

# Roundtable on “Adaptation to Climate Change in Industries and Industrial Parks in Gujarat”

In the frame of the Project on  
“Up-scaling Community Based Approaches to Climate Change Adaptation”

Supported by the Federal Ministry for Economic Cooperation and Development  
Under the Indo German Environment Programme on Advisory Services in Environmental Management  
(ASEM)



Venue:

**Hotel St Lurn Tower, Ahmedabad**

Date:

**November 29, 2011**



*With Support From*



# Background

## Climate Change Impacts

India is one of the most vulnerable countries to climate change in the world, given its long coastline of 7000kms, the Himalayas with their vast glaciers, and its large part of the population living in poverty. In the past year, numerous floods, droughts and weather events occurring and affecting India were linked to climate change. Furthermore India is still taking steps towards further industrialising and developing its economy and the economic gains realised so far are particularly threatened by a changing climate. Across the country, adaptation measures are of high concern – often in conjunction with development objectives and poverty reduction activities. Current government expenditure on adaptation to climate variability already exceeds 2.6% of the GDP or more than 13% of total government expenditure. Critical components thereof are linked to poverty alleviation and livelihood preservation, including health and sanitation, water and energy, but also infrastructure, agriculture and forests are specific areas of concern.

## Private Sector and Climate Change Adaptation

While many businesses are already taking action to mitigate climate change by reducing their carbon footprints, so far much less has been done by enterprises to address adaptation to expected climate change impacts. The difference between these two approaches is defined below.

**Adaptation:** Adjustments in natural or human systems in response to actual or expected climate change impacts, which moderate harm or exploit beneficial opportunities, i.e. activities that enable businesses and communities to become more resilient to the impacts of climate change (such as developing new water-treatment technologies for drought-prone areas, installing flood defenses, conducting a supply chain vulnerability assessment, etc.).

**Mitigation:** An intervention to reduce the sources or enhance the sinks of greenhouse gases, i.e. reducing the carbon footprint of business operations (such as switching to cleaner fuels, reducing electricity consumption, etc.).

Climate change impacts on businesses can be classified into direct impacts e.g., through weather events and change of temperatures, and indirect impacts through the effects of weather events and change of temperatures on business operation, specifically inputs and market demand. Climate change effects on businesses include but are not limited to water and energy supply, effects on infrastructure such as roads, which affect supply chain logistics and the accessibility and cost of resources. These changes are not only relevant for the viability and continuity of businesses, but also affect direct and indirect stakeholders, such as employees and communities.

Projected climate variability in directly climate-sensitive sectors that cater to basic needs like agriculture, water management and energy provision will impact both the economy and the entire population. These and other sectors that directly affect the livelihoods of the Indian population are still in need of further development, including housing, waste and sanitation and healthcare. These sectors need to integrate climate change adaptation considerations into their further development. This includes the physical infrastructure, the location, processes and value chains, as well as products and services offered and their price structure.

Moreover, climate variability also directly and indirectly impacts the resource extraction industry, heavy industry and manufacturing. Here, not only materials, products, value chains and even business cases need to be re-evaluated, but also risks for stakeholders need to be assessed and adaptation strategies need to be developed accordingly. For example, extreme weather events affecting the highly polluting industry can also have dire consequences for communities living in their proximity. Thus, concerted adaptation activities

need to include businesses, especially the vast number of MSMEs which make up more than 99% of the Indian companies.

### **Business Opportunities and Climate Change Adaptation**

In addition to the risks associated with climate change impacts for business continuity, there are also business opportunities arising from the change of circumstances. New products, processes and services need to be developed that cater to changed needs, especially in fields like climate resilient materials and products, climate resilient value chains, microfinance and micro-insurance.

Furthermore, government schemes are currently under development which seeks to minimize climate change impacts on the population and strengthen the resilience of the society. Opportunities exist for companies to implement or support government adaptation efforts. For example, companies act as contractors providing products and services in the field of adaptation, including large-scale infrastructural projects but also locally implemented initiatives. In India, adaptation measures are predominantly carried out on a state level, including the state-level implementation of the eight National Missions of the NAPCC. For example, the SAPCCs of Gujarat and Rajasthan provide business opportunities in the field of climate-proofing infrastructure such as roads and bridges.

But also new adaptation infrastructure needs to be developed and built, for example new drainage systems in case of severe flooding or innovative water storage systems in case of prolonged droughts. The research efforts necessary for these projects can also be subsidized by government funds, and include not only infrastructure but also new products, for example climate change resilient crops. Here, companies can join forces with government entities creating public-private partnerships. At the same time, new business cases need to be developed and implemented in a more informal mode of cooperation, for example in the field of climate change resilient urban habitat building and electrification.

Measures to assure business continuity and take advantage of business opportunities are not only relevant to big corporations. While these usually develop long-term strategies which include game-changers like climate change and have the resources to implement medium- and long-term adaptation measures themselves, MSMEs also have room for manoeuvre to act on climate change adaptation. Especially if MSMEs join forces they can assert considerable influence on the resilience of their communities and ecosystems, strengthening the livelihoods of their stakeholders and the natural resource base which they depend on.

To date, little concrete action has been taken to increase CCA capacities of businesses in India. But businesses urgently need to adapt to climate change impacts not only in terms of risk management, but also in order to create business value, while supporting the adaptation of the economy and society to climate change impacts. This type of business and societal value generation can only materialize if awareness for the impacts of climate change, its risks and opportunities is raised. Furthermore, a long-term business outlook is necessary and the recognition of the necessity to adapt. Awareness raising and the development of tools in this field are thus urgently needed to assure that adaptation strategies are adopted swiftly and comprehensively by the Indian private sector.

## **Round Table**

The 1-day Round Table on *“Adaptation to Climate Change in Industries and Industrial Parks in Gujarat”* is being organised within the frame of the Project on “Up-scaling Community Based Approaches to Climate Change Adaptation” supported by the German Federal Ministry for Economic Cooperation and Development under the Indo German Environment Programme on Advisory Services in Environmental Management (ASEM).

**Venue: Hotel St Larn Tower, Ashram Road, Ahmedabad**

**Date: November 29, 2011**

## Target Group

This roundtable is open for up to 100 participants from the private sector, sector associations, governmental and non-governmental organisations as well as experts from various disciplines who will be involved in further implementation and mainstreaming of climate change strategies.

After attending the roundtable, participants should be able to:

- Be aware of challenges and opportunities of Climate Change adaptation
- Define the concept of adaptation to climate change and know where it derives from
- Identify the relevance of climate change adaptation to their businesses and activities
- Apply a step-by-step approach of assessing vulnerability, identifying adaptation options and selecting adaptation measures to develop and implement a suitable monitoring and evaluation framework

## Organisers

The Round Table is being organised by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH under the Indo German Environment Programme on Advisory Services in Environmental Management. GIZ, commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), is involved in implementing Development Cooperation in India.

GIZ operates in more than 130 countries worldwide. GIZ employs approximately 17,000 staff members worldwide, more than 60 % of whom are local personnel. In addition, there are 1,135 technical advisors, 750 integrated and 324 returning experts, 700 local experts in partner organisations and 850 'weltwärts' volunteers.

Under the ASEM Programme, GIZ is closely cooperating with the Gujarat Industrial Development Cooperation (GIDC) and the Gujarat Cleaner Production Centre (GCPC) by providing technical cooperation for achieving eco industrial development in the state of Gujarat.

Adelphi, Germany and FICCI, Gujarat State Council are involved in organising the event. The event is supported by the Gujarat Industrial Development Corporation (GIDC) and the Gujarat Cleaner Production Centre (GCPC).

## Contacts

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## Programme Schedule (tentative)

<b>09:30 - 10:00 hrs</b>	<b>Registration</b>
<b>10:00 - 11:00 hrs</b>	<b>Inaugural Session</b>
10:00 – 10:10 hrs	Welcome Address: FICCI Gujarat State Council
10:10 – 10:20 hrs	Introductory Remarks: Dr. Dieter Mutz, Director, GIZ (ASEM)
10:20 – 10:30 hrs	Special Address: Dr K U Mistry, Chairman, GPCB***Government of Gujarat
10:30 – 10:40 hrs	Special Address: Dr. Rajiv Kumar Gupta, IAS, Principal Secretary, I/C, Dept of Climate Change, GoG***
10:40 – 11:00 hrs	Key Note Address: Climate Change vis-a-vis Business in Gujarat, Dr. S.K. Nanda, IAS, Principal Secretary, Department of Environment & Forests, GoG***
<b>11:00 - 11:30 hrs</b>	<b>Coffee Break</b>
<b>11:30 - 13:00 hrs</b>	<b>Technical Session – 1</b> Chairperson: Dr. Rajiv Kumar Gupta, IAS, Principal Secretary, I/C, Dept of Climate Change, GoG***
11:30 – 12:15 hrs	Presentation on “ <b>Adaptation to Climate Change in Industries and Industrial Parks – Overview and Case Studies</b> ”, Mr. Mikael Henzler, Adelphi Research, Germany
12:15 – 12:35 hrs	Presentation on “ <b>Climate Change Adaptation –Initiatives of Government of Gujarat</b> ” – GoG Official
<b>12:35 - 13:00 hrs</b>	<b>Q &amp;A</b>
<b>13:00 - 14:00 hrs</b>	<b>Lunch Break</b>
<b>14:00 - 15:30 hrs</b>	<b>Technical Session – 2</b> Chairperson: Mr A K Verma, Member Secretary, GEC***
14:00 – 14:30 hrs	<b>Presentation on “Climate Change Adaptation in Industrial Estates - Case Study from Naroda Industrial Estate”</b> - Prof. Ashwani Kumar, CEPT Ahemdabad
14:30 - 14:50 hrs	<b>Presentation on “Vulnerability Assessments in Industries”</b> -Mr. Bharat Jain, MS, GCPC
14:50 - 15:10 hrs	<b>Presentation on “Case Study on CCA at Industry Level”</b> - Industry Representative NIE
<b>15:10 - 15:30 hrs</b>	<b>Q &amp;A</b>
<b>15:30 - 16:00 hrs</b>	<b>Coffee Break</b>
<b>16:00 - 16:45 hrs</b>	<b>Panel Discussions:</b> Chairperson: Mr B B Swain, IAS, Industry Commissioner, VC & MD-GIDC ***
	<b>Moderator:</b> Mr N. Raghu Babu, GIZ (ASEM) <b>Panellists:</b> <ul style="list-style-type: none"> <li>• Mr Bharat Jain, Member Secretary, GCPC</li> <li>• Mr. Hardik Shah, Member Secretary, GPSCB</li> <li>• Mr Mikael Henzler, Adelphi</li> <li>• Dr C B Upasani, Director, Jyoti Om Chemical Research Center Pvt Ltd, Ankleshwar</li> <li>• Representative(s) of Industries</li> </ul>
<b>16:45 - 17:00 hrs</b>	<b>Wrap-up and feedback</b> Dr. Dieter Mutz, Director, GIZ (ASEM) Mr N. Raghu Babu, GIZ (ASEM)

\*\*\*invited