

Integrating heat action plans
in the climate policy and
guidelines for evolving
gender sensitive heat
adaptation plan in cities in
South Asia



CBA2021-07SY-Magotra

2023



Urban Health &
Climate Resilience
Center of Excellence



Project Reference Number: CBA2021-07SY-Magotra

Project Duration: 1.5 years

Funding Awarded: 40,000 USD

Grant DOI: <https://doi.org/10.30852/p.20539>

Date of Publication: 30 May 2023

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Recommended Citation: Magotra R, Jha N,, Alam S S, Samarakoon D, Desai V (2023); Integrating Gender Sensitivity in Heat Action Policies in South Asia.



Asia-Pacific Network for Global Change Research (APN)

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1. Summary

South Asia is a hotspot for Heat wave related incidences. Between 1979 and 2017 the extreme combinations of heat and humidity doubled in much of India, Bangladesh and Pakistan. In some parts, summer temperatures are projected to increase by 3°C–6°C by 2100. Around 800 million South Asians live in heat “hotspots” that will face worse heat waves in the future. To minimize heat stress impact on health, work productivity and livelihoods of the economically and socially marginalized population, especially women, there is an urgent need to design and implement gender sensitive Heat Action Plans (HAP) focussed on vulnerable groups. However, there is a lack of a focussed strategy to build capacities of local administrations to develop HAPs. The project collaborated with the city municipal corporations of Colombo (Sri Lanka), Rajshahi (Bangladesh) & Surat(India) to develop climate adaptive and gender integrated heat action plans. The project did mapping of urban heat islands in the project cities, conducted field surveys to assess the impact of heat stress on livelihoods, health and productivity, identified specific factors contributing to vulnerability. The detailed framework for gender integrated heat action plans (HAP) was developed. A step wise training module for developing HAP was developed in English which was translated into local languages - Bangla and Sinhalese for capacity building of the local stakeholders. The project engaged with the key decision makers/policy-makers and stakeholders to evolve and disseminate knowledge and build capacity of the stakeholders for designing spatially differentiated and gender sensitive HAPs. The project also supported the project cities in developing the capacity of the city administration, increase awareness and knowledge among policy-makers and communication to the stakeholders.

2. Objectives

- ✧ Disseminate knowledge of a replicable spatially differentiated and gender-sensitive Heat Adaptation Plan.
- ✧ Local-level stakeholder's capacity building for better institutionalization and adoption of the newly developed strategies.
- ✧ Develop an effective communication strategy to ensure broader outreach and dissemination among different levels of stakeholders

3. Outputs, Outcomes and Impacts

Outputs	Outcomes	Impacts
3 project city reports on impact of heat stress on health, livelihoods and productivity	New knowledge on heat stress impacts on the vulnerable groups in the cities	Established gender impacts of heat stress on vulnerable population
3 Technical workshops	Capacity Building of city/state and national level Stakeholders	Developed Technical and Institutional capacity for heat adaptation plans
1 Training Module in	New Knowledge on	Climate Adaptive and

English on designing and developing Gender Sensitive Heat Action Plans which was translated in two local languages - English, Bangla and Sinhalese	developing spatially differentiated and gender sensitive heat action plans	Gender Sensitive Framework and Plans established for prevention and management of heat stress.
2 International Session at COP 27 and proceedings of the sessions.	Policy influencing for prioritization of integrating gender sensitive heat action policies for vulnerable communities	Higher visibility to the issue of climate resilient and gender sensitive heat action plans internationally .
Strengthened Network on South Asia Heat Health Information Network (SAHHIN)	Knowledge and capacity building platform on heat health in South Asia	Collaboration, knowledge capacity building platform in South Asia established.
3 Master Classes on Heat Adaptation plans	Training capacity building of the stakeholders in South Asia	Strengthened capacity and network for heat mitigation and adaptation.

4. Key facts/figures

- ✧ Identification of Urban Heat Islands and Vulnerable heat spots identified in three project cities
- ✧ First gender sensitive framework for integration in heat action plans developed
- ✧ Training module in English, Bangla and Sinhalese on Developing Gender Sensitive Heat Action Plans developed.
- ✧ Two Gender Sensitive Heat Action Plans developed.
- ✧ South Asia Health Information Network (SAHHIN) strengthened through the project was accredited by WHO-WMO as its complementary node in South Asia.
- ✧ Three workshops at city/national level in the project countries, one regional workshop and 2 international sessions on heat adaptation plans in COP 27
- ✧ Three Vulnerability Assessment to Heat stress reports
- ✧ 2500 plus subscribers established- SAHHIN News mailer
- ✧ 25 Plus publications of SAHHIN News mailer.
- ✧ Three Masterclasses- Capacity building of 300 Plus Participants

- ✧ Community Engagement on Heat Stress Awareness and Adaptation Measures of 200 plus families.

5. Publications

- ✧ Training Module for Developing Climate Adaptive and Gender Integrated Heat Action Plans.
- ✧ Training Module for Developing Climate Adaptive and Gender Integrated Heat Action Plans (Bangla).
- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Surat.
- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Rajshahi.
- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Colombo.
- ✧ Climate Adaptive and Gender Integrated Heat Wave Action Plan of Surat City.
- ✧ Workshop proceedings on “Developing Gender Sensitive Heat Action Plan for the Surat”, India.
- ✧ Workshop Proceedings on Developing Gender-Sensitive Heat Action Plan for Rajshahi, Bangladesh
- ✧ Gobeshona Session Proceedings on Climate Adaptive Heat Stress Action Plans for Vulnerable Communities in South Asia

6. Media reports, videos and other digital content

✧ IRADe's work on heat action plans for building climate resilience and saving lives in India globally acknowledged in the World Meteorological Organization press release

The press release also acknowledged the South Asia Heat Health Information Network (SAHHIN) in building the capacity of other South Asian countries for designing and implementing heat action plans.

Excerpts of the press release:

Civil society, such as the Red Cross Red Crescent Climate Centre Society and Integrated Research and Action for Development (IRADe New Delhi), also play a critical role, in deploying lifesaving communications and interventions to vulnerable communities. Typical plans make sure the targeted intervention is a right fit and designed for the heat-vulnerable population of a city. It first identifies the heat hotspots of the city, locates the vulnerable populations in these pockets, and assesses the nature and status of their vulnerability to extreme heat. The action plans have tremendously helped in reducing excess mortality. The South Asia Heat Health Information Network, SAHHIN, supported by GHHIN, is working to share lessons and raise capacity across the South Asia region. This recognition strengthens our resolve in climate action for building heat resilience in India and South Asia.

<https://public.wmo.int/en/media/news/successive-heatwaves-india-and-pakistan-highlight-role-of-early-warnings>

- ✧ UNFCCC side event at COP27, Egypt, 8th November 2022

IRADe organises the UNFCCC side event on “Addressing Heat Equity through Vulnerable Community focused Heat Adaptation Plans” on 8th November 2022 on the sidelines of the UNFCCC COP 27 Sharm El Sheikh, Egypt. The session was chaired by Dr Linda Anne Stevenson, Head of Knowledge Management and Scientific Affairs, APN and was inaugurated by Mr Santiago Alba Corral, the Director of IDRC’s Climate-Resilient Food Systems program. Dr Jyoti Parikh, Executive Director, IRADe highlighted that Climate Change is becoming increasingly complex and therefore, actions are required at home, ward, Municipal, state, regional, National and International levels. The lead presentation was given by Mr Rohit Magotra, Deputy Director IRADe. He focused on the impacts of heat stress on vulnerable communities, heat adaptation needs and solutions to address heat equity from the Global South and North.

<https://sites.google.com/irade.org/irade-cop27-sharmelsheikh/home?pli=1>

- ✧ Session on “Climate Adaptive Heat Stress Action Plans for Vulnerable Communities” event at COP27, Egypt, 10 November 2022

IRADe’s India Pavilion Side event on “Climate Adaptive Heat Stress Action Plans for Vulnerable Communities”, was organised on 10th November 2022.

Mr Rohit Magotra, Deputy Director, IRADe presentation showcased the Govt of India's adaptation strategies for designing and implementing heat action plans for states, districts and cities. Dr SC Bhan (Scientist F, IMD) highlighted IMD's role in Heat Adaptation in India. <https://youtu.be/OeGfWq6ek48?t=14699>

“Recommendation to make drinking water and ORS centers at major places to avoid scorching heat” Dainik Jagran | 30th April 2022
<https://www.jagran.com/delhi/new-delhi-city-ncr-recommendation-to-make-drinking-water-and-ors-centers-at-major-places-to-avoid-scorching-heat-and-heat-jagran-special-22676621.html>

✧ "The Impact of Heat Waves and Heat Action Plans in South Asia" by Rohit Magotra, October 18th 2022, published by URBANET- <https://bit.ly/3Bm8qdz>

✧ Session on “Climate-change adaptation as a critical approach to minimising disaster risk: Insights from the field” at Adaptation Futures 2020, 5th October 2021

Mr Rohit Magotra, Deputy Director, IRADe, spoke at the session on Climate-change adaptation as a critical approach to minimising disaster risk: Insights from the field organised by IDRC, Ottawa at Adaptation Futures, held on 5th October 2021. Mr. Magotra emphasized the role of climate adaptive Heat Action Plans (HAP). The HAP should have a framework for implementing, coordinating, and evaluating extreme heat response activities in cities. Adopting dynamic heatwave intelligence should alert populations at risk of heat-related illness in places where extreme heat conditions prevail. Its implementation in the cities in India has developed better-coping mechanisms to deal with heat stress.

http://adaptationfutures2020.in/pdf/Adaptation_Futures_Abstract_Oct4_revised.pdf

✧ Climate Adaptive Heat Stress Action Plans for Vulnerable Communities in South Asia"- Gobeshona Global Conference, 30 March 2022

IRADe in collaboration with the South Asian Meteorological Association, organised a session on “Climate Adaptive Heat Stress Action Plans for Vulnerable Communities in South Asia”. Held on 30 March 2022, this session deliberated on

assessing the impact of heat stress on vulnerable communities by designing gender-sensitive & climate adaptive Heat Action Plans and building capacity among municipalities, regional and national administrative bodies, hospitals, policy-making bodies, and the public.

<https://irade.org/Session-summary.pdf>

✧ Workshop on the “Developing Gender Sensitive Heat Action Plan for the Surat”,

Gujarat, 10th October 2022

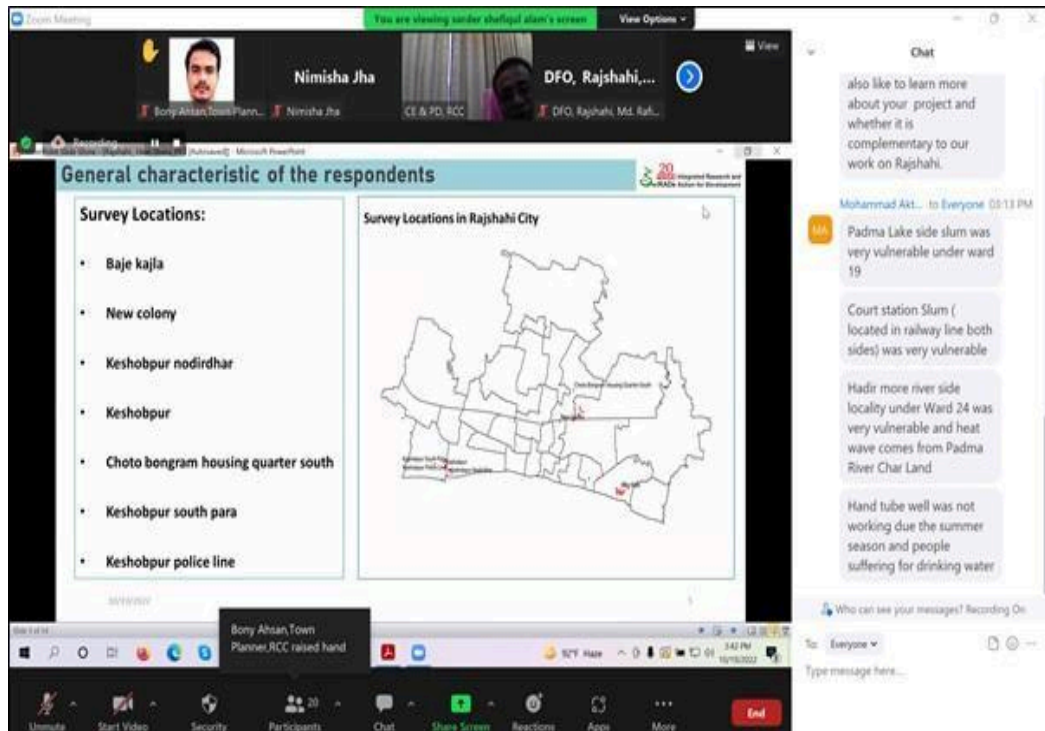


on

10th October 2022, at the Center for Social Studies, Surat, the consultation was organised by the Urban Health and Climate Resilience Centre of Excellence (UHCRC Surat) and IRADe under the Asia-Pacific Network for Global Change Research (APN) Project on "Gender-Sensitive Heat Action Plans in Cities of South

Asia". Dr Ashish Naik, Deputy Commissioner (Health and Hospital), Surat Municipal Corporation (SMC), & Honorary Secretary UHCRCE delivered the inaugural remarks. 35 participants attended the workshop, including the senior and mid-level officers from various departments of the SMC viz; Health, Fire and Emergency Services, Environment Engineering, Smart City, Town planning, Garden, Hydraulic, Community Medicine, Affordable Housing; Resident Medical Officers (RMO) from Surat Municipal Institute of Medical Education and Research SMC Hospital; Professors from Sarvajanik College of Engineering and Technology, Government Medical College, Center for Social Studies, Navsari Agricultural University Surat. The proceedings of the consultation can be accessed at <https://bit.ly/3HjHAqa>

- ✧ Workshop on Developing Gender-Sensitive Heat Action Plan for Rajshahi, Bangladesh, 19th October 2022- Dhaka/New Delhi



An online Stakeholder Consultation Workshop on the "Developing Gender Sensitive Heat Action Plan for the Rajshahi", Bangladesh was organised by the International Centre for Climate Change and Development, Dhaka and IRADe, Delhi, on 19th October 2022 under the Asia Pacific Network for Global Change Research (APN) Project on "Gender-Sensitive Heat Action Plans in Cities of South Asia".The workshop deliberated on key adaptation measures to be adopted for developing and implementing the Gender Sensitive Heat Action Plans for the city.

The proceedings of the consultation can be accessed at <https://bit.ly/3iMhWjP>

❖ 3 South Asia Heat Health Information Network (SAHHIN) Masterclasses:

Masterclass on Heat Early Warning Systems-Scientific Approaches for Estimating Thresholds, 28 October 2021. The Masterclass deliberated on the importance of temperature thresholds in heat early warning systems, various options and

best-in-use scientific analytical methods available for deriving such temperature thresholds, and the issues and constraints in policy decision-making in setting threshold temperature for heat early warning systems.

<https://www.youtube.com/watch?v=g7UqX21hmIo>

✧ Master Class on Heatwave Management Initiatives in India and their Impacts, 24th

February 2022

The Master class deliberated on the importance of a heatwave management framework aimed at preventing, responding, and containing heat-associated risks. It elaborated on the initiatives and actions taken by the National Disaster Management Authority (NDMA), Govt. of India for heatwave management. This session discussed in length the issues and constraints in policy decision-making in heatwave management in the country. The Masterclass was attended by researchers, practitioners, environment consultants, and academicians across the globe.

https://us06web.zoom.us/rec/share/Yv5069Ilf1-rqut9HGxhhiKKpPx4tvso0UZ6GPSH1E0muQIAovOA5xLyhHIGD-k.mtU79DM_Plg1oRIH

✧ Masterclass on Health Inclusive Heat Action Plan, 25th March 2022

The sixth Masterclass of South-Asia Heat Health Information Network (SAHHIN) at IRADe on “Health Inclusive Heat Action Plan” was held on 25th March 2022. It was conducted by Dr. Vikas Desai, M.D. (PSM) and Honorary Technical Director of the Urban Health and Climate Resilience Center of Excellence, Surat. The masterclass introduced the importance of health inclusivity in the heat action plans

and disseminated key components of a health-inclusive Heat Action Plan.

https://www.youtube.com/watch?v=aciVY_VqLpA

✧ Masterclass on Role of City Planning in Mitigation of Extreme Heat

The Masterclass was delivered by urban planning expert Dr. Rajashree Kotharkar, Professor, Department of Architecture and Planning, Visvesvaraya National Institute of Technology (VNIT), Nagpur, India. The Master class deliberated on the impact of Extreme Heat in the Cities and on the role of planning in the mitigation of Extreme Heat. The presentation also covered the application of Local Climate Zone (LCZ) Classification and LCZ based Urban Heat Island mitigation strategies. The Masterclass was attended by 90 plus participants from urban policy makers, researchers, urban planners and students.

<https://www.youtube.com/watch?v=V6qImeiiLS8>

7. Pull quotes

- ✧ The South Asia Heat Health Information Network (SAHHIN) works to share lessons and raise capacity across South Asia (UNESCAP)
- ✧ The South Asia Heat Health Information Network, SAHHIN, supported by GHHIN, is working to share lessons and raise capacity across the South Asia region. This recognition strengthens our resolve in climate action for building heat resilience in India and South Asia. (WMO)
- ✧ For the very first time, a gender integrated heat action plan framework was developed for the cities (Rohit Magotra, PI, IRADe)

8. Acknowledgments

"We would like to express our sincere gratitude to our partners India Meteorological Department (IMD), Urban health and Climate Resilience Centre (UHCRC), International Centre for Climate Change & Development (ICCCAD) SLYCAN Trust, Surat Municipal Corporation (SMC), Rajshahi City Corporation and Colombo Municipal Council for their invaluable support and contributions to this project. Their expertise and dedication have been instrumental in the success of this endeavour.

9. Appendices

- ✧ Proceedings of Stakeholder Consultation on the “Developing Gender Sensitive

Heat Action Plan for the Surat”, Gujarat 10th October 2022

https://drive.google.com/file/d/1KVMvsICW1OPEWGnFb120oTBnPkQTjJqR/view?usp=share_link

- ✧ Proceedings of Stakeholder Consultation Workshop on Developing

Gender-Sensitive Heat Action Plan for Rajshahi, Bangladesh, 19th October 2022-
Dhaka/New Delhi

https://drive.google.com/file/d/1I35MOJRjT5dQaphbNWfSVnYPiCqvMAv1/view?usp=share_link

- ✧ Proceedings of Integrating Heat Stress Management into Climate Policies and Guidelines for Gender-Sensitive Heat Action Plans in Sri Lanka Meeting with Colombo Municipal Council, 7 October 2022

https://drive.google.com/file/d/1nw8hTyV-wbWoY68s1P1TKfOhXbU-as2N/view?usp=share_link

- ✧ Urban Heat Island Maps of Surat and Rajshahi

https://drive.google.com/file/d/1g9UIQGfUR3vFe8r4REx2tFMiZPPCB26F/view?usp=share_link

- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Surat

https://drive.google.com/file/d/1Ej6cHv1vovm0CizGffYwnu7e_h5G4L/view?usp=share_link

- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Rajshahi

https://drive.google.com/file/d/1zbu97RDdL_pnhaLxkZZ5GYyIXu9yKe9j/view?usp=share_link

- ✧ Vulnerability Assessment of Households to Socio-Economic Impacts of Heat Stress in Colombo

https://drive.google.com/file/d/1YCrCHzjuy4Vjddo2yYkdkrq7rcI0XhUM/view?usp=share_link

- ✧ Developing Climate Adaptive and Gender Integrated Heat Action Plans

https://drive.google.com/file/d/1_sGIWytiVwNz3yvaa66pMmuEZO_LMRN3U/view?usp=share_link

- ✧ Developing Climate Adaptive and Gender Integrated Heat Action Plans (Bangla)

https://drive.google.com/file/d/1Le4rGmnWHHK09-Fnkdx8x0huS6_Wdh_K/view?usp=share_link

- ✧ Climate Adaptive and Gender Integrated Heat Wave Action Plan of Surat City

https://drive.google.com/file/d/1MtuQAUvY11iuvsLQqTCqTTIctSB2d_Ty/view?usp=share_link

- ✧ Factsheet- Rajshahi City in Bangladesh

https://drive.google.com/file/d/1SczpPyPhV8ML5R4OwyxNP9aZ4uk20c3c/view?usp=share_link

- ✧ Factsheet-Colombo City in Sri Lanka

https://drive.google.com/file/d/1QwVObmpXhUBQJBN4_a6DLPEg2Y96Cvfv/view?usp=share_link

- ✧ Summary of IRADe CoP sessions

https://drive.google.com/file/d/1-ZJSO6fjmeAcYDH_KPZ-upWOU9MIdYLE/view?usp=share_link

- ✧ Latest SAHHIN News Digest Links-

<https://us14.campaign-archive.com/?u=5354b3ff81e06c8f91df46cbe&id=1214d1987a>

<http://eepurl.com/ibvhfX> http://eepurl.com/h_iGqX

- ✧ Gobeshona Session Proceedings on Climate Adaptive Heat Stress Action Plans for

Vulnerable Communities in South Asia

<https://irade.org/Session-summary.pdf>

- ✧ **All Publications can be found in the link below:**

https://drive.google.com/drive/folders/17GB_wasDOG5AURVGLM2WXCzgssf-sj2m?usp=share_link