

# Local Government Climate Roadmap

Strong and  
Comprehensive  
Post-2012 Global  
Climate Agreement

Copenhagen 2009  
UNFCCC COP 15

Poznan 2008  
UNFCCC COP 14

Bali 2007  
UNFCCC COP 13

LOCAL ACTION FOR CLIMATE PROTECTION AND ADAPTATION — A SERIES OF LOCAL STORIES

## Surat, India

### Adapting to climate change - turning a crisis into an opportunity

**STORY IN SHORT:** Surat is committed to building resilience to climate change. In order to do this, the Surat Municipal Corporation is a part of the Asian Cities Climate Change Resilience Network (ACCCRN) which is supported by the Rockefeller Foundation. Surat is one of ten cities being supported by the ACCCRN initiative to develop and implement robust plans to prepare, withstand and recover from impacts from climate change.

### Assessing key issues for flood resistance

The Surat Municipal Corporation recognises that in order to design appropriate strategies and actions to increase climate change resilience, they need to better understand how climate change will affect their city and its inhabitants. Surat has become involved with ACCCRN to undergo a process of awareness building, stock taking, and capacity development, conducted through Shared Learning Dialogues (SLD). SLDs are platforms to share learning among a broad set of local stakeholders including the government, universities, NGOs, the private sector, community-based organizations and national and international resource groups.

Vulnerability assessments are a key part of this process. With technical support from ACCCRN partner organisations such as the Institute for Social and Environmental Transition (ISET) and TARU Leading Edge, the Surat Municipal Corporation has undertaken a series of vulnerability assessments to analyze how human communities, natural systems, and physical infrastructure will be affected by existing climatic variability and future climatic changes.

Through the SLD process, Surat has identified a number of city sectors for which detailed studies will be undertaken, including flood risk management, impacts on health, energy security, water security and the state of environment. These studies are intended to deepen the understanding of key issues for Surat in particular. Sector studies will provide a critical analysis to help generate the necessary information to identify practical interventions to increase climate change resilience and to prevent a potential crisis.



Surat slum settlement on flood plain  
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### Surat's challenge: Rapid urbanisation and climate change impacts

*The city of Surat, situated on the Tapi River just kilometres from the Gulf of Khambhat, has achieved national and global stature. A critical hub that links Mumbai and Ahmedabad in India, Surat is also known as a diamond cutting capital. The massive growth in trade and industry in recent decades has led to rapid population growth, expanding the administrative boundary from 8.12 sq km to 326.5 sq km since the 1960's.*

*Located in a floodplain and estuarial region, Surat is naturally susceptible to flooding, and recent population growth has increased its vulnerability. Floods in 2006 left more than three-quarters of the city submerged. In recognition of increasing vulnerability to climate change impacts, the city has launched an effort to strengthen its resilience, turning a crisis into an opportunity. In fact, the expansion of the administrative boundary presents an opportunity to undertake new growth and infrastructure investments. To take advantage of this opportunity, the city is exploring options for incorporating climate change resilience-building measures into the new strategic and master planning process.*



Surat's vulnerable communities on the waterfront  
© City of Surat

## Flood risk management

The city faces two sources of flooding: from the overflow of the river and the release of water from the Ukai dam and from local inundation and high tides, which affect the south and southeast portions of the city. As part of a flood preparedness plan, Surat Municipal Corporation undertakes a suite of actions prior to and during the monsoon season including review and updating of the disaster mitigation plan, ensuring effective rain water drainage by clearing storm drains and creeks and preparing temporary drainage and setting up of Relief Centers.

## Flood response in 2006: an example of cooperation and resilience

*Over the last two decades, Surat has experienced major floods almost every four years. The most severe floodings occurred in August 2006, when more than three-quarters of the city were submerged. Despite the severity of flooding, the Surat Municipal Corporation and city residents showed remarkable resilience in mitigating health risks associated with prolonged water logging and in recovering from the impacts of the floods.*

*During the flood, the city's gas company ensured a continued gas supply to households, allowing residents to boil water and thereby have access to clean water for consumption. This initiative helped to prevent a health epidemic. Surat Municipal Corporation, in collaboration with the South Gujarat Chamber of Commerce and Industry and the civil society, was able to clean the city in record time.*

*After the floods, the SMC tightened regulations on the maximum reservoir levels of the Ukai dam and shifted all its rescue equipment to a higher level. Contributions from the private sector came in the form of dialogues led by the SGCCI with insurance companies that enabled rapid settlement of claims. NGOs in the city also came together under one umbrella called 'Seva Sethu' so that their resources and capacities could be pooled and optimized.*

## Involvement in international climate initiatives

The Surat Municipal Corporation is working with the Gujarat State Disaster Management Authority to develop and test approaches to anticipate and respond to flooding. The city also participated in a panel discussion in Washington, D.C. for the UN's World HABITAT Day in October 2009. Through ACCRN, Surat has connected with the city of Durban, South Africa, one of the world's leaders on climate change resilience.



Surat is one of the largest cities in India

## City profile & contacts

Surat is an important commercial city in the south of Gujarat State. It is located approximately 250 km North of Bombay. The city has witnessed tremendous growth and rapid urbanisation in the past two decades. The population has almost tripled since the early 1990s, with around 3.8 million people living in the city today. It is one of the most populous cities in India.

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