under **learning and innovation**.

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

The tenderer is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the tender in accordance with Section 3.1 of the GIZ AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between the tenderer and GIZ
- Assuming personnel responsibility for the contractor's experts
- Process-oriented steering for implementation of the commission
- Securing the administrative conclusion of the project

Further requirements (1.7)

Deployment Plan

S.no	Experts	2026		2027												2028												2029	
		Nov	Dec	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	until April	
1	Team Leader																												
2	Key expert 1																												
3	Key expert 2																												
4	Short-term expert pool (1 expert at IARI, 1 expert at NISE)																												

Consultant should include a **detailed deployment plan** in the technical proposal, specifying the roles and responsibilities, timelines, and names of the respective experts assigned.

4. Eligibility of firms

The bidder must have the following administrative and financial requirements for conducting the assignment:

I. Commercial Eligibility Assessment

- Average annual turnover for the last three financial years should be at least 200.000 EUR.
- The agency should have a minimum of 6 employees as of 31.05.2026.

II. Technical Eligibility Assessment

The agency must have handled at least 4 reference projects in the technical field of Agrivoltaics research, policy advisory, capacity building and institutional strengthening and at least 2 in India, in the last three years with minimum commission value of Euro 20.000.

III. Weighted Criteria

Minimum one year of experience in Agrivoltaics Research including analysis of crop and energy generation

Minimum five years of experience in organising stakeholder exchange programmes/workshops at national and state levels

Minimum five years of experience in facilitating collaboration and coordination between central government institutions, state agencies and research organisations

One proposal to demonstrate comprehensive understanding of the assignment with operational plan and detailed plan for deployment of personnel.

Regional Expertise: India

Experience of development projects (at least 50% ODA-financed)

Please submit documentary evidence of all the criteria mentioned above. Please state experience clearly including details of content and duration / dates. For more details, please refer Annex A of bidding conditions.

5. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Team leader

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- Regular reporting in accordance with deadlines

Qualifications of the team leader

- Education/training (2.1.1): university degree (German 'Diplom'/Master) in Management or Engineering
- General professional experience (2.1.3): 10 years of professional experience in the Solar energy, Agrivoltaics, Agriculture sector
- Specific professional experience (2.1.4): 6 years of experience in supporting state/central government for formulation of Solar policies.

- Leadership/management experience (2.1.5): 5 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6): 5 years of experience in energy projects in India
- Development cooperation (DC) experience (2.1.7): 2 years of experience in DC projects

The expert must have proficiency in English

Key expert 1

Tasks of key expert 1

- Support in the implementation of Work Packages 1, 2, 3 & 4, including research analysis, knowledge dissemination, policy support, and institutional strengthening activities.
- Provide technical inputs to research activities, including crop performance monitoring, AgriPV system optimisation, and impact assessments across demonstration sites.
- Contribute to the development of technical reports, research outputs, and recommendations related to AgriPV system performance and crop suitability.
- Support the preparation of policy briefs, implementation guidelines, and knowledge products based on project findings.
- Assist in the organisation of workshops, consultations, webinars, and knowledge dissemination activities with key stakeholders.
- Manage team working with IARI and NISE
- Participate in project coordination meetings and provide regular progress updates and reporting as per project requirements.

Qualifications of key expert 1

- Education/training (2.2.1): Renewable Energy, Solar, Engineering, Agriculture etc.
- General professional experience (2.2.3): 8 years of professional experience in RE (including Agrivoltaics) sector
- Specific professional experience (2.2.4): 5 years of experience in research projects on AgriPV
- Leadership/management experience (2.2.5): 2 Years of management experience
- Regional experience (2.2.6): 3 years of experience in energy/agriculture projects in India
- Development Cooperation (DC) experience (2.2.7): 2 years of experience in DC projects
- Other (2.2.8): – Not applicable –

The expert must have proficiency in english

Key expert 2

Tasks of key expert 2

- The **expert should be based full time in IARI for 1 year (starting from January 2027 to December 2028)** closely supporting coordination and implementation of activities mentioned in the work package-5.
- The consultant should clearly specify in the technical proposal the **deployment plan for the key expert-2** stationed at IARI.

- The consultant should clearly mention the **name of the expert** which is proposed to be stationed at IARI for 1 year.
- Provide dedicated technical support at the IARI AgriPV demonstration site
- Support data collection, documentation, reporting and coordinate with IARI scientists on regular basis
- Participate in project coordination meetings and provide regular progress updates and reporting as per project requirements.

Qualifications of key expert 2

- Education/training (2.3.1): with university qualification (Post-Graduate) in Agriculture sciences and related field.
- General professional experience (2.3.3): 3 years of professional experience in agriculture and related sector
- Specific professional experience (2.3.4):
- Leadership/management experience (2.3.5):
- Regional experience (2.3.6): 1 years of experience in energy/agriculture projects in India
- Development Cooperation (DC) experience (2.3.7):
- Other (2.3.8): – Not applicable –

The expert must have proficiency in english

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Socio-cultural skills
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

Short-term expert pool 1 with minimum 2, maximum 3 members

For the technical assessment, an average of the qualifications of all specified members of the expert pool is calculated. Please send a CV for each pool member (see below Chapter 7 Requirements on the format of the bid) for the assessment.

Tasks of the short-term expert pool

- The **one (1) experts should be based at IARI** and **one (1) at NISE**, from **September 2027 until end of assignment**. The experts will closely support coordination and implementation of project activities with the scientists and researchers based in both institutions.
- The consultant should clearly specify in the technical proposal the **deployment plan**, including the **name of the expert to be stationed at IARI and the expert to be stationed at NISE**, along with the rationale for the proposed allocation of responsibilities.

- **During the initial phase**, the experts shall be engaged on a need basis and be available from April 2027 to initiate planning, coordination and preparatory activities with the CoE, GIZ, Fraunhofer ISE and IWMI. **Full-time placement of the two experts (one at IARI and one at NISE)** shall commence from September 2027 and continue until the end of the assignment.
- Provide specialised technical expertise to support the implementation of activities and deliverables under the work packages.
- Support research activities at AgriPV demonstration sites, including data collection, analysis, and documentation of crop and energy performance.
- Contribute to the preparation of research reports, knowledge products, and technical documentation related to agrivoltaics.
- Assist in the organisation of workshops, trainings, and stakeholder consultations at national and regional levels.
- Provide technical inputs to policy analyses, implementation guidelines, and knowledge dissemination activities under the project.

Qualifications of the short-term expert pool

- Education/training (2.6.1): **1 expert** with university qualification (Post-Graduate) in **RE/Solar/ Engineering**, **1 expert** with university qualification (Post-Graduate) in **Agriculture Sciences and related field)**
- General professional experience (2.6.3): **1 expert with 4 years of professional experience in the RE/Solar sector**, **1 expert with 4 years of professional experience in the Agriculture sector**
- Specific professional experience (2.6.4): All experts should have experience/understanding in the Agrivoltaics sector
- Regional experience (2.6.5): India
- Development cooperation (DC) experience (2.6.6): NA
- Other (2.6.7): **The technical proposal shall clearly specify with names of the proposed placement of each of short-term expert at IARI and NISE.**

The expert must have proficiency in english

The tenderer must provide a clear overview of all proposed short-term experts and their individual qualifications.

6. Costing requirements

Assignment of personnel and travel expenses

Per diem allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable from the [German Federal Ministry of Finance – tax treatment of travel expenses and allowances for international business travel as of 1 January 2026 \(GERMAN ONLY\)](#)).

Accommodation allowances are reimbursed as detailed in the specification of inputs below.

With special justification, additional Accommodation costs up to a reasonable amount can be reimbursed against evidence.

All business travel must be agreed in advance by the officer responsible for the project

Sustainability aspects for travel

GIZ has undertaken an obligation to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

CO₂ emissions caused by air travel must be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Team Leader	1	40	40	Fee for the execution of Tasks as outlined in the ToR
Key Expert 1	1	140	140	Fee for the execution of Tasks as outlined in the ToR
Key Expert 2 (1 consultant for 12 months)	1	300	300	
Expert Pool 1 (2 consultants for 1 year and 8 months each)	2	450	900	To be distributed among expert pool.
Travel expenses	Quantity	Number per expert	Total	Comments
Per-diem allowance in country of assignment	100	All	100	(Assumed for experts and short-term expert pool + for IARI and NISE scientists)
Accommodation in country of assignment	100	All	100	(Assumed for experts and short-term expert pool + for IARI and NISE scientists)
Transport	Quantity	Number per expert	Total	Comments

Domestic flights	60	All	60	Round Trips -60 (travel for the proposed experts and short-term expert pool)
Domestic flights	15		15	Round Trips -15 (travel for IARI and NISE scientists)
CO₂ compensation for air travel	75	All	75	Earmarked budget of 4,500 INR (round trips) for Co2 Compensation Total for 75 trips 3,37,500
Travel expenses (train, car)	100	All	100	Travel within the country of assignment, transfer to/from airport, car rental etc.
Other costs	Number	Price	Total	Comments
Workshops	13	3,50,000 INR	45,50,000 INR	Venue rental, complete AV equipment, Lunch with AM PM Tea With atleast 80-100 participants for each workshop Venue category (for ex. Govt. Institutions or at least 3/4-star hotel) Distribution material to be printed like concept note, agenda, factsheet, background note, pen, notepad (for 100 participants in each workshop) Backdrop banner-2 and Standee-2 (for all 10 workshops)
Professional design for 10 (reports, briefs, brochures)	10	13000 INR	1,30,000 INR	

7. Inputs of GIZ or other actors

GIZ and/or other actors are expected to make the following available:

- Coordinate exchanges with CoE AgriPV (IARI, NISE) and IGCA partners
- Provision of past reports, briefs, other knowledge material related to Agrivoltaics
- Further support as per requirements mentioned in the work packages

8. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the

positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 25 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long.

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and the budgets will be contractually agreed as maximum limits. The specifications for pricing are defined in the price schedule.

9. Outsourced processing of personal data

The performance of the Contract may involve the processing of personal data by the Contractor, such as (but not limited to) the processing of names and contact information. In such cases, the Contractor acts as an independent DATA CONTROLLER and must comply with ALL applicable data protection obligations, including those arising from regional and local laws. The Contractor may only process personal data if the objective to be achieved cannot be achieved without this data. The data protection principles such as lawfulness, data minimization, accuracy, purpose limitation, storage limitation, transparency, integrity and confidentiality and accountability as well as the numerous rights of the data subject must be observed. GIZ is in no way responsible for such processing.

In cases where the contractor follows the instructions of a GIZ partner, the partner is the data controller. The laws and standards applicable to it and the contractor must be complied with and implemented.

If the Contractor is not subject to the GDPR and the applicable laws do not contain any explanations of the data protection principles and rights mentioned here, the definitions of the GDPR (Regulation (EU) 2016/679) should be used