



Business and Climate Change

In the present global market wherein supply chains and operations are spread over different locations, Climate Change can have various impacts on businesses. It is thus imperative for businesses to gauge the impacts of Climate Change for themselves and act on countering them. This factsheet helps the readers in understanding the key risks and opportunities arising for businesses due to Climate Change. It covers the process of developing climate change strategies and benefits gained while highlighting significance of businesses in the Mumbai Metropolitan Region (MMR) to act on Climate Change.

Impact of Climate Change on Businesses

Climate Change is one of the most difficult challenges encountered over the world, particularly for the rapidly growing economies and businesses, which have to balance their development objectives whilst ensuring that they adopt a proactive approach to Climate Change. Climate Change can have varying impacts on businesses, depending on the sector, location and scale of operations. These impacts can be those related to reduced water and energy supply, damage to transportation infrastructure such as roads which can affect supply chain logistics and accessibility and cost of resources, damage to assets such as equipment and buildings affecting business continuity, threats to human health and risks on workforce. Infrastructure and transportation systems which are vital cogs in today's globally oriented business operations are highly vulnerable to Climate Change. Impacts of Climate Change can cause significant rise in business costs.

With governments devising policies to advance towards a low carbon growth, the regulatory implications are transferred into the businesses, in both local and global markets. However, the transition to a low carbon economy also provides many opportunities for businesses that are willing to innovate and have a strategic outlook towards addressing Climate Change which enables them to gain a competitive edge in the market.

Drivers, Risks and Opportunities for Businesses

Government policy, changes in consumer demand, and innovation in technology are the key drivers for business which enables businesses to comply with regulation and seek new opportunities (see Figure 1).

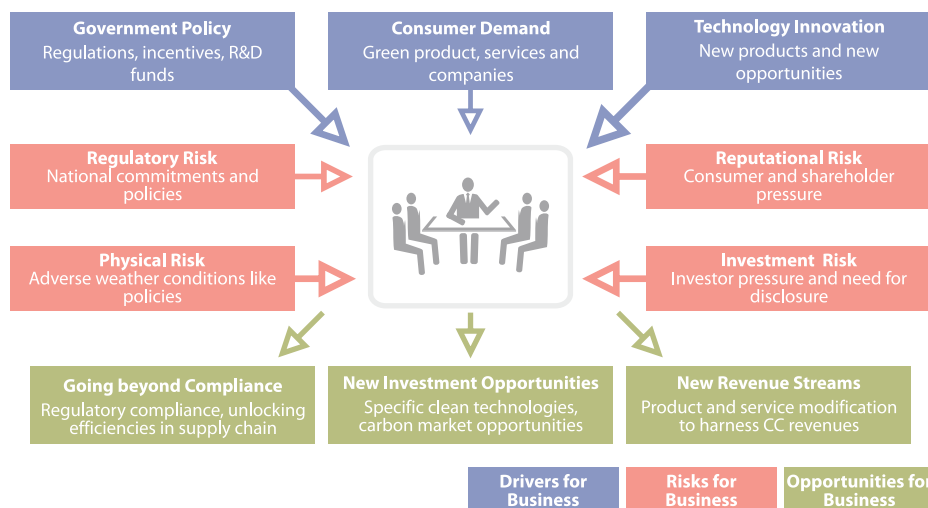


Figure 1: Risks and Drivers for Business Action on Climate Change

(Adapted from Website of Green Rhino Energy. Accessed from: <http://www.greenrhinoenergy.com/climatechange/>, Nov 2012)

THE RISKS

The risks posed by Climate Change for businesses are listed as follows :

1.

Regulatory Risk

Though India currently has not committed to binding Greenhouse gas (GHG) emission reduction targets on a national level, international pressure is increasing for India to mitigate its GHG emissions. International agreements and national commitments on Climate Change are perceived as important risks by businesses. Policies such as carbon taxes, more stringent air pollution limits, fuel and energy taxes, and cap and trade schemes like the Perform, Achieve and Trade (PAT) recently introduced for industries in 8 energy intensive industry sectors in India¹, can impact business operations and costs.

2.

Physical Risk

The major physical risk drivers for businesses due to Climate Change are changes in temperature extremes, changes in precipitation extremes and droughts, floods, tropical cyclones and induced changes in natural resources. Such occurrences can impact high value infrastructure of businesses resulting in inability to continue the operations thereby impacting production capacity, operational costs or demand for goods and services. Adverse weather conditions such as frequent floods can cause damages to supply chains, as in case of the food sector.

Perceptions of Indian Businesses

The Carbon Disclosure Project (CDP) is an independent non-profit organization that works towards driving GHG emission reduction in businesses. Backed by more than 655 institutional investors representing in excess of US\$78 trillion in assets, CDP seeks information via request from the global top 500 businesses every year, on how these companies assess climate change risks and opportunities, and strategize for Climate Change.

● In the CDP India response for the top 200 companies, 76% of the respondents perceive to be exposed to regulatory and physical risks due to Climate Change while 67% perceive other risks specific to sectors

● Further, 87% of the Indian companies see regulatory opportunities while 50% of the companies foresee physical opportunities

(Source: CDP (2012) India 200 Report)

3.

Reputational Risk

Consumer and shareholder awareness on climate change would increase in the near future due to increased regulation and political debate, media reports, severe weather occurrences, and market penetration of climate friendly products. With rising awareness, companies can lose market share if they are perceived to lag

¹Ministry of Power, GoI (2012): PAT-Perform, Achieve and Trade

behind competitors in creating a pro-climate image. Businesses could be increasingly facing lawsuits, with shareholder and stakeholder groups accusing them of being proponents of Climate Change and not planning for climate risks, leading to reputational damage.

4.

Investment Risk

To reduce portfolio risks linked to Climate Change, institutional investors are shifting to invest in climate sensitive assets, capable of sustaining and reaping benefits in a low carbon environment. Increasingly, shareholders and investment managers are asking companies about their policies on climate change. Lackadaisical management and insufficient disclosure of climate risks and opportunities by businesses can have negative impacts on investor confidence, and affect thus investment decisions.

THE OPPORTUNITIES

Climate Change also presents certain opportunities for businesses, listed as follows:

1.

Going beyond Compliance

Complying with regulations can enable businesses to unlock various opportunities to reduce operational inefficiencies. Going beyond the minimum compliance activities to modify internal processes, supplier contracts, products and services can help businesses drive down costs while becoming climate friendly. Proactively developing strategies to manage climate change with focus on minimization of carbon footprint and resource

consumption, engagement of employees and various stakeholders in the supply chain, and effective disclosure can reap multiple tangible and intangible benefits.

2.

New Investment Opportunities /Incentives

Challenges posed by Climate Change and energy security have led to opportunities for investing in clean energy technologies such as solar, wind, and biomass. With investment in renewable energy market at \$12 billion in 2011, up by 62% from the previous year, India had the fastest expansion rate for investment in clean energy in the world². This resulted from increased capacity addition in wind and solar energy, and a rise in venture capital and private equity investment in renewable energy companies. Various mandatory and voluntary carbon markets around the globe have further incentivized investments driving GHG emission reduction.

3.

New Revenue Streams

Businesses can develop products or services, based on their core capabilities and infrastructure, to pursue new revenue streams related to Climate Change and gain significant competitive advantage. Focusing on life cycle consideration and low carbon products can enable businesses to operate in high value markets across countries, while complying with various regulations and products standards. Opportunities also exist within physical impacts of Climate Change, such as infrastructure companies coming up with innovative climate resilient practices like using heat resistant paving materials and building artificial reeks/dykes as barriers against sea water inundation.

Case Study : Initiating Actions towards Climate Change

Larsen & Toubro, one of the largest technology, engineering, construction and manufacturing firms headquartered in Mumbai, has formulated its strategies for Climate Change based on India's national level actions. The organization has undertaken initiatives aligned with each of the eight missions of the National Action Plan on Climate Change (NAPCC). The organization has identified issues and taken actions in areas based on the themes of the missions such as enhanced energy efficiency, sustainable habitat, water, sustainable agriculture.

Some of the actions taken involve :

- mapping of the carbon footprint and water footprint
- harnessing renewable energy
- conducting energy audits and improving efficiency
- developing office buildings as green buildings
- training of external stakeholders regarding climate friendly practices
- working with communities for conserving plantations
- building internal capacities in relation to Climate Change

The initiatives have been disclosed to the stakeholders involved and have enabled the organization to gradually address the challenges of Climate Change. The proactive approach has also helped the organization gain monetary benefits while foraying into cost competent solutions and technologies in the field of Climate Change.

It should be noted, however, that very few such cases of businesses acting towards Climate Change exist in India. It is of paramount importance that businesses in India understand the significance of Climate Change on their operations and initiate actions.

(Source: WWF and CII-ITC CESD (2008): Indian Companies with Solutions that the World Needs)

² Frankfurt School of Finance & Management gGmbH (2012): Global Trends in Renewable Energy Investment

Assess	Implement	Disclose and Engage
<p>Assess risk and opportunities</p> <ol style="list-style-type: none"> 1. Create a climate management team and develop a board oversight committee. 2. Measure and benchmark and GHG emission from business operations. 3. Compute exposure to various Climate Change risks for assets, products and competitive position. 4. Assess strategic, branding, and product opportunities related to Climate Change. 	<p>Implement action plan for climate risk and opportunities</p> <ol style="list-style-type: none"> 5. Develop corporate policies and procedures to reduce climate risk and increase value. 6. Create time bound GHG emission reduction targets and action plans to achieve results. 7. Set goals related to energy efficiency, clean energy technologies, and offsetting GHG emissions. 8. Engage in policy dialogues about reducing climate risk and enhancing opportunities. 	<p>Disclose your findings and engage with stakeholders</p> <ol style="list-style-type: none"> 9. Publicly disclose assessments and implementation plans in annual reports. 10. Engage shareholders, staff, public, and key stakeholders for feedback and proactive response.

Figure 2: Key Steps to Develop a Corporate Climate Change Strategy

(Source: Ceres (2006): Managing the Risks and Opportunities of Climate Change: A Practical Toolkit for Corporate Leaders)

Strategizing for Climate Change

It is vital for leaders and top management of businesses to understand and address Climate Change to ensure sustenance in a changing environment. In a 2008 KPMG survey of 70 Indian business leaders and their views on Climate Change, 83% responded that they had a good understanding of Climate Change³. But only 21% of them had measured their carbon footprint which is one of the first steps in defining a Corporate Climate Change Strategy (see Figure 2). With a comprehensive strategy, business leaders can not only minimize risks and protect the business but also seize growth opportunities and enhance shareholder value and competitiveness.

Why businesses in MMR should act on climate change?

The Mumbai Metropolitan Region (MMR) plays a vital role in India's economy, with it being located around India's financial capital Mumbai city. Many of India's largest conglomerates as well as foreign banks and financial institutions are based in Mumbai

The major contributors to MMR's economy are

- Tertiary Sector: involving services such as retail trade, transport, IT/ITES, real estate, and hospitality
- Secondary Sector: involving manufacturing, power, and construction (Source: USAID (2007): Prospects for economic growth and workforce development in the MMR)

Businesses within these sectors in the MMR are vulnerable to the various risks of Climate Change. Physical risks such as can impact private sector involved in infrastructure development in terms of physical damage as well as increased

construction costs. Industries involved in sectors like pharmaceuticals, chemicals, petrochemicals, textiles and engineering, located in the low lying areas in Navi Mumbai and Thane are vulnerable to flooding. Climate Change impacts on raw material availability and its transportation would be greatly felt within these industries. MMR also houses many small scale cottage and agro based industries engaging large number of skilled/unskilled labour. Economic and physical risks of Climate Change would have severe repercussions on livelihoods dependent on these industries.

It is vital for the businesses located in the MMR to assess risks and vulnerabilities to Climate Change and formulate relevant actions to address these. By developing holistic strategies for Climate Change, businesses can maximize opportunities arising out of Climate Change. Business involved in infrastructure development or within the value chain can innovate and develop climate resilient construction materials and products. Businesses in the power sector or those with high energy consumption can invest in renewable energy and procure tradable Renewable Energy Certificates (RECs).

For further information, Refer to :

- 1.Pricewaterhouse Coopers International Ltd (2009): Risk, Responsibility & Opportunity: The CEO's Guide to Climate Action Available at: <http://www.pwc.com/gx/en/sustainability/risk-responsibility-opportunity-ceo-guide-to-climate-action.jhtml>
- 2.IBM (2008): A day in a low carbon life. What might it be like to lead a business in 2012? Available at: http://www-935.ibm.com/services/uk/bcs/pdf/low_carbon_life_2012.pdf
- 3.The Climate Group (2010): Climate Change and Finance in India Available at: <http://www.theclimategroup.org/what-we-do/publications/Climate-Change-and-Finance-in-India/>
- 4.Marsh Inc. (2006): Climate Change: Business Risks and Solutions, Risk Alert (April 2006), Vol. 5, Issue 2 Available at: <http://solutions.marsh.com/climate/documents/climateChange200604.pdf>
- 5.Ceres (2006):Managing the Risks and Opportunities of Climate Change: A Practical Toolkit for Corporate Leaders Available at: http://www.c2es.org/docUploads/Ceres_corporate_toolkit_012006_010507_130824.pdf

³ KPMG (2012): Climate Change: Is India Inc. Prepared