

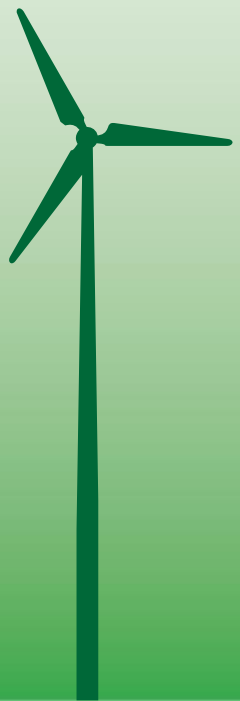


Fast-tracking Climate Action through Research and Collaboration

Who We Are

Integrated Research for Action and Development (IRADe) is an independent, non-profit advanced research institute that aims to conduct research and policy analysis to engage stakeholders such as government, non-governmental organizations, corporations, academic and financial institutions. Energy, climate change, urban development, poverty, gender equity, agriculture and food security are some of the challenges faced by the world in the 21st century.

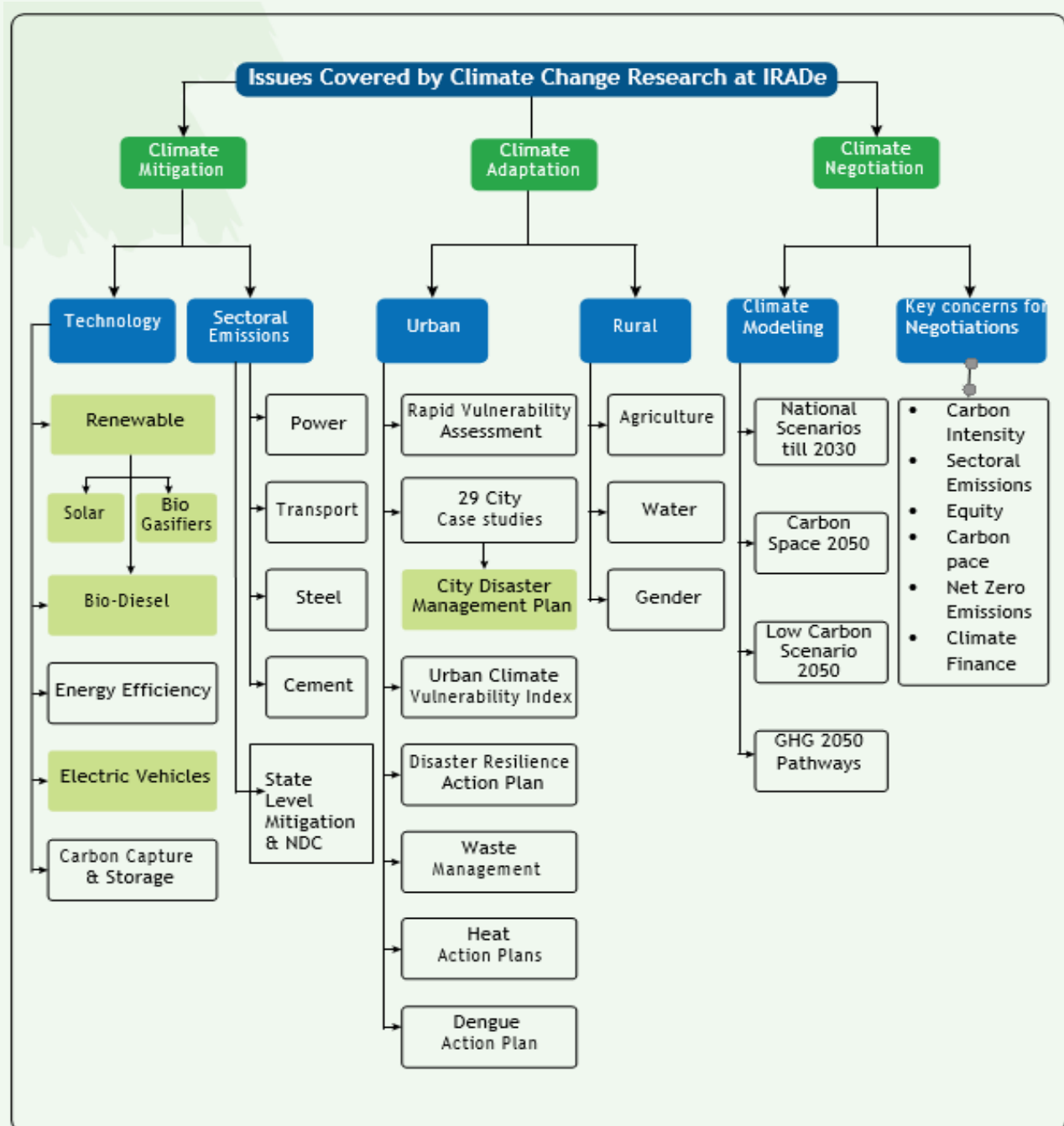
IRADe covers Climate Change issues from a holistic perspective covering aspects of climate mitigation, adaptation, climate negotiations. We address them with Global, National and state-level perspectives along with sectoral details viz. Power, transport, industry, agriculture and household sectors, air pollution and ecosystems. Our multidisciplinary approach synthesizes technology, economy, SDGs, equity, among others and offers multidimensional perspectives.



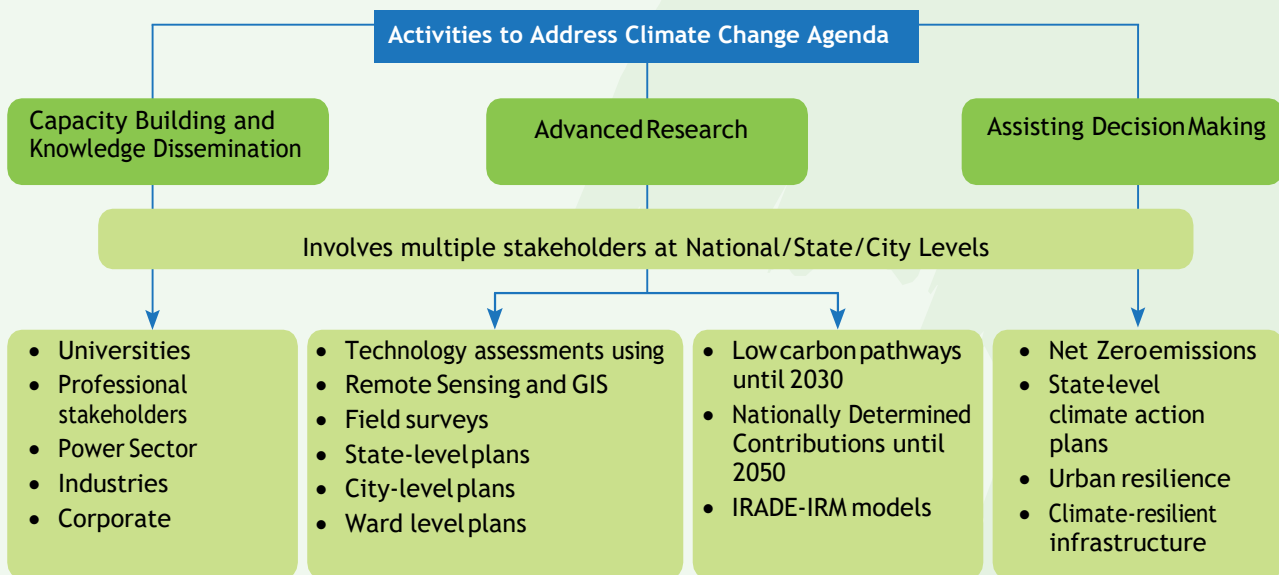
What We Do for Climate Action

IRADe has made policy level contributions to institutional, technological and financial issues, bringing into focus the discussion of mitigation, adaptation and development by better conceptualizing and integrating problems of climate and development.

IRADe provides inputs with models in the area of low carbon pathways until 2030 and 2050 to various ministries for Climate Policies in India. IRADe assists in country reports and provides inputs on negotiating positions, arguments and policy suggestions to ensure equity principles. We describe our activities in brief about these major areas below viz. Climate Mitigation, Adaptation and Global Climate negotiations.



IRADe has provided policy-relevant analysis of different options for National and global climate governance, including assessments using integrated modeling of both mitigation technologies and adaptation potentials to - facilitate international dialogue and understanding around the climate and energy policies by advanced research, capacity building of University/college students and state level and municipal representatives and assisting decision making.



Climate Mitigation

IRADE has developed a wide variety of modelling tools under various research projects. IRADE has contributed to policymaking for the Government of India by using this modelling tool through various studies, such as the study on economy-wide low carbon strategy for the expert group on low carbon inclusive Growth Strategy, Planning Commission 2014, and guiding the formulation of Nationally Determined Contributions (NDCs) for the Paris agreement along with Ministry of Environment, Forest and Climate Change (MOEFCC) to guide the formulation of NDCs. Recently, IRADE has used the macroeconomic model to make scenario-based projections to advise the MOEFCC for the Glasgow COP, including solutions for Net Zero transitions. IRADE has also developed modelling tools to analyze electricity trade in South Asia which can support climate mitigation in the South Asian countries.

IRADE's has analyzed state and National Level Mitigation strategies and has provided perspectives by sectoral and technology analysis. IRADE has worked on e-mobility for the transport sector, given its increasing importance in emissions inventory. Our policy analysis includes mitigation options that span across Power, Transport, electric cooking, solarizing schools and medical centres and farms with solar pumps. To assess policy options in the transport sector, IRADE has developed transport models at the national, state and city level. IRADE has done numerous techno-economic analysis for carbon capture and storage, CCS, Biodiesel, LPG and electric cooking and EV for the power sector till 2030 and 2050.



Electric Cooking



NDC Policy Dialogue on Climate Change and Environment, Odisha, 2019

Climate Adaptation and Resilience

Urban disaster resilience

Since 2008, IRADe has been designated as a Centre of Excellence (CoE) by the Ministry of Housing and Urban Affairs, Government of India. As a CoE, it addresses critical issues related to urban development and climate resilience in India. It works towards capacity building, raising awareness, research and training, integrating various urban developmental efforts and documenting best practices and policy level prescriptions. IRADe undertook rapid vulnerability assessment of 20 cities across India, Prepared roadmaps for mainstreaming climate and disaster resilience components in the smart city development plans of 10 cities and piloted urban climate vulnerability index. IRADe prepared hazard vulnerability and critical infrastructure maps for cities, enabling planners and decision-makers to devise city disaster management strategies and resilience action plans for various smart cities. Detailed work on Remote sensing and Geographic Information System (GIS) has been done for state, city and ward levels in India.

Heat stress and Dengue Action Plans

IRADe has developed and implemented Climate Adaptive Heat Action Plans through extensive studies on mapping vulnerability population, heat islands in the cities of Delhi, Bhubaneswar and Rajkot. A toolkit for developing climate-adaptive heat action plans for the cities and South Asia Heat Health Information Network (SAHHIN) are developed to act as a platform to promote scientific interventions, prepare action plans and empower capacity building among stakeholders for South Asian countries and organized several masterclasses and conducted Medical stakeholder training. Predictive modelling for dengue outbreaks and Dengue Action Plans were developed to strengthen city health resilience and reduce climate change impacts on vector-borne Diseases.

Rural Resilience

IRADe assessed the vulnerability of food security and livelihood due to climate change and found that the yield of wheat and rice will be affected adversely over the short (2030), medium (2050) and long-term (2080) periods. The ongoing schemes and programmes by the Government of India have great potential to address these challenges. Our approaches are always Gender sensitive.

Capacity Building



Strengthening Climate Negotiations

Our activities range from advanced research and participation in the IPCC, GHG modeling for assisting decision-making, and participation at a global level, such as the World Economic Forum, Conference of Parties, among others. We also test solutions at the local level, such as electric cooking in Nepal or Solar transition of schools and medical centres in India.

IRADe inputs regarding low carbon pathways for the Planning Commission and the Nationally Determined Contributions for Paris Agreement until 2030 and 2050 have been used for climate policies in India. IRADe charted out Net Zero Pathways and the need for technologies and Climate Finance. IRADe has participated in a number of meetings of Conference of Parties (CoP) such as Montreal, Bali, Doha, Katowice and Madrid. IRADe provided analytical support to the MoEFCC for developing NDC for the Paris Agreement. Results, outcomes and findings from the IRADe CoE are widely shared on various forums and platforms like IPCC, European Union, Rockefeller Foundation (ACCCRN), UN-Habitat.

IRADe has suggested taxing cumulative emissions of a country since 1990 to equitably raise climate finance because global warming is a function of the stock of emissions in the atmosphere.

IRADe Participation at CoP25



CoP25 Madrid, 2019



IPCC Special Report on 1.5°C, COP24 Katowice, 2018

IRADe in CoP Dialogues



Friends of CoP26, Wilton Park, UK 2020-2021



National Conference on Post Paris Climate Action, 2016



COP21 DIALOGUE - French Embassy, India



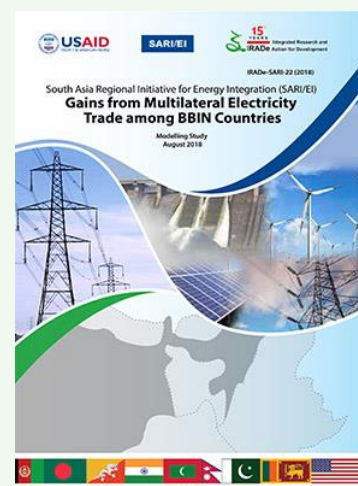
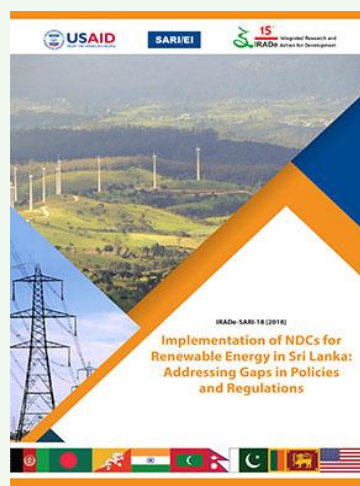
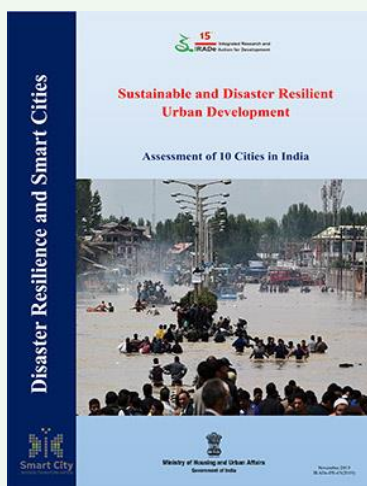
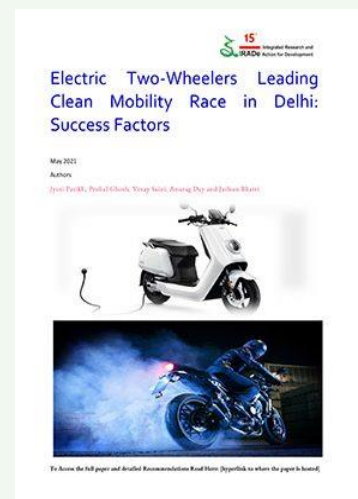
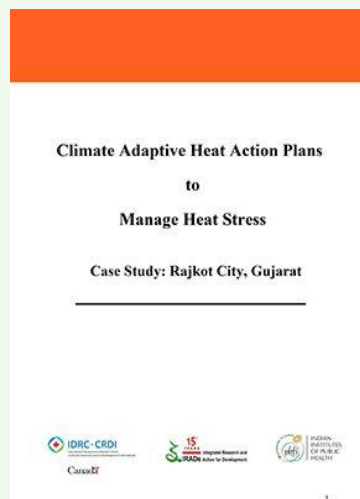
South Asia and Global reach

Climate Change cannot be solved within national boundaries, and South Asia and Global concerns have to come in. IRADe, through the South Asia Regional Initiative for Energy Integration (SARI/EI) supported by the United States Agency for International Development (USAID), works with Ministries and policymakers, regulators, system operators, multilateral agencies, think tanks and civil society - especially in Bangladesh, Bhutan, India, Nepal and Sri Lanka (BBINS), to increase cross border energy trade (CBET) within the countries, so as to increase clean energy transition in the region.

South Asia Regional energy cooperation will ultimately lead to cheaper power and accelerated economic and social development through renewable energy and pumped hydropower, with closed and open-loop to help the South Asian countries meet their NDC commitment.

IRADe also worked on renewable energy transition support and developed solutions at the local, regional, national level, e.g. electric cooking in Nepal.

Recent IRADe Publications



Sponsors



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