

**Climate Adaptive Action Plans to Manage
Heat Stress in Indian
Cities**

Partner's Inception Workshop

Date: 1st February, 2018, Time: 10.00 am
– 2.30 pm **Venue:** India International
Centre (IIC), Delhi

New Building, Seminar Room 1

Organized by: Integrated Research and Action for Development IRADe, New Delhi

Supported by: International Development
Research Center IDRC, Canada

BACKGROUND

The Intergovernmental Panel on Climate Change estimates that rising global temperatures will increase the amount and severity of heat waves. In India, these heat waves are exacerbated by the heat generated by human activities in urban areas. This has a considerable impact on the health of vulnerable communities, including a rise in fatalities. According to the Indian Meteorological Department, in 2015 alone more than 2,400 people died of heat-related causes. Despite projections by climate models of a warming climate and increasing frequency of extreme heat events in the coming years, in India the public recognition of the magnitude of these hazards remains low. Administrative support systems generally lack preparedness measures and data to quantify how heat stress affects human health, work productivity, and livelihoods.

This project, implemented by the New Delhi-based organization Integrated Research for Action and Development (IRADe) is funded by International Development Research Centre, IDRC, Canada. It will support the development of location-specific and gender-sensitive heat stress action plans in Delhi, Bhubaneswar, and Rajkot in association with their Municipal Corporations, Indian Institute of Public Health (Gandhinagar and Bhubaneswar), and Odisha State Disaster Management Agency. These plans will be based on quantitative and qualitative measures, primary and secondary data, and shared learning dialogues with stakeholders.

The objectives of the project are:

- Identify spatial vulnerability of populations during extreme heat events in selected areas;
- Identify the impacts of extreme heat events on the health, work productivity and livelihoods of vulnerable population in selected areas
- Select appropriate, innovative and affordable climate adaptation measures for improving health and livelihood resilience for the urban population, with consideration of the associated cost effectiveness as well as gender-based implications.
- Strengthen the capacity of key stakeholders to facilitate the implementation of the Heat Stress Action Plans and their long-term sustainability in the selected areas through training opportunities
- Facilitate active use of information and evidence for policy makers to drive the implementation of the

The researchers, in collaboration with the Municipal Corporations, will identify the spatial vulnerability of populations during extreme heat events; analyze the impact of extreme heat events on health, work productivity, and livelihoods; select appropriate, innovative, and affordable climate adaptation measures that consider associated cost effectiveness and gender-based implications; provide training to urban planners, municipal commissioners, city engineers, officials from various healthcare centers, and municipal health officers to improve their ability to execute heat stress action plans; and organize policy workshops to facilitate the implementation of the heat stress action plans into municipal disaster strategies in the selected areas.

The research process and plans developed are expected to influence appropriate adaptation actions and associated policy at the municipal scale, which will improve resilience and reduce vulnerability of more than

10 million at-risk people in the selected areas

*The project will develop spatially differentiated and gender sensitive Heat Stress Action Plans (HSAPs) for Delhi, Bhubaneswar and Rajkot for better management of heat stress risks. HSAPs will **support India's medium term development planning** in prioritizing and integrating adaptive resilience within the agenda of climate resilient smart cities.*



Row 1 from L-R: Dr. Probal Ghosh, Dr. Ambarish Ganguly, Mr. Rohit Magotra, Dr. Ajit Tyagi, Dr. Anindya Chatterjee, Dr. Pradeep Nayak, Dr. Partha Ganguly, Dr. Milan Panday

Row 2 from L-R: Ms. Ananya Mukherjee, Ms. Moumita Shaw, Dr. Melanie Robertson, Dr. Jyoti Parikh

INAUGURAL SESSION

Introductory Presentations by Partner Institutes/Agencies

Prof. Jyoti Parikh

Executive Director, IRADe

Dr. Anindya Chatterjee

Regional Director, Asia Regional Office, IDRC Canada

Dr. Milan Pandya

Medical Officer, Rajkot Municipal Corporation

Dr. Ambarish Dutta

Associate Professor, Indian Institute of Public Health-Bhubaneswar

Dr. Partha Sarthi Ganguly

Additional Professor, Indian Institute of Public Health-Gandhinagar

Dr. Pradeep K Nayak,

Chief General Manager, Odisha State Disaster Management Authority

WELCOME ADDRESS

Mr. Rohit Magotra, Assistant Director, IRADe

Mr. Rohit Magotra thanked all the partners for taking out time to attend the inception workshop and briefly introduced everyone.

OVERVIEW OF INTEGRATED RESEARCH & ACTION FOR DEVELOPMENT



Prof. (Dr.) Jyoti Parikh

Executive Director, IRADe

The inception workshop started with an introduction of IRADe by Prof. (Dr.) J. Parikh. She gave an insight to IRADe's 5 thematic work areas viz-a-viz Sustainable Development, Climate Change & Environment, Energy & Power Systems, Poverty Alleviation & Gender, Agriculture & Food Security.

Prof. Parikh shared IRADe's vision to be a leading independent policy research organization and a think tank that suggests implementable policies in energy, environment and climate change with a focus on the thrust working areas. IRADe as a Center of Excellence under Ministry of Urban Development, contributed to India's Intended Nationally Determined Contributions (INDC) for the COP 21, Paris & the project 'Climate Adaptive Action Plan for Managing Heat Stress' will be dealt under the Cites & Health vertical of Sustainable Urban Framework of IRADe. She shared the information regarding the other on-going projects of IRADe under this vertical: Early Warning system for Dengue in Delhi & Rajkot, Disaster Resilience Action plan for Shillong & Gangtok, Air pollution action plan for Delhi.

INTRODUCTION TO INTERNATIONAL DEVELOPMENT RESEARCH CENTER



Dr. Anindya Chatterjee

Regional Director, South Asia, IDRC

Dr. Anindya Chatterjee gave an introduction of IDRC and its programmes in India. He explained that over the last decade IDRC has supported research and developed knowledge base to mitigate the socio-economic impact of climate change, for which they are addressing the vulnerable hotspots, cities & climate change, coastal cities, mountainous area, urban and peri-urban areas at strategic policy level; details of which is given on IDRCs website.

He opined that today climate change is being addressed over the top of all the policies, little late than never. A survey revealed that agriculture will be affected by climate change by 15-18% in irrigated areas and about 20% in non-irrigated areas. Therefore, this is a valuable opportunity which wasn't available

before, to work on projects related to climate change. IDRCs recent climate change programme is called CARIAA (Collaborative Adaptation Research Initiative in Africa and Asia) which is bringing more than 450 researchers, 80 consortia members and about 40 partner organizations together. In India, IDRC is working to address water issues (river basin system, underground water recharge) in urban and peri-urban areas, mountainous region- glaciers & delta. The Heat Stress project comes under cities & climate change, which broadens IDRCs rapporteur, the issue is vital and critical in cities. Hence needs a deeper study. He wished everyone a success for rolling out of the project.

INTRODUCTORY PRESENTATION: RAJKOT MUNICIPAL CORPORATION

Dr. Milan Pandya

Medical Officer, RMC



Dr. Pandya, informed that since 2005 average annual temperature of Rajkot City has increased by approx. 2°C. and in 2016 the maximum temperature was above 45°C for 7-8 days. Rajkot Municipal Corporation has stationed water vending machines for free of cost, but its major concern are the labourers who spend 8-10 hours/day in heat without adequate food, water and other supplements. He highlighted the problems faced in raising awareness and in programme implementation. With a population of 1.78 million (M

corp), Rajkot city has only 2 government hospitals. Dr. Pandya informed diarrhea and vomiting cases stay at peak in the city from March to August.

Mr. Magotra, pointed out that Rajkot has about 120 slum pockets. Given that it is one of the fastest growing cities and identified for smart city initiative along with New Delhi and Bhubaneswar, hence they make a good case for HSAP. He also highlighted that health and climate change are not addressed under the smart city programme. Furthermore, for IPCC work on climate and disaster resilience, 10 of smart cities were considered at the policy level for integrated planning. Dr. Nayak shared that smart city programme is an ICT enabled governance system. However, finances are problematic.

Dr. Pandya also mentioned that Rajkot city has complete medical records including the patient's names, addresses, types of diseases, symptoms etc. and also conduct regular medical follow-ups, which in turn helps authorities in arranging follow up actions and distribution of ORS. However, it is often the poor and laborers who are affected by seasonal diseases. Dr. Dutta, also questioned the accuracy of data which levy limitations on the project while statistically analyzing the data.

INTRODUCTORY PRESENTATION: INDIAN INSTITUTE OF PUBLIC HEALTH BHUBANESHWAR



Dr. Ambarish Dutta,
Associate Professor, IIPH-B

Dr. Dutta gave a brief on the institute and explained how catastrophic daily heat is vis-à-vis a heat wave. Bhubaneswar has state data on confirmed deaths and compensations sought from the government.

He spoke on heat related deaths and explained how rise in summer temperature, affects mortality rate. He added that it may not be heat stroke or heat exertion which causes the deaths, but the micro-stress of heat. IIPH,

Bhubaneswar has conducted a small study on mortalities in summer months (March-July), (corresponding mortality & municipal vital registration system of all deaths) for 9 years in Bhubaneswar city. The study indicated that people start dying (due to any cause) at the lower threshold of 36.2°C & it exponentially increases when temperature crosses the higher threshold of 40.5°C. He recommended that all mortalities must be investigated for heat stress. He drew attention towards temperature thresholds and city wise variation. He said that for Ahmedabad a shift of 5°C is observed, making the population resilient to 5°C hotter temperature. This would help in appropriate designing of early warning system. He suggested that Roth Fuzz index can be used for labelling heat stress.

He also pointed out the lag effect of heat, which is though negative in Bhubaneswar due to coastal climatic conditions, can be higher for inland regions, like Rajkot. Extracting the data from Indian medical system indicating the cause of mortality will be challenging, but all causes of mortality must be investigated as the trend shows a higher mortality rate during temperature surge.

Mr. Magotra stressed on the cumulative effect of heat island and pollution on health. It was discussed that the slums also vary in their structural nature, for example, slums in Bhubaneswar are more organized as compared to Delhi, hence will be differently affected by heat stress. Dr. Ganguly opined that farmers in rural areas are less vulnerable to heat as compared to labourers, vendors and hawkers working in urban areas.

Prof. Ajit Tyagi, (*President Indian Meteorological Society (IMS) & Senior Advisor IRADe*), mentioned that high heat prone areas, slums as well as heat islands need to be identified. It would not be sufficient to only rely on spatio-temporal data as a single point source data. He suggested triangulation of data for heat mapping.

Dr. Probal Ghosh, (*Head Modelling, IRADe*), questioned the impact of awareness generated in the

vulnerable groups, which Dr. Dutta explained if proper adaptation awareness mechanism is in place then threshold of heat related deaths will increase but a large-scale study has not been initiated to understand what mechanism works and what does not. Mr. Magotra shared the two objectives of the project that may help in better understanding of the issues, first is the use of spacio-temporal data for time based analysis and second, overlay of vulnerability profile of each city project. Dr. Dutta concluded saying that every city should have an early warning system in place.

INTRODUCTORY PRESENTATION: INDIAN INSTITUTE OF PUBLIC HEALTH GANDHINAGAR

Dr. Partha Sarthi Ganguly, *Additional Professor*



Dr. Ganguly, gave a brief presentation on Gandhinagar institute, degrees offered and projects handled. The institute has recently shifted from Ahmadabad to Gandhinagar and the land for the institute was given by the government. The institute was inaugurated by CM Gujarat, hence, it has a strong support from the government. The new institute is built across a large campus with green open space and has hostel facility as well. The main activities of IIPH-G are: Education Diploma MPH, PhD (start in 2018), Applied and field Research, Health system support to government, Community awareness and Behavior change, Short term trainings (openly offered and tailor made), Advocacy and policy making support. The institute is currently training the government engineers regarding vector borne diseases, for better future planning. He gave an overview of the key academic programs currently going in IIPH-G. The institute has started a state of the art techno business incubation center for any health related new technology to enable researchers, practitioners to use a databank. They have strong international collaborations and partners with a range of bi/multilateral agencies, academia, government bodies and research institutes.

He shared a Case Study of Ahmadabad. The first scientific workshop for Ahmadabad Heat Action Plan was held on March 2012, a co-party agreement was signed. After a basic work of 2 years, the report was framed which is a similar kind of work for this project. He discussed that Gujarat experienced severe heat wave in 2010 and a study conducted by them (2010 vs avg. of 2009 & 2011 data - Heat wave vs Non heat wave period) revealed lag in heat stress as well as $1/3^{\text{rd}}$ reduction in death after the Heat Stress Action Plan was rolled out. In 2014, heat wave similar to 2010 was observed but a reduction of about 35% was seen for actual death vs expected death, which in turn may be inferred as a positive effect of the awareness of Heat Action Plan. The same could be observed for the mortality data of 2016 vs 2010, where the temperature had risen a degree more than 2010 but mortality in 2016 was lesser, which may be due to the awareness generated. Mr. Magotra added that another intervention was from the municipal bodies & health sector to

prevent heat related deaths. In Ahmadabad, the minimum temperature increases with the maximum temperature, the body is not at ease, hence vulnerability is increased. They have collected 15 years' data from 2001-2015, it was observed when minimum temperature rises beyond 30°C , number of death also rises, whereas maximum temperature remains the same. On the other hand, if the maximum and minimum temperature variation is high it will cause more havoc, hence the study of data reveals that minimum temperature effects mortality. He also opined that respiratory issues and unconsciousness are also related to heat stress, as the data showed in the month of May (when temp is high) rate of unconsciousness is higher. Prof. Parikh questioned the role of pollution in heat wave effect. Dr. Dutta further added that pollution may aggravate heat stress and needs to be studied as winter pollution differs from the summer pollution level. Mr. Magotra agreed to consider this aspect for the 3 project cities.

The on on-going scientific works of IIPH includes: Establishing Temperature – Mortality Relationship for various cities to understand the impact of heat in human health, developing various statistical models for assessing the attributable deaths due to heat, its lag effects and determining its future impacts, disseminating the findings. Dr Ganguly shared a comparison of heat threshold (15 years' data for Ahmadabad) for mortality in Ahmadabad is around 43°C whereas in Bhubaneshwar was 36.5°C , and the mortality rate increases exponentially after 44°C which can be attributed to humidity. They have scientifically determined the thresholds with color codes to issue warnings at various levels.

He also shared that 24 NICU admissions with high temperature without infection in newborns: versus 8 and 4 in 2009 and 2011, respectively. Vulnerability sample survey revealed Construction Workers, Kite Makers, Aggarbatti rollers, Rag Pickers and Street Vendors are at risk. Cool roofs have been implemented to reduce indoor heat. Dr Ganguly thanked Prof Ajit for his support in framing the advanced warning system in the country and NDMA has issued NHAP guidelines, due to the policy implications people are now aware about heat stress. NDMA also developed TV snippets along with IIPHG.

INTRODUCTORY PRESENTATION: ODISH STATE DISASTER MANAGEMENT AUTHORITY A



Dr. Pradeep K Nayak, OAS
Chief General Manager

Dr. Nayak gave a brief on the authority that came into existence following Odisha super cyclone in 1999. The state experienced severe heat wave in 1998 that killed almost 2000 people. After OSDMA was set up the number never crossed 1000 persons. OSDMA keeps a daily track with IMD and ISRO for weather updates, and uses this information in raising awareness and forewarning. They have issued simple steps for

heat resilient life like use of heat trapping materials in building construction, design and paints.

He showed concern that the workplaces/offices are not ready to address heat waves. He also expressed concern about indoor pollution and temperature and said that about 90% of people think living inside the house would protect them not knowing that indoor air pollution levels & temperatures are also high.

INTERACTIVE SESSION

Interactive session on Reporting, Monitoring and Output Dissemination

Mr. Rohit Magotra

Deputy Director, IRADe

Dr. Melanie Robertson

Senior. Program Manager, IDRC

Interactive session on Financial Reporting for Partners

Mr. Rakesh Tiwari

Finance Head, IRADe

OVERVIEW OF IDRC'S MANDATE & INTEGRATION OF THE PROJECT INTO IDRC'S CLIMATE CHANGE PROGRAMME

Dr. Melanie Robertson

Senior. Program Manager



Dr. Robertson, introduced herself and gave an overview of IDRC's mandate. She briefed everyone about the global presence of IDRC. IDRC aims to make knowledge a tool for addressing pressing challenges by providing funds, advisory, fellowships and training in three broad areas: agriculture and environment; social and economic policy; and technology and innovation. She informed that currently 83 projects are active under the climate Change programme, with 28% of budget allocated for Asia. The climate change research theme includes agriculture, water and land management, disaster risk reduction, heat stress, private climate financing,

modelling, migration, and economic analysis of adaptation, among other themes. IDRC's communication officer would give opportunities to build contacts, conduct conferences/workshops in this region for this project.

At the programme level, using gender approaches have always been a cross-cutting theme since 2006. For this project it is planned to support gender-sensitive Heat Stress Action Plans and a specific methodology should be developed and adapted to the context of respective city. She also explained the technical reporting & monitoring system to be followed by the project proponent and partners while developing HSAP. Each reporting is to be done half yearly, partners will report to IRADe and IRADe as per the guidelines will report to IDRC. The decided log frame is a tool to monitor the project, its methodology and timeliness and emphasized that the final technical report is a primary source of information and analysis for IDRC. It serves an important accountability function in reporting on what was achieved with IDRC's support. Mr. Magotra further explained that deliverables in the form of presentations, policy briefs, reviews, research,

etc. have to be documented and that everybody will be working on a common template. He opined that a lot of time also goes in meeting and mobilizing which forms a part of the project and a record of the same should be maintained. He discussed the project log-frame in the next session. Dr. Ganguly seconded the idea. Dr. Robertson discussed about the planning and documentations process for the project and agreed to share examples (link) with the team on communications and outreach work as well as the advertisements on website. She delineated that line of communication will be between her and Mr. Magotra and he will further pass the information to the partners and vice-versa. She also indicated that call for proposals on gender and climate change will soon be made public.

FINANCIAL REPORTING FOR PARTNERS

Mr. Ramesh Tiwari, Finance Head, IRADe, gave partners a brief on financial reporting. Mr. Magotra defined that even though this project does not have any elaborate guideline because it's not a sub-grant project, but for better understanding of raising invoices and other accounting related work this session will be helpful.

Mr. Tiwari stated that the nature of the agreement deliberated will be in line with consultancy contracts, due to certain stringent rules and implications for FCRA, as defined by IDRC. The duration of the contract will be 2 years starting from 1st February, 2018, should there be any changes in the timeline, deliverables, etc. the same will be considered for the contracts as well. The consultancy cost that have been agreed upon by the partners is inclusive of everything (incl. GST), i.e. IRADe would not pay over and above the agreed charges. And all the payment will be done against the invoices which will be subjected to TDS of ~ 10%, later a TDS certificate will be issued against the bills rates which can be later claimed for. Invoices have to be raised against the wetted deliverables only then IRADe will be able to process the bill. He also requested to submit invoices with legal name and proper entry else IRADe will not be able to process the same, also if the PAN card number is not mentioned then the TDS deducted will be double, as per the rules of IT Dept.

INTERACTIVE SESSION

Overview of the Project “Climate Adaptive Action Plans to Manage Heat Stress in Indian Cities” & an Interactive Session on Expected Outcomes & Project Log-frame

Q&A:

Mr. Rohit Magotra

Deputy Director, IRADe

Discussants:

Dr. Ambarish Dutta

Associate Professor, Indian Institute of Public Health-Bhubaneswar

Dr. Partha Sarthi Ganguly

Additional Professor, Indian Institute of Public Health-Gandhinagar

Dr. Pradeep K Nayak,

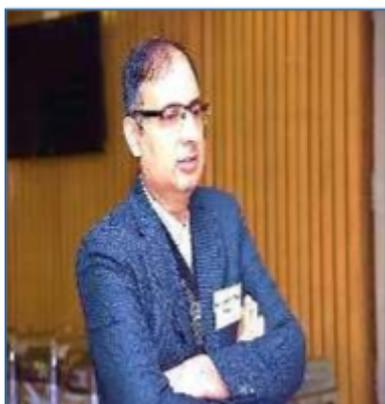
Chief General Manager, Odisha State Disaster Management Authority

Prof. Ajit Tyagi

President, Indian Meteorological Society & Senior Advisor IRADe

Dr. Milan Pandya

Medical Officer, Rajkot Municipal Corporation



Mr. Rohit Magotra,

Deputy Director

Mr. Magotra, gave a broad project overview and explained in detail the log-frame of the project. The first step is to bring a compendium together of all initiatives that have been taken in India & South Asia. The three project cities have been selected based on city size, geographical location & heat related issues, for e.g. in 2016 Delhi touched 47^OC & in last decade, Rajkot population increased by 79%. Hence the learnings from these cities would help in developing key initiatives towards managing heat stress and

can be disseminated in other cities as well.

He enlisted the key deliverables of the project:

- Synthesized report of existing policies and heat stress adaptation strategies in India
- Vulnerability maps of impact of heat stress
- Technical reports on spatial distribution of human vulnerability to extreme heat events
- Information compendium on heat stress cases and heat-related morbidity and mortality information at the municipal level
- Vulnerability index for each of the selected areas, including the demographic, environmental and health variables
- Draft HSAPs & Final HSAPs
- Shared Learning dialogues & Workshops

Mr. Magotra explained the three broad components of work package formulated for the said project viz- viz **Research, Training and dissemination**. The research work will be carried out during the first two years of the project which will identify the impact of extreme heat events on health, work productivity and livelihood of vulnerable gender based population & prioritizing the cost effective adaptation options at city, state level. A workshop will be conducted on the methodology for this project. The focus will be on all the lessons learnt from the research will be taken to training and later dissemination part of the project.

Mr. Magotra further shared information about the participation of Municipal corporation of both Delhi & Rajkot, whereas OSDMA will be the nodal authority for Bhubaneshwar. To address the gender component indoor and outdoor heat stress level will also be considered for the project. As per the discussions with the New Delhi Municipal Chairman, the evaluation of data source and possible outcomes of the study will be used for dissemination. Information compendium related to heat stress will delineate morbidity, mortality,

productivity and livelihood in various seasons for different cities, the vulnerability index is primarily an extent of the heat stress threshold for each of the project cities, three Vulnerability Index maps along with technical reports will be produced to understand the special distribution. This in turn can be used by other cities to understand their vulnerability and identify their status. The most important of all is the HSAP which will be prepared in consultation with the respective government, dialogues at community levels, academia, municipal corporation, etc. and the same will be translated to local language. The project will also cater to capacity building & training as the outcomes are broad and varied for each city level with the municipal corporations and OSDMA. During the primary research drafting of questionnaires, checklist, shared learning dialogues based on sample (qualitative & Quantitative data). The data will also be segregated based on gender; a comparative case study can also be done for the three cities. The secondary research will aim to identifying the cost effectiveness of adaptation strategy including the regional level cultural components.

An HSAP template has to be decided and standardized by the committee which can further be used for other cities, the same will be done in consultation with various stakeholders. The steering committee (OSDMA, RMC, IIPH-G, IIPH-B) so formed will guide, mentor, validate through the drafting of HSAP & will also be the approving authority. The three training workshops covering various components of varied stakeholders like urban planners, doctors, corporations, etc., the modules from the trainings and to share the knowledge a common platform (virtual network) will be organized. Dissemination is the most important component, advocacy, mobilization of stakeholders, policy engagement work will be done at city level as well as at the regional level. Each workshop would have pre-press release and post press releases, three policy briefs, three newsletters, three opinion editorials, etc. both in English and regional language, including regional media.

Dr. Ganguly opined that due to limited availability of mortality and morbidity data, assessment becomes difficult at household level. Population attributable risk fraction will be the biggest evidence to draw out the effectiveness of the HSAP. Dr. Dutta suggested that control city data should be included to keep track of the effectiveness of the HSAP. These control cities do not have to be identical but the secondary data and spatio- temporal data may help in further analysis. He also suggested to include ground/household level awareness work in programme implementation.

WAY-FORWARD

The workshop concluded with the following decisions to be taken in the near future:

- Tentative Dates for workshop for delineating methodology of the project at either Delhi or Bhubaneswar.
- Share letters on the formation of steering committee with partner agencies.
- Form partner E-mailing group
- Launch project website
- Initiate data collection process for summer season, 2018
- Share ethical documentation formats with partner agencies for approvals
- Share questionnaire with the partner agencies for approvals
- Formal communications and outreach plan
- Capture the impact of interventions at household level for a pilot area in the 2nd year of the project.
- Donor to share policy brief templates. However, the template is not mandatory to be followed by partner organizations for writing policy briefs
- Conduct Skype discussions and meetings, as needed



PARTICIPANTS

Donor Agency- International Development Research Center, Canada

- Dr. Anindya Chatterjee, Regional Director
- Dr. Melanie Robertson, Sr. Program Manager

Partner Agencies

- Dr. Ambarish Dutta, Associate Professor – Indian Institute of Public Health Bhubaneswar (IIPH-B)
- Dr. Partha Ganguly, Additional Professor – Indian Institute of Public Health Gandhinagar (IIPH-G)
- Dr. Milan Pandya, Medical Officer – Rajkot Municipal Corporation (RMC)
- Dr. Pradeep K Nayak, Chief General Manager – Odisha State Disaster Management Authority (OSDMA)

Project Proponent – Integrated Research & Action for Development, New Delhi

- Dr. (Prof.) Jyoti Parikh, Executive Director
- Prof. Ajit Tyagi, President Indian Meteorological Society (IMS) & Senior Advisor IRADe
- Mr. Rohit Magotra, Deputy Director
- Dr. Probal Ghosh, Head Modelling
- Mr. Ramesh Kumar Tiwari, Finance Head
- Ms. Moumita Shaw, Sr. Research Associate
- Ms. Ananya Mukherjee, Research Associate