

A wide-angle photograph of a lush, green forest landscape. The foreground is filled with dense, vibrant green foliage, including palm trees and various shrubs. The middle ground shows rolling hills covered in thick forest, with a soft, white mist or fog settling in the valleys. The background features more distant hills under a sky with scattered, light-colored clouds. The overall scene is bright and natural, conveying a sense of ecological health and biodiversity.

2020-21 Annual Report

Leading Nature-based Solutions in India since 2009



About Us

We are a leading environmental advisory firm in India, with demonstrated expertise in natural resource conservation, climate change mitigation and adaptation.

Founded in 2009, IORA offers its multi-disciplinary services across finance, program implementation, policy advisory and scientific research. We have collaborated with 70+ partners and clients across the country to promote actions that benefit people and the planet alike.

Our extensive experience and proven ability to design and implement Nature-based Solutions (NbS) driven projects across the globe enables us to offer an integrated and effective NbS platform for large scale ecosystem conservation and climate action projects.

We have successfully implemented 120+ projects in the last 10 years across Conservation & Management of Natural Ecosystems and Climate Change Mitigation & Adaptation.

We have built cross-sector alliances with governments, NGOs, corporates and multilateral organizations to tackle complex environmental challenges. We leverage the collective expertise of these alliances to inform, initiate debates & discussions and influence policy and decision-makers.

Our Purpose

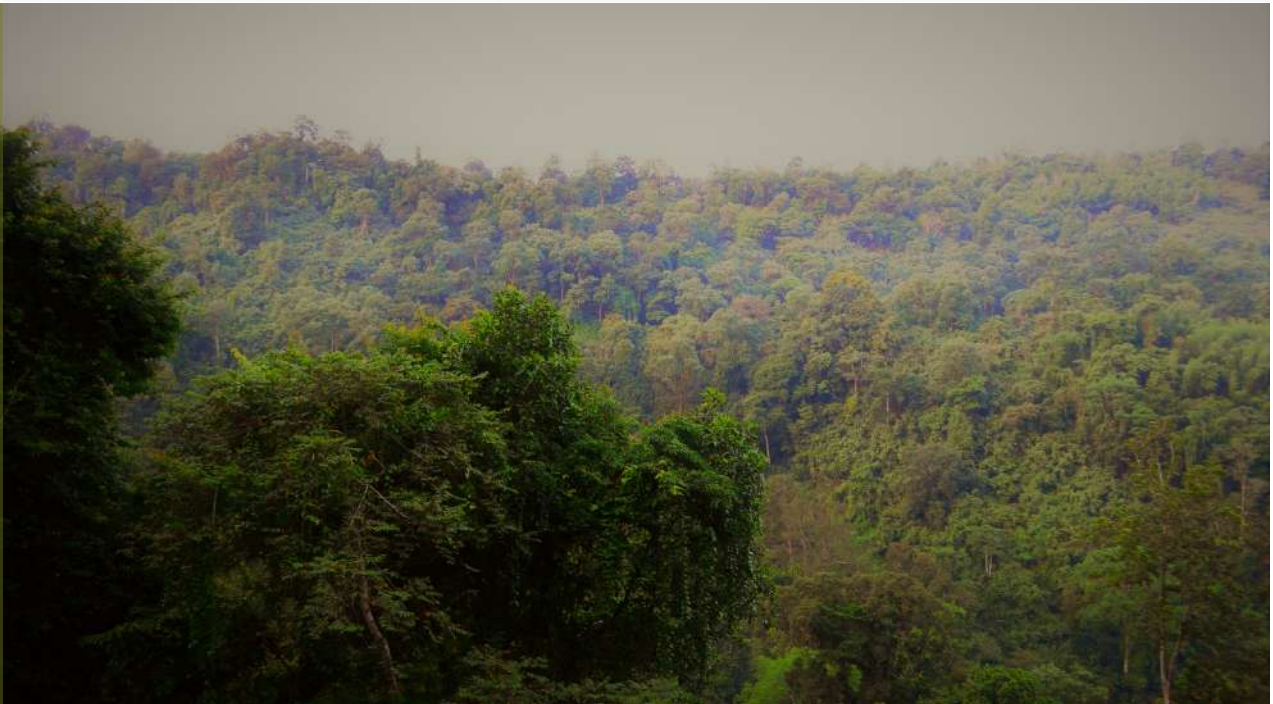
We are committed to “Enabling Conservation of Natural Ecosystems and Developing Climate Resilient Communities through data-driven decision-making, convergent partnerships and innovative financing mechanisms”.

We aim to enable a global transition to NetZero and climate resilient economy through NbS.

As we strive to reduce GHG emissions, promote sustainable forest management, and steer towards a healthy planet, all our initiatives are in sync with global goals, calling for urgent economic and environmental transformation. We work to tackle the triple planetary crisis of climate change, biodiversity loss and pollution by addressing local realities, through a combination of policy congruence, incentivising conservation, securing finance and developing capacities to support sustainable development.



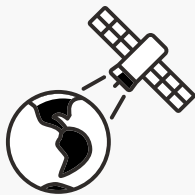
Key Sectors



**Forest
Management
and Conservation**



**Climate Policy and
Advisory**



**Integrated Remote
Sensing - GIS
Solutions**



**Agriculture
Research and
Advsory**

Prologue

The complexity of solving the challenges of resource conservation requires the connection of disparate nodes across policy, finance, scientific expertise and implementation. Protecting our natural ecosystems and tackling climate change requires multi-disciplinary approaches. We established IORA based on these beliefs as a business that offers end-to-end solutions for ecosystem conservation and climate change mitigation.

Ever since IORA's advent in 2010, the company has grown manifold and achieved several admirable milestones in enabling solutions to pressing challenges across policy, climate change and natural resource management.

The year 2021 witnessed us innovate and implement our forest management, climate change, RS-GIS and agricultural solutions. Our work and accomplishments in advancing green recovery and in tackling climate crisis stand as a testimony to this statement. We also crossed the milestone of 150+ Nature-based Solution projects, which were implemented across India and select international locations. In the run-up to supporting and meeting various global environmental agendas, we have enjoyed collaborating with many ministries and institutions across the world to tackle the climate crisis, forest and biodiversity loss, whilst building synergies for restoring the ecosystem.

This year's report features our work spread across the country highlighting our achievements and ongoing activities. We are also pleased to highlight new and existing partnerships with national and state governments, multi- and bi-lateral institutions, educational institutions, corporations, and communities that have supported our vision and work. As we move ahead into 2022, we hope to overcome the ravages of COVID-19 and enable new partnerships to steer the world towards environmentally sustainable and carbon-neutral pathways.

We thank you for showering us with your unwavering faith in 2021 and look forward to a fruitful 2022, together with your continued support and engagement. With gratitude for your steadfast support and belief in IORA Ecological Solutions.

Regards

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Ecosystem Assessment and Strategy Development towards Carbon Neutrality



Ecosystem Services and Incentive Feasibility Assessment for Narmada Landscape Restoration Project (NLRP)



Client – IUCN India

Duration – Aug. 2021 - Ongoing

The NLRP initiative by Global Green Growth Institute (GGGI), jointly implemented by Indian Institute of Forest Management (IIFM), United States Agency for International Development (USAID) and National Thermal Power Corporation (NTPC) Ltd., seeks to improve the quality and quantity of water in select tributaries of the Narmada River between Omkareshwar and Maheshwar Dams in Khargone district, Madhya Pradesh.

IORA will carry out the Baseline Assessment of Ecosystem Services in the NLRM area and design the Monitoring, Learning, and Evaluation (MEL) Framework to quantify the impact of project activities implemented under the program. After completion of the assessment, we will develop a Payment for Ecosystem Services (PES) Model exploring the possibilities of bundling ecosystem services to leverage incentives and facilitate decision-making and promote sustainable practices. We will also identify buyers, sellers, intermediaries, and knowledge providers for operationalizing incentive-based mechanisms.

Scoping study and screening of the prioritized existing-working aids in the Western Himalayas

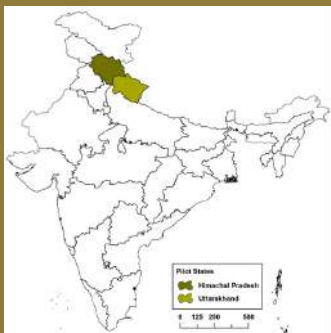
Client – GIZ India

Duration – July 2021 – Dec 2021

GIZ India supported 'the Sustainable Management of Forest Ecosystem Services (FES)' project, aims to orient forest management towards FES in the western Himalayan states of Himachal Pradesh and Uttarakhand. The initiative focuses on enhancing water availability and agroforestry interventions near forest areas.

GIZ engaged IORA to carry out a scoping study and screening of prioritised existing working aids to support sustainable FES Management. These working aids comprise innovative approaches, recommendations, guidelines, toolkits, and work templates. Once screened, the prioritised working aids will be refined in agreement with the partners for further use and dissemination.

We undertook an extensive review of the working aids specific to FES in the International, National and local contexts, and followed a consultative participatory approach to assess the needs at the ground level, as well as at the MoEFCC to suggest potential alignment between appropriate working aids. A major learning from the exercise is the necessity of using hybrid approaches (different combinations of approaches) toward FES management considering the diversity of factors at play on the ground.



Preparation of Forest Landscape Restoration report based on IUCN's "Restoration Opportunities Assessment Methodology (ROAM)" in targeted Indian states



Client – IUCN India

Duration – 2021 – Ongoing

IORA is working in collaboration with IUCN to carry out an FLR opportunity analysis based on IUCN's "Restoration Opportunities Assessment Methodology" (ROAM) toolkit across five target states – Haryana, Nagaland, Madhya Pradesh, Maharashtra, and Karnataka.

These FLR interventions aim to restore multiple ecological, social and economic functions across the landscape and generate a range of ecosystem goods and services that benefit multiple stakeholders. The ROAM assessment can help in shortlisting the most relevant and feasible restoration intervention, further enhancing India's capacity to achieve land degradation neutrality and Bonn challenge targets.

The project adds impetus to India's goal of achieving Land Degradation Neutrality (LDN) and Bonn Challenge targets by identifying the precise levels of restoration opportunities within the boundaries of the degraded land identified.

Consultations were held in the selected states to validate the findings with the key officials and finalise the outcomes on a major driver of degradation in the state and potential FLR intervention, which will result in the development of the package of practices for enhancing land restoration.

Programme Management Consultant (PMC): National Mission for Clean Ganga



Client – KPMG India
Duration – May 2021 – Ongoing

National Mission for Clean Ganga (NMCG) under the Namami Gange Programme aims to rejuvenate the Ganga river by adopting a holistic approach that promotes inter-sectoral coordination for comprehensive planning and management. One of the major components of Ganga rejuvenation is forestry interventions to support tree diversity, and increase in forest cover and forest productivity in headwater areas of the river and its tributaries.

NMCG has taken up afforestation activities across five states serviced by the river– Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, and West Bengal. IORA is a technical partner for the programme, supporting the implementation of forestry interventions for site-specific plantations along the river banks covering an area of 1.34 lakh hectares. We will also identify the gaps in programme implementation and review the progress of investments in biodiversity conservation. The project aims to maintain and enhance the vegetation cover along the river and its tributaries as well as maintain minimum ecological flows in the river to ensure water quality, support aquatic life and ensure environmental sustainability.

Sustainable Agriscapes for Future – Phase 2



Client – IUCN INDIA

Duration – Aug 2020 – Jan 2021

As a part of the “Sustainable Agriscapes for Future” project, IORA worked on finding long-term sustainable solutions with regard to food security and the preservation of biodiversity.

The project’s focus is on strengthening ecological and biodiversity management and improving livelihoods in the selected landscapes of Ghod (Maharashtra) and Bhawani (Tamil Nadu) districts. We devised agriscape plans based on socio-economic and biodiversity assessments and a review of key ecosystem services.

The plans highlight the causes and implications of the degradation of forests and catchments in the project areas. Proposed conceptual models provide prescriptions for catchment area treatment, interventions for improvement of agriculture and development of riparian areas. The plans also provide detailed recommendations on AR/ ANR plantation, nursery development, water conservation strategies, planting multi-purpose trees in ToF systems along with crop diversification, alternative livelihood options and capacity building.

Capacity Development for Sustainable Forest Management



Assessment of Forest Carbon Stock and Building Capacity of Tripura Forest Department and SCATFORM Project Personnel



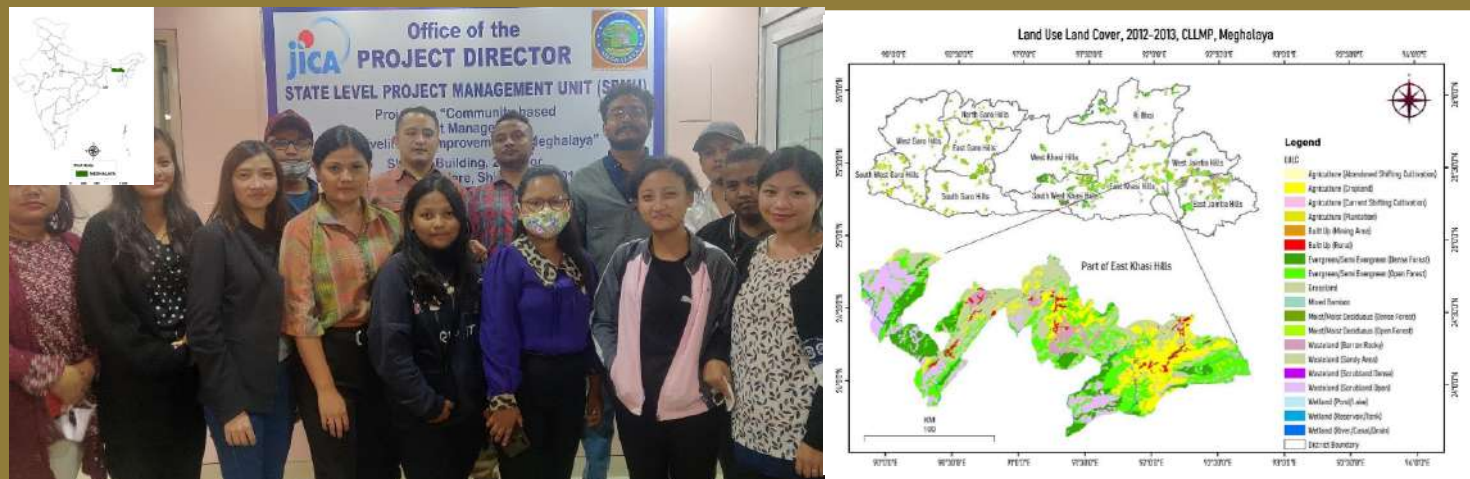
Client – Tripura SCATFORM Project PMU, Tripura State Forest Department
Duration – Nov 2021 – Dec 2022

The JICA-funded Sustainable Catchment Forest Management (SCATFORM) project is underway in Tripura. It aims to improve the quality of forests in targeted catchments, along with soil and moisture conservation and supporting sustainable forest management. The goal is to enhance ecosystem services and improve livelihoods for forest-dependent communities.

JICA commissioned IORA to undertake the assessment of forest carbon stocks under this project and build the capacities of forest department staff and community stakeholders in conducting carbon assessments enabling the department staff to plan and implement such assessments independently in the future.

Utilising our experience of conducting joint training of forest officials and community members for carbon estimations, IORA shall prepare a training manual for the benefit of forest department staff. The project will also report JFMC-wise results of the carbon stock mapping by forest types, canopy density classes, and overall forest stock.

Capacity Building and Developing Land Use and Land Cover Maps for 400 Villages to Support the Implementation of Meghalaya led Land Landscape Management Project (MCLLMP) under MBMA



Client – Meghalaya Basin Development Agency (MBMA)
Duration – September 2020 – March 2022

Meghalaya Basin Management Agency (MBMA) is implementing a five-year (2018-2023) Meghalaya Community-Led Landscape Management Project (MCLLMP) in order to rehabilitate the state's degraded landscapes, build climate resilience and create livelihood opportunities. The project aims to build upon the traditional community-led landscape management approaches by introducing appropriate scientific technology and financial mechanisms, to strengthen the planning and management of natural resources in the state.

Supporting the project objectives, IORA assisted in building the state's geospatial capacity and strengthening MBMA's state and district project management units. We conducted training sessions on "Delineation of Agro-climatic Zones and Potential Spring-shed Zones of Meghalaya" and generation of Temporal Land Use Land Cover (LULC), Vegetation indices (V_i), and Carbon Stock baseline datasets for state and district GIS and Environment cells of East Garo Hills, East Khasi Hills, and West Jaintia Hills. The training provided an intensive theoretical understanding and hands-on processing of multi-resolution spatial data to generate baseline outputs.

Additionally, GIS lab training sessions were also held for the trainees. We undertook an extensive validation of the Land Use Land Cover (LULC), focusing on bamboo and agricultural plantations (cashew nut, areca nut and rubber), mining-affected areas and different forest categories. This will help strengthen the community's capacities for managing natural resources through a landscape approach.

Providing Assistance to Working Plan Officer of Tripura Forest Department for Preparation of Working Plan of 8 Districts, as per National Working Plan Code 2014



Client – Tripura Forest Department
Duration – September 2021 – August 2022

IORA is aiding Tripura Forest Department in the revision of Forest Working Plans for all its divisions in consonance with the National Working Plan Code (NWPC), 2014.

Our team is using the latest tools for forestry assessment, planning, and management to support the scientific management of Tripura's forests and mainstream best practices in forestry. This exercise will further assist the department in identifying and collecting relevant data to access funding for national and international instruments like REDD+, NAMAs, INDC and GIM.

The exercise will be supported by remote sensing and GIS analysis towards effective implementation and monitoring of suggested works.

Additionally, IORA is conducting GIS training sessions for forestry personnel to facilitate knowledge dissemination and capacity building for the preparation of forest inventory.

Carbon Offset Monitoring and Reporting



Feasibility study on Voluntary Carbon Markets for Sustainable Soil Management in India



Client – GIZ India

Duration – November 2021 – December 2022

As part of the GIZ programme on Soil Protection and Rehabilitation of Degraded Soil for Food Security (ProSoil), IORA carried out a feasibility study on Voluntary Carbon Markets (VCM) for Sustainable Soil Management in India. The study focussed on outlining key steps involved in developing an 'Agriculture Land Management (ALM) Carbon Project' that can provide real and measurable carbon emission reductions under the current most widely utilized carbon standards. The study provides an understanding of trends in VCM, and associated risks and challenges. It also provides estimates of the climate mitigation potential of major ProSoil activities including Improvement in Soil Organic Carbon, Water and Soil Conservation; Improved Cropland/ Sustainable Land Management Practices and Livestock Management.

The study mapped schemes, programs, policies, and actions associated with ProSoil in India; identified activities that have potential for climate mitigation and recommendation of the best-suited methodology – VM0042 “Methodology for Improved Agricultural Land Management, v1.0”, which incorporates the maximum number of ProSoil activities.

Additionally, the team also developed a toolkit to facilitate the design and scaling of agriculture-based voluntary carbon projects in India, and designed a knowledge product summarizing the project's key outcomes, guidelines and way forward.

Feasibility study report for the origination to generate carbon credits from Coconut Plantations in Palawan, Philippines

Client – Climate Resources Exchange International (CRX) Singapore

Duration – July 2021 – Ongoing

CRX and IORA have come together to study the potential for developing a carbon sequestration project on Coconut Plantations in Palawan (Philippines) for Lionheart Agrotech Limited, a Hong Kong-based agricultural company.

As part of the study, IORA is developing a carbon project to support CRX in achieving its climate mitigation targets. The project will contribute to a sustainable supply chain mechanism which in turn will help in providing long-term business security to coconut farmers.

We will provide technical, social, legal and financial feasibility analysis of the carbon project, along with a detailed analysis of available methodologies for land-use and carbon price sensitivity analysis.

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Third Party Monitoring and Evaluation



Assessment of Carbon Sequestration Capability of Plantations in Onshore Suvali Terminal, Surat, Gujarat

Client – Vedanta Ltd. (Cairn Oil and Gas)

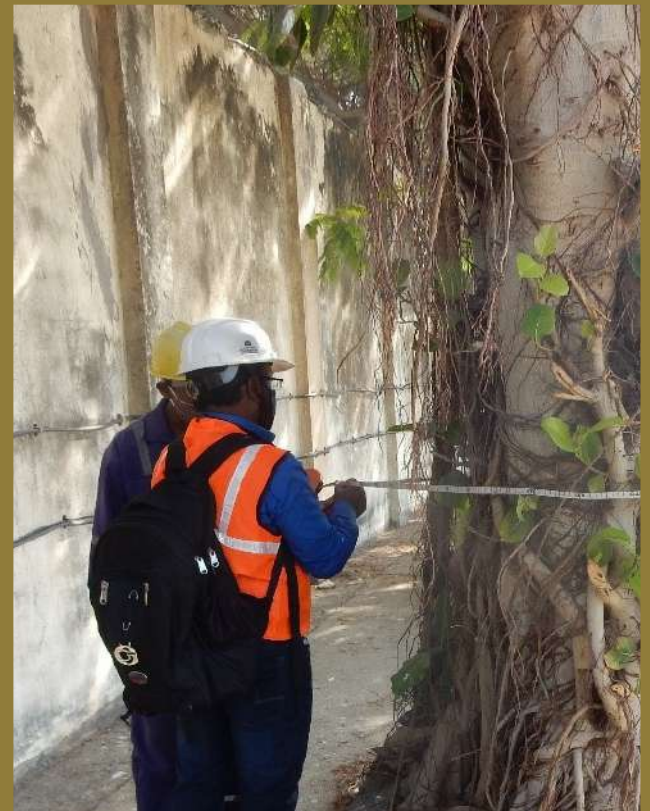
Duration – February 2021 – April 2021

In line with Cairn India's vision to ensure holistic socio-economic development while adding to India's goal of NetZero by 2050, the company engaged IORA to assess the carbon sequestered in its green belt area at Suvali terminal in Surat.

Adding another carbon sequestration assessment to our repertoire, our team put forth recommendations to increase the green belt area, develop nurseries and implement waste management initiatives. We also submitted a layout design for possible plantations in the area, considering the development and enhancement of biodiversity, as well as an increase in the green belt.

We prepared a detailed inventory of plantations (marking species, height and girth of trees) and calculated soil carbon stock in the green belt area along with its sequestration capability. This was compared with the carbon stock present in relatively low pollution areas towards calculating and validating the annual carbon sequestration rate.

The report submitted to Cairn India provides a rigorous assessment of the carbon stock of plantations, raised in the Suvali Terminal and an analysis of the status of the plantation.



Third Party Evaluation of Works done under Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in the State of Telangana

Client – Telangana State Forest Department (TSFD)

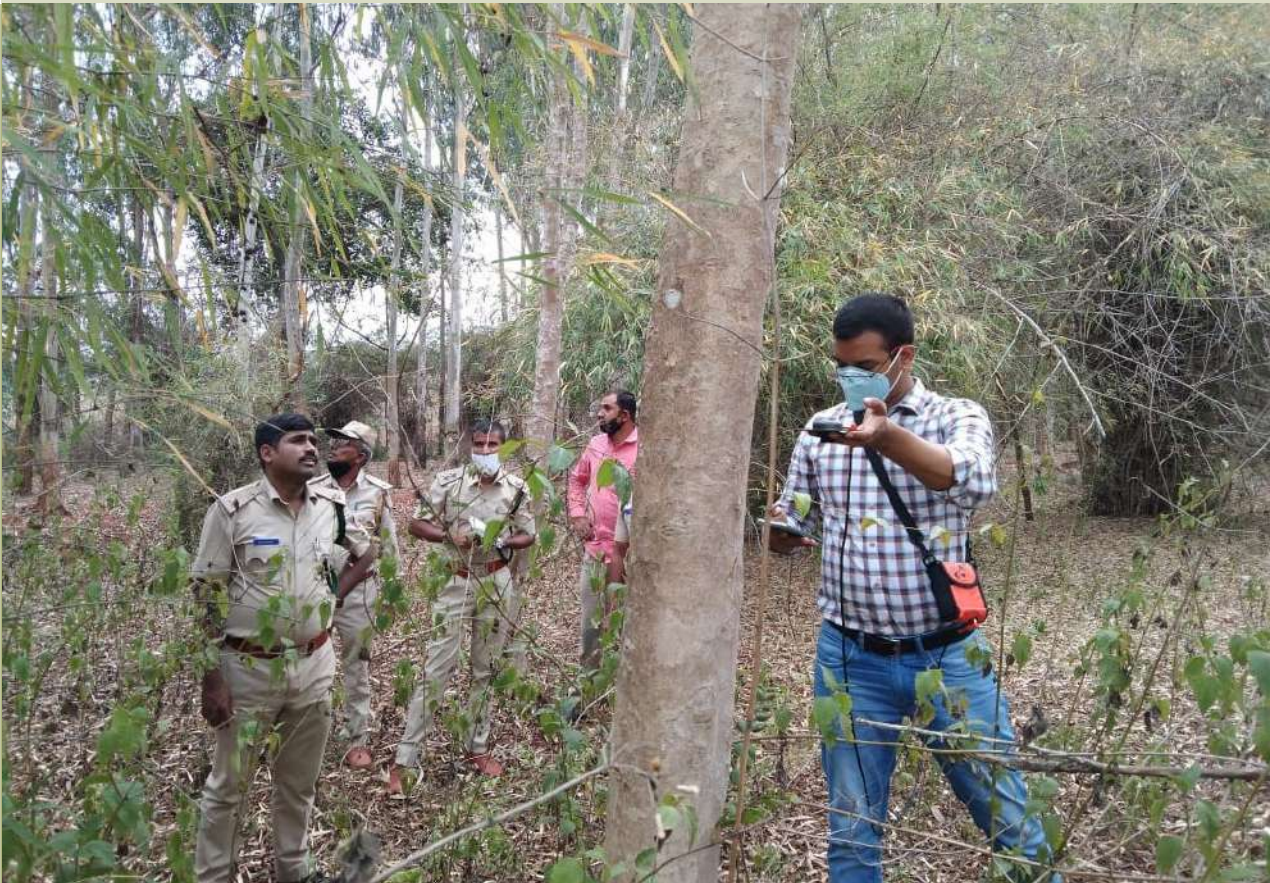
Duration – April 2021 – December 2021

The Telangana Forest Department hired IORA as the third-party evaluator for its CAMPA activities undertaken in the year 2016 – 2019. Our project team carefully assessed multiple large-scale activities including preservation of natural forests, management of wildlife, capacity building, R & D, and infrastructure development.

Additionally, we evaluated the growth and survival of various plantations, habitat improvement works, soil moisture conservation, and protection measures. Some of the recommendations arising out of the evaluation include the adoption of indigenous species, the development of Miyawaki forests, nature education centers and urban parks.



Utilising Geospatial tools for Strengthening Ecological Health



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Robust and Efficient Analysis Approaches of Remote Imagery for assessing Population and Forest Health in India

Client – University of Cambridge

Duration – October 2019 – March 2022

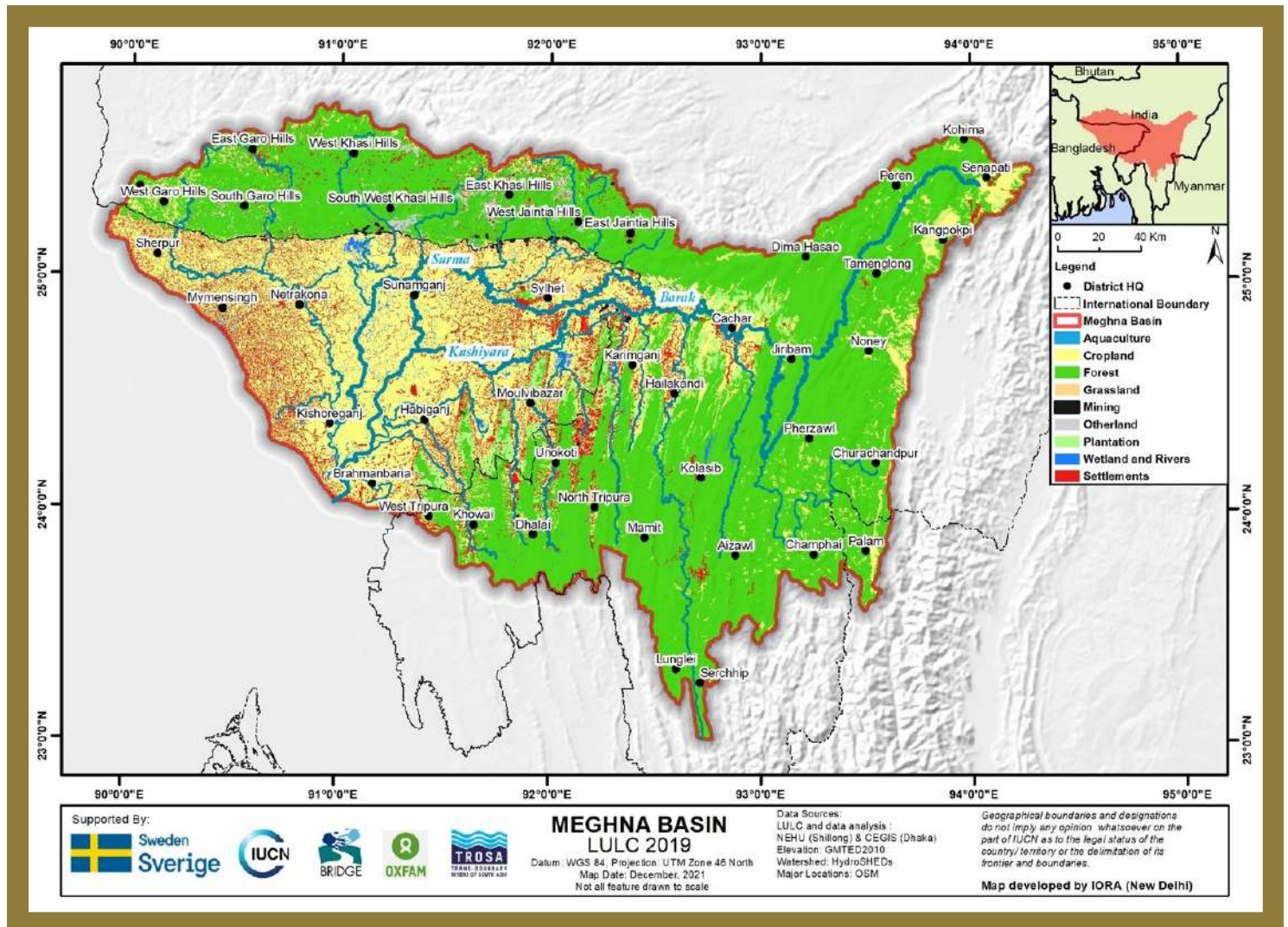
IORA collaborated with Engineering and Physical Sciences Research Council (EPSRC), the University of Cambridge, and the Global Challenges Research Fund (GCRF) to develop novel satellite image analysis and Machine Learning (ML) tools for monitoring forest health in India.

Under the project, we carried out a ground survey in collaboration with the Karnataka State Forest Department and identified 40 tree species in our sample of over 400 trees. The survey was conducted using a Global Navigation Satellite System (GNSS) receiver, which enabled the team to obtain sub-meter accuracy data in dense canopy cover areas of the Shivamogga Forest region.

The Data will be used as a training set to rapidly identify dominant tree species in this sub-region's forests. It will use an advanced graph-based deep learning classification algorithm on High-resolution Hyperspectral Images captured by Airborne Visible InfraRed Imaging Spectrometer- Next Generation (AVRIS-NG) Hyperspectral Sensor, developed by NASA.



Develop Meghna Basin Land Use and Water Resources Atlas



Client – IUCN Bangkok

Duration – March 2021 – March 2022

Commissioned by IUCN-Bangkok, IORA developed an atlas with illustrative thematic maps for all 29 transboundary tributaries of the Meghna River. This includes maps depicting hotspots of changes in the river basin over the last 15 years. Our team consolidated data on land use change analysis conducted by North East Hill University (NEHU) and the Centre for Environmental and Geographic Information Services (CEGIS) to develop these maps.

The atlas provides well-synthesised information to stakeholders and promotes evidence-based decision-making by policy makers, planners, private sector and civil society stakeholders, for the development of the Meghna basin.

Identifying Climate Risks and Vulnerability



Analysis of Climate Change Vulnerability / Risk Assessment Methodologies and Tools in Indian Context



Client – GIZ India

Duration – April 2021 – April 2022

The GIZ study on VRA methodologies and tools for India aims to select the most effective strategies for climate change adaptation and impediments to use of VRA tools for decision making.

IORA successfully completed the study and provided recommendations for strengthening the existing frameworks and methodologies for wide-scale adoption by decision and policy makers. We further identified the capacity needs for state departments in facilitating VRA and enabling climate change aspects into departmental planning and implementation plans.

It led to a repository of case studies for climate risk and vulnerability assessment at global, national, and subnational levels. It also led to the identification of strengths, limitations, and gaps in the adoption of VRA methodologies by a diverse group of stakeholders including, but not limited to the developers and practitioners of VRA tools and methodologies. It also led to a set of recommendations for the wide-scale adoption of these methodologies.

Studying the Climate Vulnerability in Mint Cropping System in Barabanki district, Uttar Pradesh

Client – GIZ India

Duration – April 2021 – Ongoing

Iora conducted a comprehensive assessment of the climate vulnerability of mint farming practices in Barabanki District, Uttar Pradesh. Funded by GIZ India, the project aims to promote climate resilient and sustainable mint farming practices in the region, whilst supporting the response capacity of the mint farmers for the same.

It intends to disseminate knowledge to more than 25,000 mint-producing smallholder farmers to help reduce the climate vulnerability of the crop and communities. It also aims to identify Greenhouse Gas (GHG) emission sources in the mint crop value chain and develop a framework for future assessments.

We collected primary data pertaining to current mint farming practices, and key climate challenges, water availability and use, and the economics of mint farming. This helped devise pragmatic and need-based climate adaptation and mitigation strategies for farmers and communities.



Studying the Climate Vulnerability in Peanut Cropping System in Junagadh district, Gujarat

Client – GIZ India

Duration – June 2020 – May 2021

Peanut cropping systems face major climate risks, including depleting water resources, erratic rainfall patterns, pests & diseases, and the low adaptive capacity of farmers. IORA carried out a comprehensive climate vulnerability assessment of peanut crops in Junagadh district, Gujarat towards understanding and addressing the same.

Our team conducted a training session in Junagadh for more than 40 farmers and extension workers. It gave an overview of climate change and its impacts on agriculture, discussed key climate risks faced by farmers in Junagadh and presented climate-resilient strategies for climate mitigation and adaptation. An action plan for different strategies was also shared with participants, describing the scale of implementation. IORA also prepared a Training of Trainer's (TOT) Manual on Promoting Climate Smart Peanut Cultivation.

Following our rigorous discussions with key stakeholders and farmers, we presented the project outcomes at the GIZ-India workshop on 'Implementation Experience and Knowledge Sharing' in developing a climate-smart solution for small and marginal peanut farmers of Mendarda and Vanthali blocks of Junagadh. The workshop discussed the impacts of climate change on agriculture, in the of Junagadh and presented strategies for mitigation and adaptation.



Designing Targeted Climate Action Plans



Revision of Assam State Action Plan on Climate Change (ASAPCC)



Client – Assam Climate Change Management Society (ACCMS)
Duration – June 2021 – May 2022

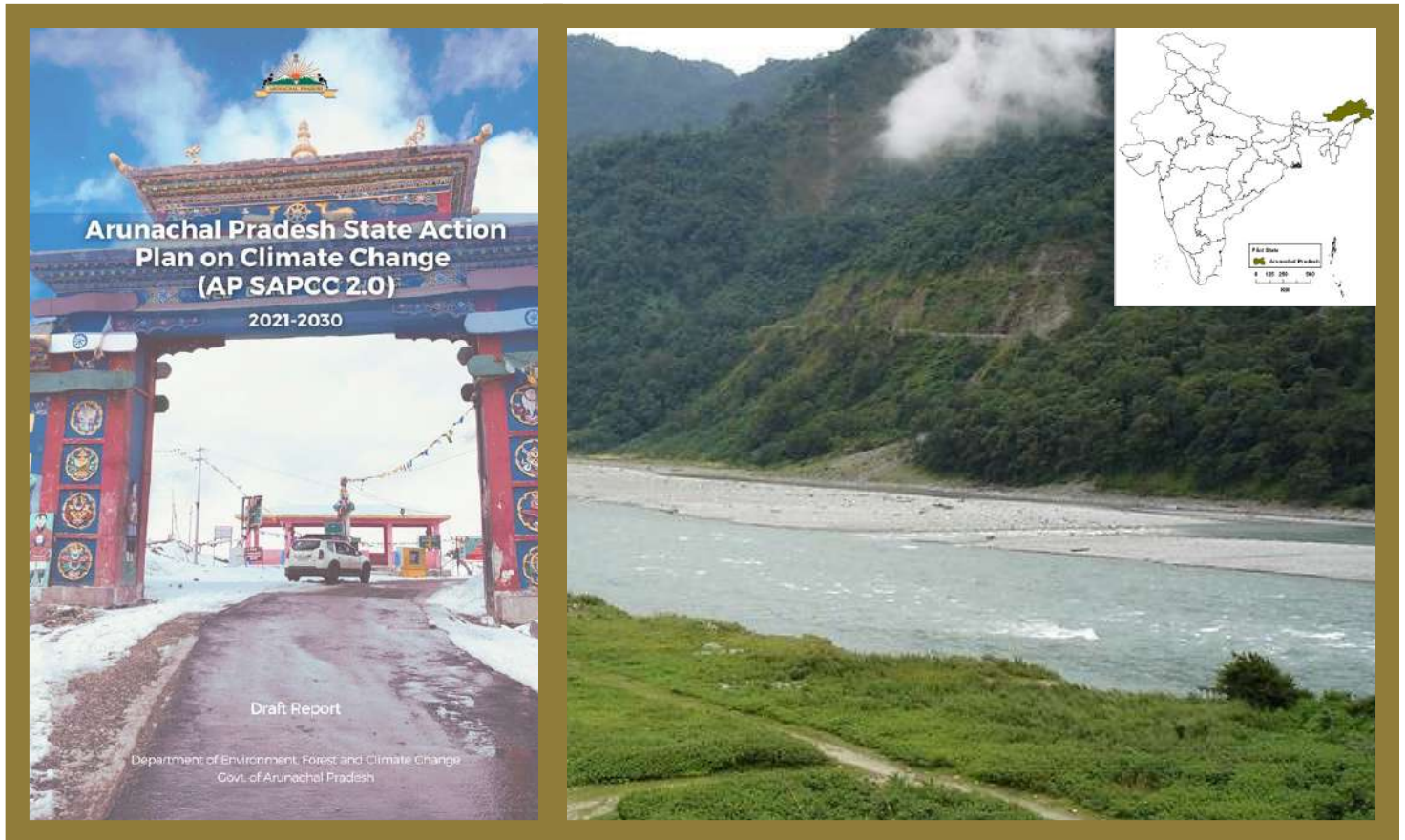
State Action Plans on Climate Change (SAPCCs) provide a risk assessment for states, supporting their development planning under a changing climate scenario. SAPCCs are important state-level policy documents that address vulnerabilities and support an increased resilience at a sub-national level.

IORA, supported by the Assam Climate Change Management Society (ACCMS), revised the Assam State Action Plan on Climate Change (ASAPCC), aligning it with national and international climate goals.

The revised SAPCC aligns with Assam's sustainable development goals, India's Nationally Determined Commitments (NDCs) and SDGs. It assists in planning mitigation actions, as well as achieving adaptation goals.

We are further assisting the state in institutionalising the updated SAPCC, whilst building awareness and capacities to implement the same. The ACCMS aims to use the revised SAPCC to further focus on developing a focused action plan for all six Agro-climatic zones in Assam, based on their vulnerability to climate change.

Supporting Development and Update of Arunachal Pradesh SAPCCC



Client – Department of Environment & Forests Government of Arunachal Pradesh
Duration – June 2020 – Ongoing

The Department of Environment & Forests, Government of Arunachal Pradesh has commissioned IORA to support the review and updating of SAPCC for the period 2021-2030.

The revised SAPCC will identify adaptation and mitigation needs of priority sectors based on identified climate risks, in line with India's NDC and SDG commitments. IORA assessed climate vulnerabilities and risks in the state and held state-level stakeholder consultations to present the methodology for these assessments, key indicators from priority sectors as well as vulnerability categorisation of districts to vet our findings.

The revised SAPCC will include quantified actions, financial requirements, funding sources, implementation arrangements, and M&E Frameworks to track progress and feed into future updation of AP SAPCC 2.0. Going ahead, we will build awareness and develop the state's capacity to implement the actions and institutionalize recommendations as standard practice.

Revision of Uttar Pradesh State Action Plan on Climate Change (UPSAPCC)



Client – GIZ India

Duration – October 2020 – May 2022

As a part of its effort to bring climate change concerns into mainstream government planning processes, the Uttar Pradesh Government is revising its current SAPCC. IORA was roped in by GIZ India to support the state in reducing climate-associated risks for vulnerable groups and sectors through a revised SAPCC. This will enhance stakeholder capacity to plan, implement, and finance climate adaptation actions.

IORA revised the UPSAPCC in congruence with state priorities and India's commitments under the Paris Agreement. The SAPCCs identify state-specific vulnerabilities and key priorities related to adaptation and mitigation.

The work entailed historical climate analysis for the period 1980–2019, development of future climate projection maps and sector-specific district-level Climate Vulnerability Assessment. IORA carried out mission-wise stakeholder consultations and workshops to finalise sector-specific climate risks and associated strategies, targets & budgets. The state and sectoral climate projections and vulnerabilities were presented at the UP Climate Change Conclave 2021

Supporting Development of DRM & Climate Action Tracking (DCAT) Tool and sample assessment of baseline for Kerala Program for Results



Client – World Bank

Duration – January 2021 – September 2021

Owing to India's vulnerability to climate-induced disasters, it is imperative to mainstream Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) into development planning, across all tiers of administration.

Kerala, being a coastline state is susceptible to severe sea erosion and hazards like floods and drought. Therefore, an integration of CCA and DRM can effectively address climate change in the state, whilst building the resilience of the vulnerable sectors and population. The World Bank is working on mainstreaming DRM and Climate Risk Information at the local level in Kerala. It engaged IORA to develop a framework for implementation of the DCAT Tool at the Local Body level in consultation with the State Government.

IORA developed a scorecard to assess each activity/investment in terms of DRM and climate co-benefits. This aids in identifying specific aspects of state plans that provide for financial investments in achieving climate change and DRM co-benefits.

The DCAT framework helps track and quantify climate disasters and identify climate-informed investments across various sectors at the Local Body level. It was applied to five existing local level plans to establish baselines of sensitivity in investment planning.

Strengthening of Maharashtra's State Action Plan on Climate Change



Client – Environment Department, Government of Maharashtra
Duration – July 2020 – May 2022

Considering the changing climate context, the SAPCCs need to be strengthened with latest scientific assessments and projections that are available along with prioritized climate action. Subsequently, it ensures that the capacity of state authorities to plan, implement and operationalize SAPCC is enhanced.

In this context, the Maharashtra Government has engaged IORA to revise the current Maharashtra State Action Plan on Climate Change (MSAPCC 1.0), as per the guidance provided in the Common Framework for Revision of SAPCCs.

Feeding into the learnings and experiences from the previous SAPCC, our team is strengthening the Maharashtra SAPCC with the latest scientific assessments and available projections and prioritised climate action.

Our team took a participatory approach to revise the SAPCC. This was done to ensure that the revised SAPCCs reflect the needs and priorities of all the sectors, while promoting ownership by all its relevant decision-makers. The updation process includes the latest climate analytics (IPCC AR5) and ensures that the identified action plans are aligned with India's national and international commitments (NDCs and SDGs) and state priorities (state's SDG targets, Maji Vasundhara).

IORA is also developing elaborate implementation, finance and M&E plans towards achieving the targets effectively and executing the overall revised SAPCC.

Mainstreaming Climate Transitions into Development Planning



Technologies and Finance Needs Assessment for Adaptation in India



Client – Shakti Sustainable Energy Foundation
Duration – June 2021 – October 2021

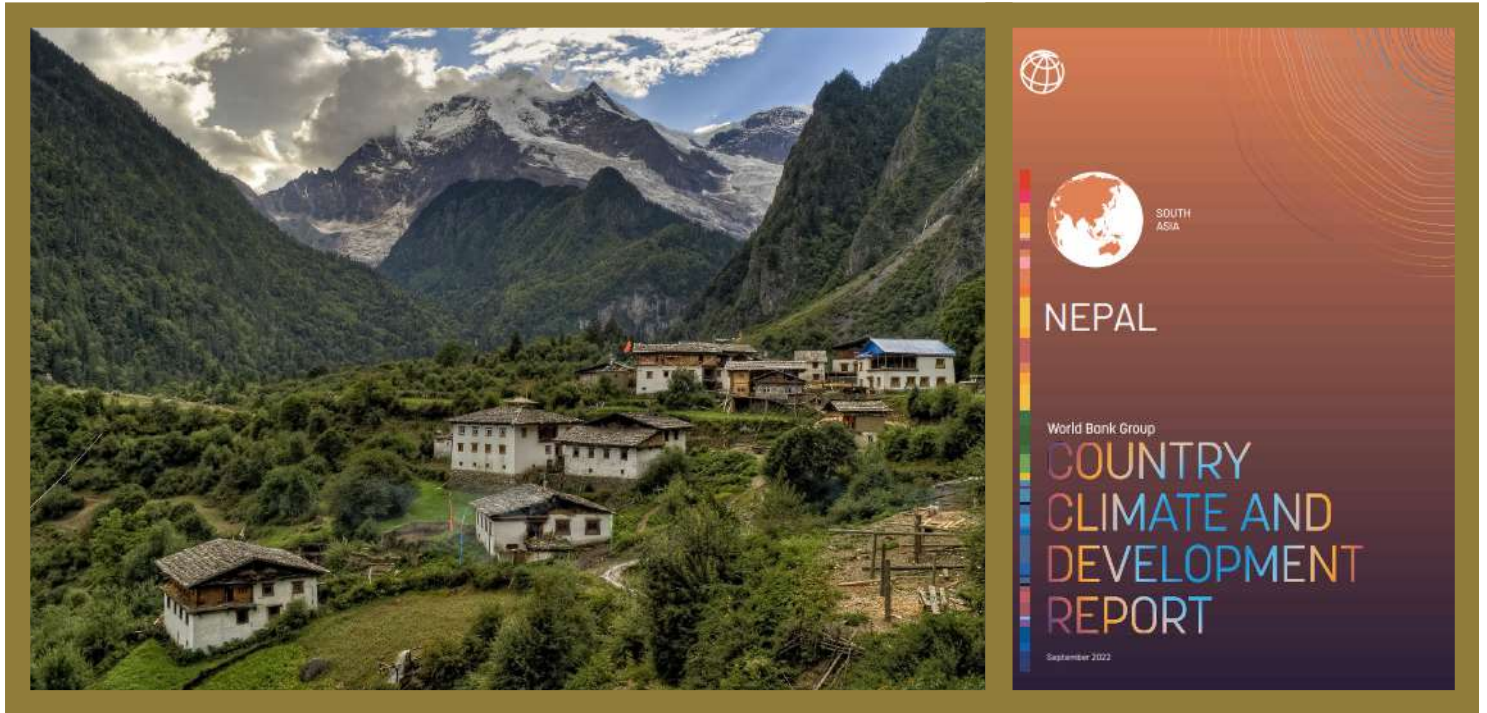
The growing urgency to address climate change calls for the adoption of emerging and disruptive climate smart technologies. However, the adoption of existing and proven technologies, as well as the development and diffusion of new technologies, both face key financial and technological barriers. Preliminary estimates under India's NDCs suggest that the nation would need around USD 206 billion (at 2014–15 prices) between 2015 and 2030 to implement adaptation actions in agriculture, forestry, fisheries, infrastructure, water resources and ecosystems. The global adaptation agenda under the Paris Agreement further underscores the focus on adaptation and the increasing technology needs therein.

To address this, IORA (supported by Shakti Sustainable Energy Foundation) assessed the key barriers and enablers that may aid in the development, adoption and diffusion of disruptive technologies and transformative strategies for climate change adaptation in four focus sectors – Agriculture and Allied, Forest and Other Land Uses, Public Health and Water Resources.

The study maps key climate risks, adaptation needs and associated technology requirements in the focus sectors along with financial requirements for fulfilling the identified adaptation measures, and suggestions for undertaking future Technology Needs Assessment (TNA) studies.

The key findings from this study will feed into the technology needs assessment aspect of India's upcoming National Communication (NATCOM) report for the UNFCCC.

Nepal Country Climate and Development Report (CCDR)



Client – The World Bank Group

Duration – June 2021 – December 2021

IORA finalised a review of Nepal's existing policy landscape, institutional arrangements, and challenges, hindering it from delivering key climate transitions towards supporting the country's low-carbon, climate-resilient development pathway. We analysed Nepal's national circumstances vis-à-vis climate change, its national GHG emissions inventory, current climate governance architecture and climate change concerns in development planning.

The study was a part of the World Bank's flagship Climate Change and Development Report (CCDR), addressing any disconnect between climate and development policies to identify the highest-impact actions that reduce GHG emissions and build resilience. IORA carried out a comprehensive sectoral review of AFOLU, Water, Energy, Infrastructure, Transportation, and Urban development sectors to deliver insights and recommendations for their improvements. We identified sectoral opportunities and synergies to enable institutional and financial reforms that support high-impact climate action.

The research highlighted sectoral investments enabling climate transitions through balanced adaptation and mitigation measures benchmarking Nepal's key sectors against regional and global standards.

Assessing Institutional, Policy and Planning Systems to deliver on Key Climate Transitions in India

Client – The World Bank Group

Duration – June 2021 – April 2022

IORA worked on India Country Climate Report in association with WRI and Vertiver. The study, commissioned by the World Bank, provides an extensive review of country-wide development goals and climate-related trends, policy actions and challenges.

We identified the key gaps that need to be addressed urgently to achieve India's intended just transition to sustainable cooling, and climate-resilient services in agriculture, water, energy and forests.

The study focuses on providing strategic guidance on the policy directives, investments and capacity development needed to achieve the intended accelerated transitions. The information and data generated will be analysed to identify the key engagement opportunities for each sector.

This report will serve as a foundation for future engagements on long-term climate strategies for India; contribute to the country's NDC updates and help in the identification of critical areas for climate-smart interventions.



Support Public-Private Partnership (PPP) Models for Deployment of Decentralized Renewable Energy Systems in Assam and Meghalaya



Client – Shakti Sustainable Energy Foundation
Duration – June 2020 – Ongoing

IORA is working on “Developing Public-Private Partnership (PPP) Models for Deployment of Decentralised Renewable Energy (DRE) Systems in Assam and Meghalaya”. The project endeavors to showcase the importance and accessibility of DRE solutions for rural and remote areas. Its goal is to help the states achieve SDG 7 by providing reliable access to electricity through the deployment of renewable energy projects.

We are piloting 10 solutions across seven districts in both states addressing issues of rural electrification, development of local enterprises, building resilient disaster risk management (DRM) and enhancement of education and medical infrastructure.

Under the project, IORA organised a ‘Technology Showcase’ and stakeholder consultation, to bring together DRE solution providers and local stakeholders. The companies offered varied DRE solutions for contextualized applications in the region. DRE has the potential for bridging the developmental gap in these states while meeting local needs and aspirations. The showcase discussed technologies for distributed energy generation, energy storage, demand response, and grid infrastructure design. The event also familiarised stakeholders with technical, financial and socio-economic aspects of different DRE technologies.

We have identified the potential areas for deployment of DRE solutions and engaged with potential funders – businesses and government agencies, and community stakeholders to forge a partnership towards the deployment of the solutions. All our DRE solutions have been vetted by community stakeholders.

These pilots present a strong case for furthering the goals of equitable access to affordable, reliable and sustainable energy in line with state policy, and the aspirations of the people.

Our Clients





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For More Insights -

