Building Urban Climate Change Resilience in Jorhat City, Assam

Why Urban Climate Change Resilience (UCCR)

Most of the Indian cities are confronting challenges of resource scarcity, ageing and/ or inadequate infrastructure, and poor quality of critical basic services. The situation is further aggravated by the fact that installing new infrastructure has become nearly impossible due to very high densities and lack of space. Major changes in density and decongestion of core urban areas to improve services are politically unpopular and administratively challenging. Only in rare cases are Urban Local Bodies able to decongest and improve the services in core areas. This problem of development deficit is compounded further by additional stress from climate change on urban infrastructure and critical basic services consequently producing a large-scale multiplier effect on the rapidly burgeoning urban population.

Project Partners

- Lead: Gorakhpur Environmental Action Group (GEAG)
- Collaborating partners: Institute for Social and Environmental Transition International-(ISET) and SEEDS India
- City Partner: Aranyak , Assam

Project period: 2012-2015

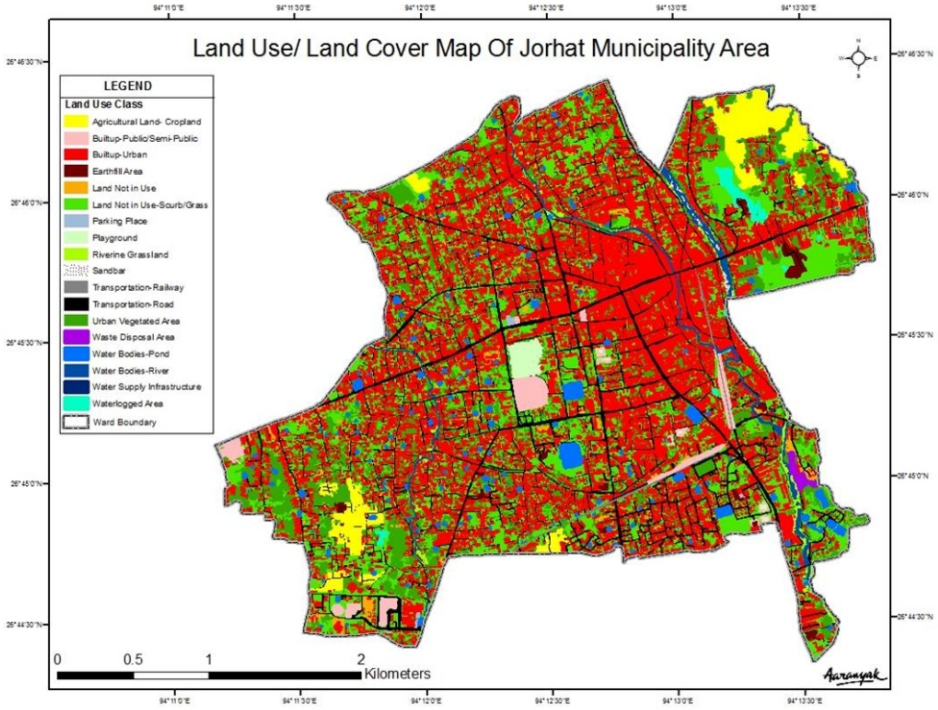
- City location : Jorhat, Assam
- City Population : 97946 (Census 2011)
- Area : 9.67 sq. km
- No of wards : 19
- Density : 10646.30/km2
- Administration : Municipality
- Annual rainfall : 1999.6 mm

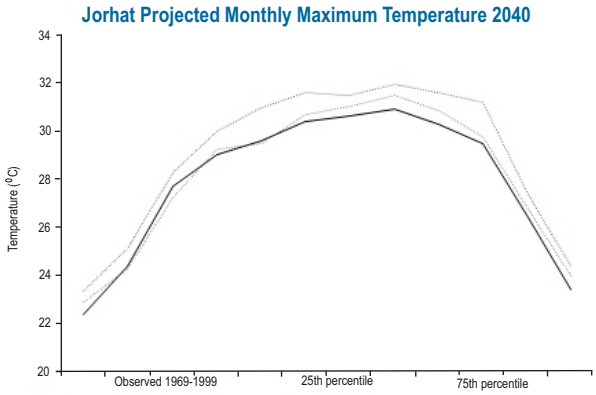
UCCR Coordination

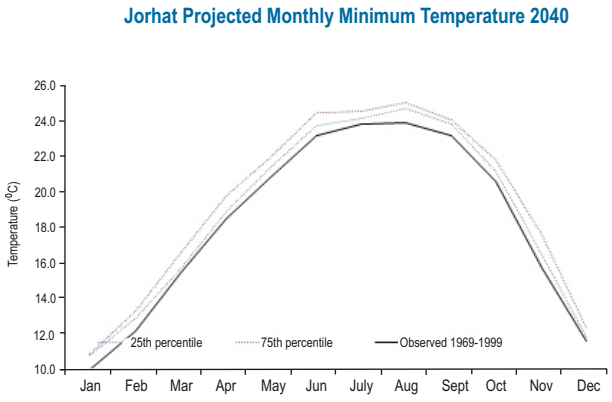
Gorakhpur Environmental Action Group (GEAG) is a partner in Asian Cities Climate Change Resilience Network (ACCCRN) India program. The ACCCRN- India program began in 2008 (Phase I: City scoping and selection). Three cities in India Gorakhpur, Indore and Surat were identified for engagement and assessment in Phase II (City level engagement and capacity building, development of City Resilience Strategy, 2009-2010). During this phase, TARU steered the program in Indore and Surat and GEAG in Gorakhpur. Phase III looked into implementation of urban resilience strategies and implemented interventions identified in the urban climate resilience strategy and action plan, 2011- 2014. Phase IV (2015-2016) is focussing on replication and scaling up of UCCR actions in India. In this phase GEAG is replicating its experiences of phase II and III in three cities namely, Basirhat (W.B), Saharsa (Bihar) and Jorhat (Assam) of eastern India.

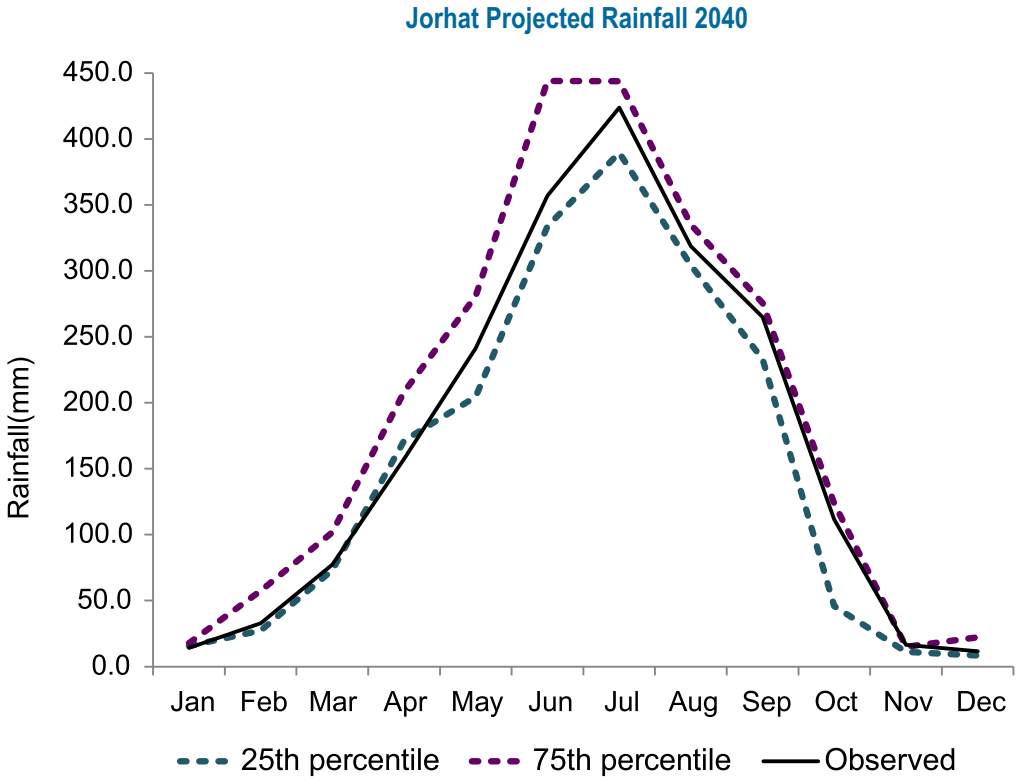
The City Jorhat (Brief Profile of Jorhat City)

- Jorhat, a historical town situated in upper Assam is the head quarter of Jorhat district of Assam, with 19 municipal wards;
- The name of the place Jorhat has significance. In historic past there were two markets, "Macharhat" and "Chowkihat" situated in the two different banks of the river Bogdoi and then the two markets joined together. Since then this place is known as Jorhat means 'Jor' to join, 'hat' market/mandi;









Source : • http://cmip-pcmdi.llnl.gov/cmip5/
• India water portal

- The Jorhat has been increasing its importance as an administrative centre, educational centre, and centre of trade for Jorhat, Golaghat and Sivsagar districts as well as for the neighbouring state of Nagaland;
- The city Jorhat had experienced 44.92% of population growth between the years 2001 to 2011;
- The average minimum temperature is about 10.1°C in January and maximum is about 32.2°C in August;
- The impact of climate change is explicitly manifested on maximum and minimum Temperature. Minimum Temperature is showing an increasing trend, while the maximum temperature is also increasing at Jorhat; and,
- Annual rainfall in future is likely to be increased by three to seven percent while the number of rainy days is also showing increasing trend due to orographic effects.

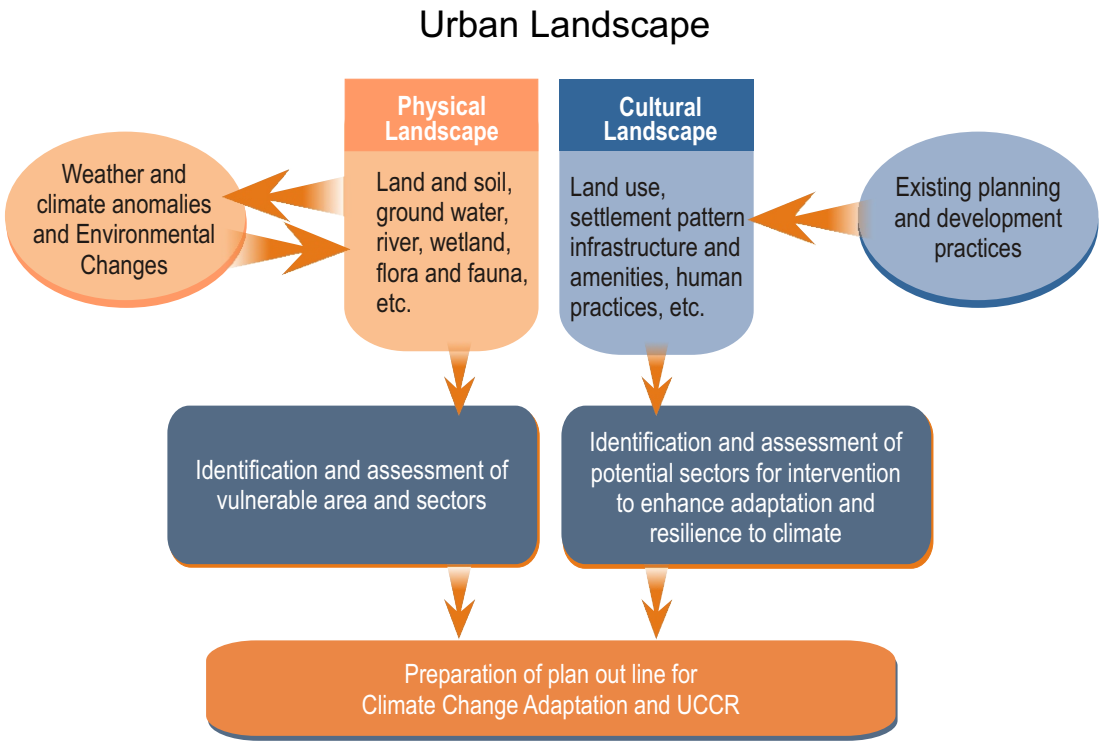
Objective of the Project

The main objective of the project is to enhance the capacity of the cities to develop Climate Resilience Strategy and undertake advocacy on UCCR issues at state, national and international levels for replication and scaling up of the ACCCRN process.

Project Output

- Improved understanding on the key vulnerabilities of the city by using participatory GIS methodology in Vulnerability Assessment
- Detailed strategy paper on improving City's Resilience (City Resilience Strategy) (detailing actions for short, medium and long term)

Approach and Process



Key vulnerabilities of the city

- Water logging is the critical and typical problem of the city during the rainy season due to poor drainage and solid waste management system. There are some pockets in the city where the risk is more critical;
- Poor drinking water quality is causing serious problem for public health;
- Diminishing buffer zone of water bodies due to encroachment and rapid land use changes; and,
- The city also devoid of basic urban facilities like safe drinking water, proper solid waste management, smooths traffic and community toilets.

Expected Impacts

- The project will benefit the populace of the city especially the poor and vulnerable and enhance understanding of vulnerability issues and Climate Resilience;
- Urban planners and municipality, will benefit through enhanced capacity to promote Climate Resilience with the aid of practical tools and methodologies made available to them; and,
- Programmes, policy makers and practitioners at the State and National level will benefit from dissemination of tools and methodologies, and cross learning on implementation experience of this project.

Lead by : Aaranyak
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