



# Climate Change: Is India Inc. Prepared?

A KPMG Study

KPMG IN INDIA



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# Foreword

Climate change is now widely regarded as one of the most serious challenges the world faces, with consequences that go far beyond its effects on the environment. It is a key economic issue and needs to be dealt with accordingly. It is in this context, the Prime Minister of India recently released the National Action Plan on Climate Change, which seeks to promote sustainable development through use of clean technologies. The action plan, while it does not commit to GHG emissions reduction targets it does pledge that India's per capita greenhouse gas emissions will "at no point exceed that of developed countries" in spite of its development imperatives.

With a view to finding out how Indian firms are responding to the issues and challenges around climate change KPMG has carried the first major study among business leaders on this issue. A total of around 70 business leaders at the CEO/CXO level were interviewed for this study. The study brings out some interesting findings:

- 83% of Indian business leaders believe they have fair to good understanding on the issue of climate change and a significant 48% regard it as important issue which needs to be near the top of India's business agenda
- However, there is significant gap between good intentions and action as only 21% have measured their current carbon footprint, which is one of the first steps in defining a strategy to deal with the issue

We believe that as Indian companies confront the challenges of climate change :

- First, they should assess the direct and indirect implications of climate change on their business and take corrective action
- Second, they should seek to benefit from opportunities brought by climate change. For instance, the global market for low carbon energy efficient technologies will be \$3 trillion by 2050 <sup>1</sup>.



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<sup>1</sup> European Commission, November 26, 2007

Indian companies will have an opportunity to leverage climate change as a competitive advantage (rather than a threat) by planning their approach, measuring their impact, adapting their model to a low carbon business and reporting on performance accurately.

At KPMG we are committed to addressing climate change first and foremost, by acting as good corporate citizens. The principal ambition of 'KPMG's Global Green Initiative' will be to reduce our member firms' combined carbon footprint by 25 percent by the year 2010 from a 2007 baseline, through emission reduction schemes and the use of renewable energy in our member firms.

Furthermore, we have always sought to be at the forefront of developments that shape business behavior. Our global sustainability and climate change services network has more than 15 years experience in providing services to a wide range of clients from global to national businesses and government agencies. We offer business focused advice on a wide range of issues in the climate change sphere, from carbon foot printing and greenhouse gas inventories to carbon trading and corporate finance.

In addition, we regularly provide insight and industry analysis into the role of business in relation to some of the most pressing societal issues. Our thought leadership in the sphere of climate change is well established, with our member firms pioneering analysis and providing insight into some of the key questions that businesses may be asking. This study adds to our extensive knowledge base and provides interesting insight into the Indian business leaders' appreciation of the climate change context, its implications for the economy and their businesses, and their readiness to respond to the impending change.

I am confident that this study makes a meaningful contribution to the understanding of climate change as a business issue in India.

## **Arvind Mahajan**

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**NOTE:** Unless otherwise noted throughout this publication, "KPMG" refers to "KPMG in India."



# Contents

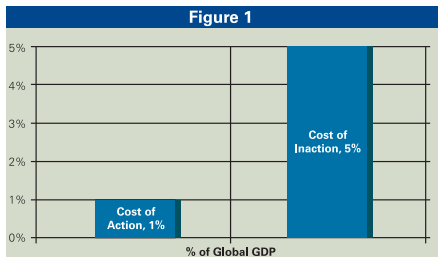
1	Context for this study	1
2	About the study	5
3	Is Climate Change on the business agenda?	6
4	Who is going to lead the response to climate change?	8
5	Motivators for responding to climate change	14
6	How can we respond to climate change?	24
7	Conclusion: Bridging the gap between intention and action	29



# 1 Context for this study

The impact of human activities on the earth's climate has been receiving increasing attention with the recognition of the problem of global warming. The fact that a range of initiatives need to be taken to arrest the pace and reverse the accumulation of Greenhouse Gas (GHG) emissions is widely accepted. However, the implications of such initiatives – on countries, economies, businesses and societies – are expected to be significant, and the allocation of costs, risks and responsibilities is still under debate and negotiation.

## *The Challenge: Managing economic growth while reducing the pace of emissions growth*



Data source: Stern Review Report on Economics of Climate Change, 2006

The economic costs and benefits of action (and importantly, inaction) against climate change has been quantified with the Stern Report published in 2006 (commissioned by the UK government).

The costs of taking action now, to reduce greenhouse gas (GHG) emissions to an accepted sustainable level are estimated at 1 percent of global GDP which is a significant, but manageable financial commitment. However, global GDP loss on account of business as usual (no action to contain GHG emission) is estimated between 5 percent (at the least) to 20 percent (at worst) annually, now and forever<sup>2</sup>. While the cost of action is lower than that of inaction, it is still a significant cost, more so for rapidly growing countries like India, and has implications on choices for reducing the energy intensity of the growth trajectory.

<sup>2</sup> Department of Environment, Food and Rural Affairs, UK Government, 2007

## ***The Threat: Indian businesses would have to act within a foreseeable timeframe***

India, along with China, has been subjected to increasing international pressure to undertake binding emission targets to limit its aggregate level of emissions. Whilst the government of India has chosen an approach based on common but differentiated responsibility, the mounting international call for demonstrable action from India is significant. Further, other countries are considering trade-based sanctions on Indian businesses if the country fails to commit to binding targets under the next international collective agreement post-2012. Any future regulation, whether binding or voluntary, can fundamentally alter the development path of the country and have a profound impact on the growth trajectories of individual industries and companies. India recently released the National Action Plan on Climate Change. This report does not set targets for GHG emissions reduction but seeks to promote sustainable development through use of clean technologies. The action plan commits that India's per capita greenhouse gas emissions will "at no point exceed that of developed countries" in spite of its development imperatives.

Corporations across all industries will continue to be subject to increasingly stringent environmental regulation, as well as sustained pressure from customers, employees and investors to deliver on a triple bottom line of economic, environmental and social performance. This concept of triple bottom line is a framework within which stakeholders can evaluate the performance of firms across an expanded spectrum of values and criteria that go beyond mere economic performance.

## ***The Opportunity***

At the same time, Indian companies can exploit numerous business opportunities that are likely to arise out of climate change mitigation and adaptation. The global market for low-carbon technologies is estimated to amount to USD 3 trillion per year by 2050<sup>3</sup>, throwing up significant commercial opportunities. Already, it is estimated that industries such as renewable energy, waste management and water treatment will be worth USD 700 billion globally by 2010 – on par with the value of the global aerospace industry.<sup>4</sup>



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<sup>3</sup> European Commission, 26 November 2007

<sup>4</sup> OECD Environmental Policy Committee, 22 Feb 2008

Further, the Clean Development Mechanism (CDM) under the Kyoto Protocol affords businesses in developing countries like India the opportunity to reduce their emissions with the technological and financing support of entities in developed countries. Also, reducing emissions at a firm level has been established to result in significant efficiency gains in various business processes.

### ***Is India Inc ready?***

It is in this context that KPMG undertook this study to understand the Indian business leaders' appreciation of the climate change context, its implications for the economy and their businesses, and their readiness to respond to the impending change. Our discussions with the business leaders covered the following areas:

- Is climate change on the agenda: How do businesses leaders perceive climate change as a current business issue and how is it expected to influence their strategy going forward
- Who will lead the response: What role do Indian businesses envisage for India in the global response to climate change and within India, who are the major stakeholder groups that are likely to drive action
- Motivators for action: What motivates Indian businesses to take action on climate change now and how do they perceive these actions paying off
- How can we respond: What actions and tools, if any, do businesses currently have in place to respond to climate change and what is their future plan of action.





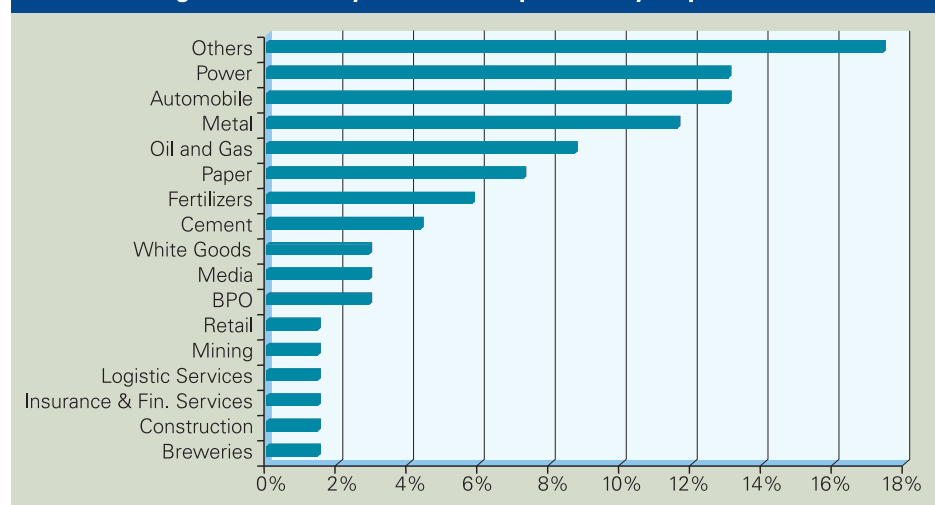


# 2 About the study



KPMG has conducted a study to understand the current landscape of opinion in Indian industry on the issue of climate change. Seventy business leaders from a broad range of industries and sectors were interviewed on a structured questionnaire.

**Figure 2 : Industry-wise break-up of survey respondents**

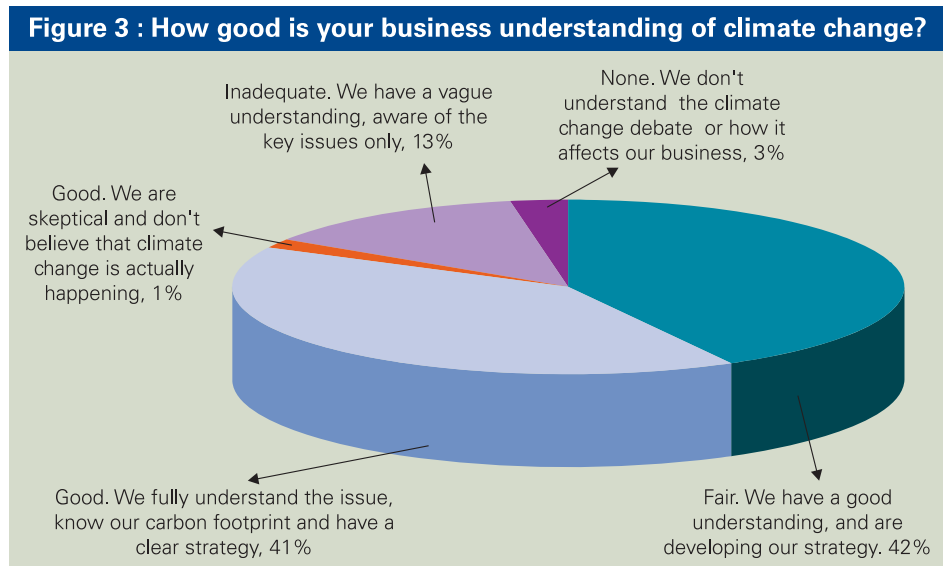


This study follows a similar survey conducted by YouGov on behalf of KPMG in the UK of 73 business leaders in April 2007. In this report, relevant, responses of Indian business leaders have been contrasted with the responses of business leaders in UK.

# 3 Is Climate Change on the business agenda?

**The need for action in response to climate change issues is clearly appreciated by the business leaders interviewed for this study.**

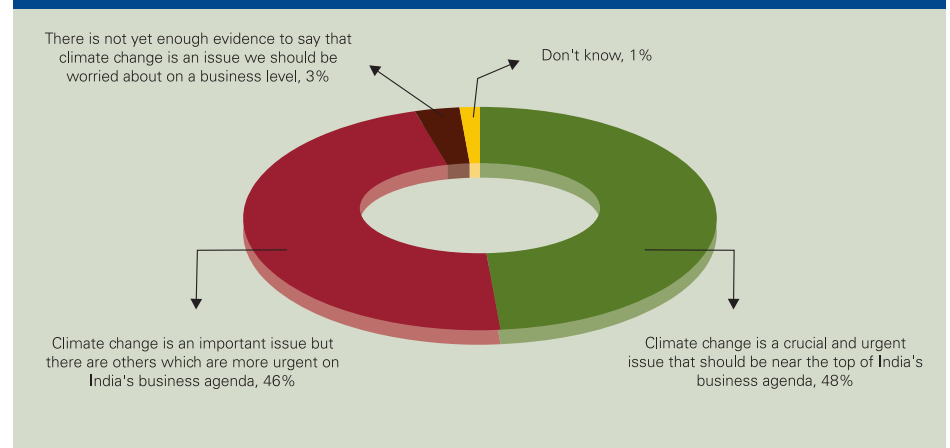
Forty one percent of respondents regard themselves as having a good understanding of the issue and having a clear strategy in place. A further 42 percent claim to be in the process of developing their carbon strategy (See figure 3).





The awareness of issues relating to climate change has resulted in climate change being high on the business agenda of a significant proportion of the respondents (see figure 4). Forty eight percent felt that climate change is a crucial and urgent issue and should be near the top of India's business agenda. This is higher than the proportion of UK respondents in the March 2007 study (27 percent) who believed that climate change was in their top 9 strategic priorities. A further 46 percent of Indian businesses indicated that climate change is an important issue, but there were others that are more urgent on India's business agenda.

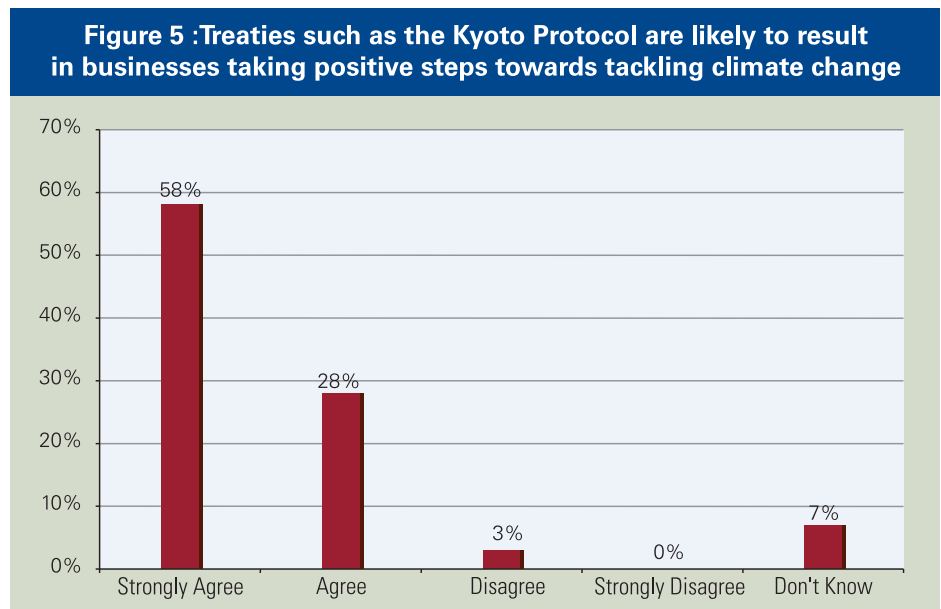
**Figure 4 : How important do you think climate change is as a modern business issue?**



# 4 Who will lead the response to climate change?

**While climate change issues appear to be high on the business agenda, and there is a desire for India to be seen as a leader on this issue on the international arena, the leadership role in bringing about change is largely left to the Government.**

Indian businesses believe that international collective agreements will bring about positive incentives to change, even in the wake of India's stance (see box 2) to not accept binding emissions targets under any subsequent international collective agreement. Eighty six percent of respondents believe that treaties such as the Kyoto protocol are likely to result in businesses taking positive steps towards tackling climate change (see figure 5 and box 1).



**Box 1: International collective agreements<sup>5</sup>**

The Kyoto Protocol, which came into force in February 2005, is the most detailed binding international agreement to tackle global warming. As part of the first commitment period expiring in 2012, developed countries (Annex-1) are required to reduce their GHG emissions below levels specified for each of them in the treaty, on an average of 5.2 percent below the 1990 baseline. Most of the major developed countries except US have ratified the treaty. Developing countries (non-Annex 1) including India, do not face binding emission targets.

Non-ratification by US, late ratification by Australia (December 2007) and non-binding emission targets on major current GHG emitters China and India were some of the key issues of deliberation at the United Nations Climate Conference held in Bali, Indonesia in December 2007. It was aimed at initiating negotiations for a new international collective agreement to come into force post-2012. A Bali Roadmap was adopted and its constituent Bali Action Plan, whilst containing no binding commitments, provides for a new international collective agreement to be in place by the end of 2009 and for the explicit participation of countries that have not accepted binding emission targets under Kyoto, including US.

The official launch of negotiations and the establishment of a concrete timeline took place at a meeting of the working groups established at the Bali convention from 31 March – 4 April 2008 in Bangkok, Thailand. At this meeting, a work program for structured negotiations towards this new international collective agreement was concluded. Importantly, in responding for calls for greater clarity and certainty from businesses, the UNFCCC confirmed that the use of market-based mechanisms such as the market for carbon credits would be continued and improved.

There will be 3 more major UN climate change meetings in 2008 and at least 4 such meetings in 2009, culminating in the Copenhagen conference at the end of 2009 where a new international collective agreement is envisaged to be signed. This new agreement will come into force once the current commitment period expires in 2012.

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<sup>5</sup> UNFCCC, 2008

## Box 2: India's position on climate change mitigation efforts

As a non-Annex I country under the Kyoto Protocol, India is not subject to binding emission targets. It has unequivocally rejected taking on quantitative restrictions under any subsequent international collective agreement, but has committed to preventing its per capita emissions from ever exceeding those of developed countries through a range of mitigation and adaptation techniques adopted.

The Prime Minister's Council on Climate Change was constituted in June 2007 to develop India's first ever national action plan on climate change. The policy was published on 30th June 2008 and the salient features of this policy and its likely impact on Indian industry are illustrated in Box 6.

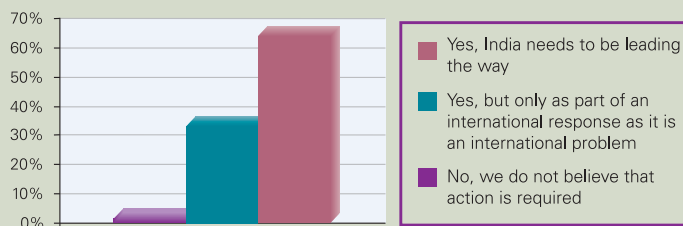
Simultaneously, negotiations on India's role in the global response to climate change are underway with China and India being part of the 16-member group of 'Major Economies' that constitute the leading emitters of the world. The 'Major Economies Meeting' (MEM) was launched in September 2007, and has held 3 meetings so far, the latest being in April 2008. The MEM is working on a 'leaders' declaration' to be published at the G8 summit.

Source: Times of India, June 16 2008; "India fights off pressure to alter climate agenda" – most recent source.

Indian businesses are positive in their outlook for the role of India in the global response to climate change, as reflected in 65 percent of respondents indicating that India should be leading the way. (See figure 6)

While there is a keen desire for India to take the lead in responding to climate change issues on the international arena, the results reveal that businesses want the government to take the lead in education, leading by example, and in adoption of technology. However, they are of the opinion that the government is not doing enough in these areas at present.

**Figure 6 : Does India need to act on climate change, given that its per capita carbon emission is amongst the lowest in the world?**







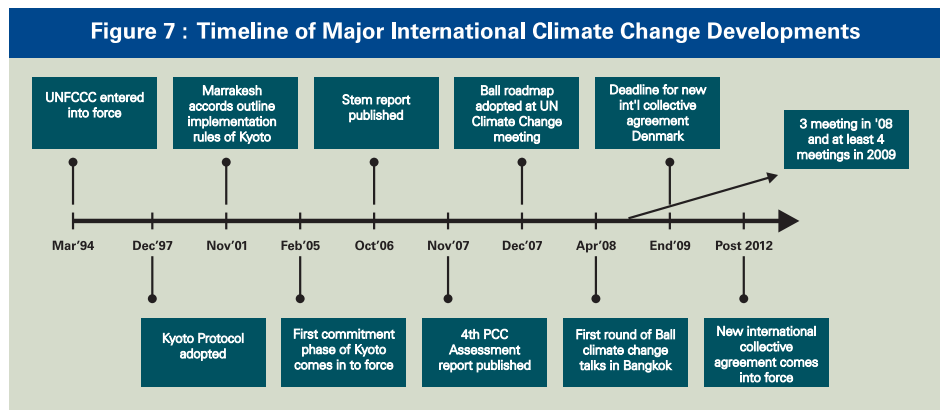
### Box 3: Government as a key driving force in the UK

As in the case of the Indian survey results, the KPMG in the UK March 2007 study found that UK businesses attributed primary responsibility to the government in the areas of education, leading by example and adoption of technology. Further, nearly a third (32 percent) regarded the government as their key influencer on climate change policy. When considered against the backdrop of the UK Climate Change bill being the world's first legal framework for the transition to a low carbon economy, the leading role for the government advocated by UK businesses is understandable.

However, the UK government seems to be performing better in its role(s) in domestic climate change mitigation efforts as compared to the Indian government. Forty two percent of UK businesses feel that the government is doing enough to educate businesses and 49 percent regard it as doing enough to educate individuals, as compared to 13 percent and 5 percent respectively for Indian respondents. This is not surprising given the high importance allocated to climate change by the UK government, which was further reinforced by the inclusion of the issue in March 2008 as one of the top three threats to national security.

Source: KPMG in the UK Climate Change Business Leader Survey, 2007

Box 3 provides an interesting insight into the role attributed to the government by UK businesses and its perceived performance as compared to the Indian situation. In terms of leadership structure on a global level, there are interesting dynamics at play in the roles that different countries are likely to play in the future global action to combat climate change. Figure 7 provides a timeline of some of the important milestones in the global action against climate change and Box 4 explores some recent global socio-political developments in this area and their likely future impact.



#### Box 4: Impact of recent global socio-political developments on international efforts to combat climate change

**The EU will play a key role in shaping the next set of international collective agreements.** The EU's leadership of climate change mitigation efforts is evidenced by their commitment to take steps to reduce their emissions by 20 percent by 2020 (from 1990 levels) irrespective of what other countries do, and an offer to increase that goal to 30 percent if an acceptable post-Kyoto international collective agreement is conceived. The EU expects to conclude negotiations on an ambitious climate change action plan for the 27 nation-block, by end of 2008, aimed at meeting this goal. This could place Europe in a strong position to set the standard in Copenhagen in late 2009.

**US' involvement is also expected to increase.** Responding to mounting international pressure for binding emission targets as the world's leading emitter, the US is likely to change its stance and take on greater commitments to reduce its emissions, independent of political outcomes. Both presidential candidates support reductions in emissions, with John McCain supporting a figure of 65 percent, whilst Barack Obama favours 80 percent from 1990 levels by 2050. Further, both support the institution of a cap-and-trade system along the lines of the EU Emission Trading Scheme.

Twenty eight US states have formed, or are about to create, mandatory greenhouse emission limits in the absence of federal regulations. Thirteen climate change bills are currently under discussion in the Democrat-led Congress, most of which contain plans for some sort of market-based mechanism. The most publicized of these is the Climate Security Act (Lieberman-Warner Bill), a bi-partisan compromise that is supported by McCain. Whilst this bill was rejected by the ruling Senate in June 2008, it is likely to be reconsidered in some form under new political leadership in 2009.

Source: Council for foreign relations, "Economic challenges for climate change policy," April 14 2008; Reuters, 'Governors to plot climate fight at Yale meeting', April 16 2008; and International Daily Newswire, 'McCain outlines his plan to confront climate change', May 12, 2008.



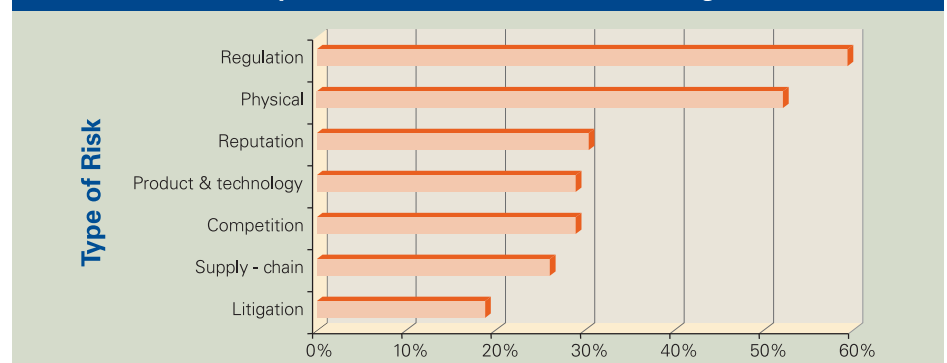
# 5 Motivators for responding to climate change

Indian businesses' desire to respond to climate change issues appears to be driven largely by the need to comply with expected regulations, and in the course of corporate social responsibility initiatives. The lack of stakeholder pressure on Indian companies is in sharp contrast with other countries where preferences of investors, employees, and customers typically convince companies to plan to reduce their carbon impact.

## *Risks of inaction*

Stringency in regulatory requirements is perceived to be the primary risk to business arising out of climate change issues. (See figure 8 & box 5). Further, the need to prepare for expected regulations emerged as the most important factor in the formulation of the company's carbon strategy. The government's current point of view

**Figure 8 : Risks that respondents felt their companies were likely to face as a result of climate change**





### **Box 5: Regulation as the primary driver of change across the globe<sup>6</sup>**

A review of the business risks and economic impacts of climate change at a sector level conducted by KPMG in the Netherlands in 2008 also showed that regulatory risk was the most often cited concern amongst 50 authoritative published studies on the subject.

The report identified 4 types of risks that businesses across 18 sectors would face as a result of climate change - regulatory, physical, litigational and reputational, and found that a majority (72 percent) of the studies discussed the regulatory risks that businesses face. Companies and sectors that fail to adjust to a changing business environment created by new laws and regulations face competitive disadvantages, while regulatory uncertainties make it difficult for companies to plan ahead.

is defined by the national action plan on climate change, prepared by the Prime Minister's council on climate change. Salient features of this plan are summarized in box 6.

Whilst the domestic regulatory environment is clearly important to Indian businesses, they would be well served to assess the impact of the policies of foreign countries on their own operation. In particular, the operation of export-oriented Indian firms in GHG intensive industries such as iron, steel, aluminum, cement, glass and paper could be fundamentally impacted by the proposals of US and the EU to use restrictions and/or taxes to raise the cost of imports from less environmentally stringent countries like India and China (see box 7). Further, the participation of countries like India and China in the reformed emissions trading scheme in CDM projects may be restricted by new EU proposals (see box 8).

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<sup>6</sup> *Climate Changes Your Business: KPMG's Review of the Business Risks and Economic Impacts at Sector Level*

### Box 6: India's national action plan on climate change

India's national action plan on climate change is a consolidated account of the country's position on climate change mitigation and adaptation efforts. In line with the government's adopted policy of shared but differentiated responsibility, the plan does not impose quantitative emission targets on the country, but rather focuses on efficiency targets.

There are 8 national missions which form the core of the plan and dictate the direction of future action. These cover the following areas:

1 Solar energy	3 Sustainable habitat	5 Sustaining the Himalayan ecosystem	7 Sustainable agriculture
2 Energy efficiency	4 Water	6 Green India	8 Sustainable knowledge for climate change

Importantly for businesses, the policy mandates the setting up of energy benchmarks for each industry sector and allows for trade in energy efficiency certificates. Along the lines of the international market for trade in carbon credits, the aim of such a 'cap-and-trade' scheme is to facilitate the least-cost method of achieving the overall target of sector-wide efficiency. Nine energy intensive sectors such as thermal power plants, iron & steel and cement have been identified and within these sectors, bands have been created which classify individual units (businesses) on the basis of energy intensity levels.

Each band is given a target (which is periodically revised upwards) to reduce their fuel consumption over a fixed period of time. The industrial units who surpass their targets will be given energy efficiency certificates which can be traded on the open market or banked for the next round of efficiency targets. Industrial units that surpass their allocated standard would be forced to buy such credits from more energy-efficient units.

In this manner, businesses have a monetary incentive to become more energy efficient and face risks of financial loss if they do not. Further, the government's expanded actions in the 8 missions are likely to create and/or significantly expand the market for energy-efficient goods, services and technologies across a range of industries.

Source: Prime Minister's Council on Climate Change: National Action Plan; June 30, 2008, Times of India, July 1, 2008; "Stage is set for domestic trading in energy credits"; Times of India, July 1, 2008; "New climate plan: Iron plants may face brunt"



### **Box 7: Possible import restrictions in US and EU**

The European Union and US are considering using trade-based measures to protect the competitiveness of their domestic industries which operate under domestic regulations from similar industries in developing countries that have weaker environmental regulation.

Such 'carbon equalization' measures could take the form of either a carbon tax or of requiring producers in the exporting countries to purchase international reserve allowances to sell their products in the EU or US, both of which effectively raise the price of imported goods to the level of similar goods produced by 'cleaner technologies' within the EU or US.

Besides protecting domestic industry, such measures are also intended to provide an incentive to emerging economies to reduce the emission-intensity of their industry through market-based measures such as a cap-and-trade system. Further, they are designed to give impetus to negotiations for arriving at a new international collective agreement envisaged to contain greater commitment for mitigation efforts from developing countries. The EU has indicated that the imposition of such measures is contingent upon an international collective agreement failing to materialize, and as such, it will take a decision on the matter only in 2011.

However, the legality of such unilateral measures, in the context of World Trade Organisation (WTO) trade rules, is being questioned. Further, even if such measures are deemed to be legal, the prospect of trade retaliation from the affected countries, who might perceive them as disguised protectionism, may be a significant obstacle in their uptake. Nonetheless, these proposals are significant indicators of the pattern of thinking of developed countries moving forward towards a new international collective agreement.

Source: Akin Gump Strauss Hauer & Feld LLP, Washington, D.C, 'Trade law and climate change: convergence or conflict?' March 13, 2008

### **Box 8: Possibility of restricted access of India to reformed EU ETS**

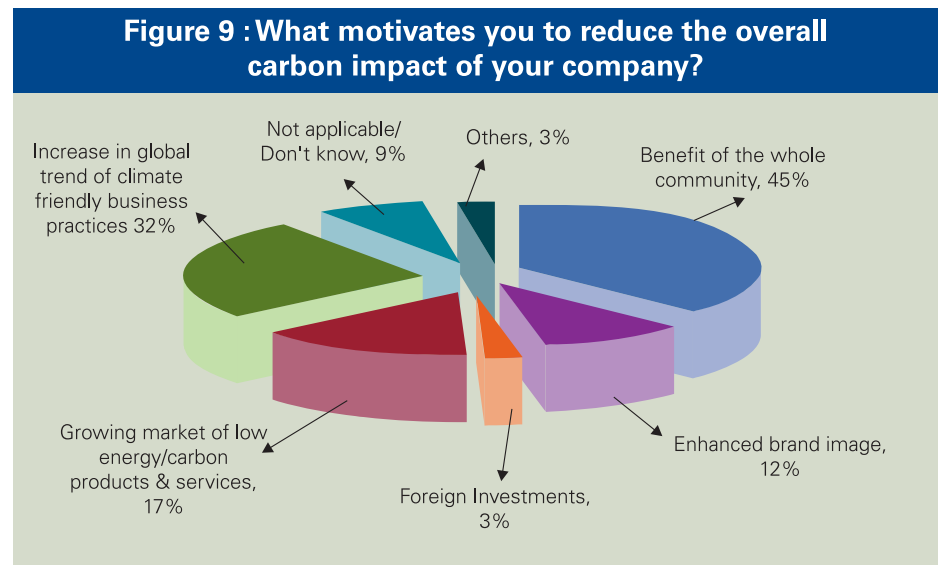
Whilst currently around 10 percent of carbon credits purchased by EU companies are CDM or Joint Implementation credits, there is a suggestion to limit this to 5-6 percent. Further, the EU has also indicated that it is open to providing free emission allowances to those industries that are particularly vulnerable to carbon leakages, whilst requiring foreign firms in those industries to purchase credits to operate in the EU, thereby eroding the competitiveness differential currently enjoyed by firms in India and China.

Source: Euro Correspondent, "ETS expects more stability in second phase," 16 July 2007.

Euractiv, "EU unveils plan to beef up carbon trading scheme," January 23, 2008

## Benefits of action

Forty five percent of the respondents mentioned 'benefit of the whole community' as their main motivator to reduce their carbon impact, while 32 percent mentioned the desire to align with the global trend of climate friendly business practices as the main motivator (See figure 9).

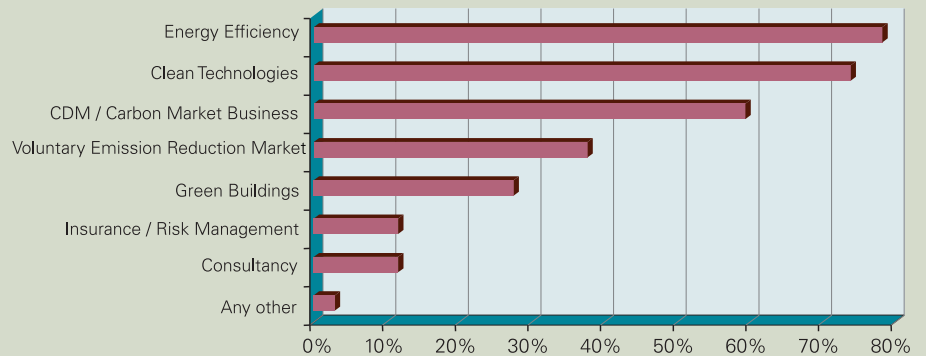


Only 17 percent of the respondents see the growth in the market for low energy / carbon products and services as a motivator for reducing their carbon impact. However, in the context of investment decisions, consideration of the environmental impact and availability of greener options appears to be playing a greater role. Eighty eight percent of the respondents consider it important to evaluate their carbon footprint for investments in upgradation of existing technology and equipment. Similarly, 87 percent believe it to be important for investments in new plants and technology.

On the other hand, the business potential arising out of this is also being recognized. Energy Efficiency (75 percent), Clean Technologies (74 percent) (See box 9) and CDM / Carbon Market business (59 percent) (See Box 10) are the areas in which respondents are planning or working towards building businesses (see figure 10)



**Figure 10 : Areas in which companies are planning / working towards exploiting business opportunities resulting from climate change**



### Box 9: Nokia to tap market for green technologies

Nokia plans to roll out 40 green phones in 2008. The company plans to use biodegradable phone covers and recyclable battery designs, which contain small amounts of toxic material such as cadmium and lithium. The company also has plans to reduce the energy consumed by mobile chargers by up to 50 percent. The company also plans to open up 'Green Bins' across all Nokia dealers in India, where customers can dispose of their old mobile phones for recycling.

Source: Times of India, May 22, 2008, "Nokia to launch 40 green phones"

### Box 10: Future opportunities in the carbon market

The value of the global carbon market grew by 80 percent in 2007, with some 2.7 billion tonnes of CO<sub>2</sub> credits, worth GBP 40.4 billion, changing hands, with further incremental growth being predicted. Verified emission data for the EU showed that CO<sub>2</sub> emissions actually increased by 1 percent in 2007 as compared to the previous year. This is expected to lead to increased demand for Certified Emission Reductions (CERs) from CDM projects, and CER prices.

The reformed EU Emission Trading Scheme post 2012 is expected to cover a wider range of industries, further raising the demand for CERs. Similarly, if US introduces a carbon cap-and-trade system, it could result in the creation of a USD 150 billion market, with 5.7 billion allowances traded as early as 2012. This is also likely to translate into increased demand for environmentally benign technologies, products and services.

Source: Times of India, 'Carbon credits may get dearer, Indian cos to gain', April 21 2008

### *Currently, stakeholder pressure is not an important driver of business' carbon strategy*

The study results show that influence of employees, customers or investors is not a strong driving force behind firms' decisions to respond to climate change.

Compulsions from investors/shareholders was the second least important factor influencing a firm's carbon strategy, with customer expectations in target markets achieving nearly the same level of importance (or lack thereof). Employee expectations to meet global standards in business practices were perceived as slightly more important, but only as the third most influential factor.

This is reflective of the lack of pressure that these stakeholder groups have exerted on this issue in India, in the past. However, given the influence that these stakeholders have exerted as drivers of change in various social and environmental issues in general, and climate change in particular around the world, these pressures are expected to be significant drivers of change in the future (See box 11 and 12). Further, this expected increase in influence is accentuated by the historical record of socio-economic issues, which demonstrates that awareness and calls for action do not increase at a steady rate, but grow exponentially once the critical mass is achieved.

### Box 11: Johannesburg Socially Responsible Investment Index<sup>7</sup>

Responding to the calls from investors for a reliable source of information on a company's socio-environmental performance upon which to base investment decisions, the Johannesburg Stock Exchange launched the Socially Responsible Investment (SRI) index in May 2004. The policy, management / performance and reporting of eligible companies (they have to meet certain criteria to be eligible for inclusion in the index) are evaluated against the criteria of triple bottom line (environmental, social, economy) as well as social governance. Their resulting individual and total scores are then compared with the performance of other firms to produce a relative ranking.

Within the environmental criteria, companies are classified as high, low or medium impact based on their activities. Importantly, more detailed criteria specific to climate change will be introduced in the near future. Interestingly, the top 10 environmental performers for 2007 belonged to traditionally energy and emission intensive industries of mining, construction, steel, resources and oil and gas, with the top performer for the past 3 years being Anglo American (mining). These companies constitute some of the biggest and most profitable South African firms; thereby demonstrating that environmental sustainability is compatible with economic gain and would very likely enhance it moving forward.

The SRI index was the first of its kind in an emerging market and the first to be launched by an exchange, which is an important indicator of the rising interest and concern of environmental issues in developing countries and in particular, the increasing demand from investors for companies to be environmentally and socially responsible. When considered in the context of the expanding energy labeling programme for appliances launched by the Bureau of Energy Efficiency in 2006 in India, these developments signal a definite shift in the role played by different stakeholders in developing countries which, as the study results indicate, Indian companies do not currently pay much attention to.

The Advisory services for the establishment of the criteria against which firms were selected to be part of the SRI index in 2007 were provided by KPMG Sustainability Services.



<sup>7</sup> Johannesburg Stock Exchange, 2008



### Box 12: Thermal power plants facing popular pressure in the US

A powerful indicator of increasing public awareness of the issue of climate change is reflected in the veto of the expansion of a coal-based power plant in Kansas, US on environmental grounds in May 2008. The governor of the state successfully vetoed a bill allowing the expansion of the power plant after the project failed to secure an air quality permit from the state Department of Health and Environment on the grounds that it would produce 11 million tons of CO<sub>2</sub> every year. Despite attempts by the legislature to override the veto, the decision stands and the project does not have the required clearance to commence.

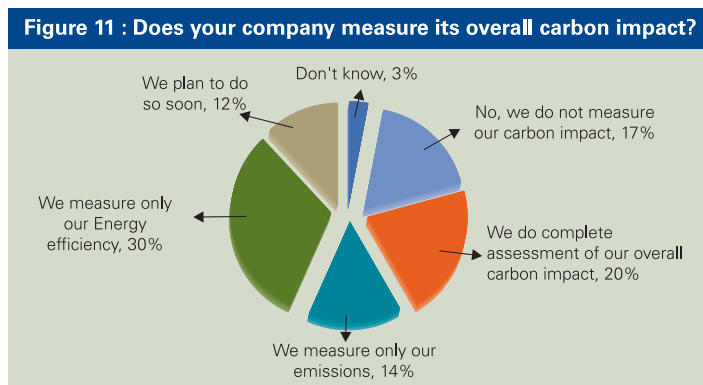
Source: Office of Kansas city governor, April 2008

# 6 How can we respond to climate change?

**There seems to be a significant gap between good intentions and appropriate actions to back up the intentions. While a number of companies expect to contribute to mitigating their impact on climate change, few seem to be approaching this in a structured, measurable manner. The credibility of achievements may therefore remain under question. Employing a larger range of tools, and developing capabilities to implement them, requires a deeper understanding of the linkages between climate change and business issues.**

## *Current carbon footprint: Do we know where we are*

A detailed carbon impact mitigation plan of a company would typically start with a measurement of the company's present 'carbon footprint' (see figure 11 and box 13), which would be the baseline against which improvements can be measured. In absence of this, the impact of any initiatives would not be measurable, and would therefore lack credibility.



While a number of Indian businesses claim to be aware of the need to reduce their carbon impact, and believe that they are taking steps towards it, most companies have not taken this first step of measuring their current carbon footprint. Only 21 percent of respondents indicated that they fully measure their carbon impact. Importantly, 16 percent of respondents don't see the need for such an analysis (See figure 11).



### Box 13 – Global Carbon Footprint Initiatives

A business's carbon footprint is the total amount of greenhouse gases emitted over the full life cycle of a process or product. Whilst there is considerable debate about the exact scope of activities covered under such a methodology, it is widely accepted that it must go beyond considering only the direct activities involved, to also consider the indirect inputs, outputs and production processes in order to provide a more realistic depiction of the total impact.

In recognizing that measuring their total carbon footprint is the first step to managing and reducing it, numerous global business conglomerates have initiated action to assess the total carbon footprint of their supply chain. In an attempt to inform various stakeholders and in particular, investors on their carbon footprint, global companies such as Procter & Gamble, Hewlett-Packard, PepsiCo and Unilever, among others have picked as many as 50 of their suppliers to assess their contribution to the firm's total footprint according to a standardized methodology.

Source: Washington Post, '11 Multinationals to assess their carbon footprint', January 21, 2008

### ***Targets: Where do we want to be?***

Many companies in the developed world have measured and announced their baseline carbon footprint, and also their reduction targets over 5 to 10 year periods. Surprisingly, 41 percent of the respondents in this study indicate having at least some quantified goals for carbon reduction to be achieved by 2010, even in the absence of government regulations. However, it is significant that 38 percent of respondents have no goals whatsoever.

### ***Tools and Capabilities: How can we get there?***

While a large proportion of businesses claim to have quantifiable targets for emission reductions, an appreciation of the tools and capabilities required to achieve them (including measurement of their current carbon footprint) is missing at present.

Out of all the measures presented that businesses engage in, or plan to engage in, to tackle climate change; the most widespread was using energy efficient appliances (94 percent), followed by educating and training employees on environment friendly practices (77 percent) (See figure 12). Whilst energy efficiency is an important source of substantial reductions in carbon intensity and thus, the high proportion of businesses engaging in this activity is encouraging, much fewer businesses are engaged in other primary drivers of emission reductions. Only 29 percent of firms review and update their global supply chain to achieve energy efficiency and only 25 percent have discontinued high energy services (See box 14).

#### **Box 14: Case Study – ITC<sup>8</sup>**

ITC's endeavor to become the first organization of its size and scope in the world to become carbon positive, water positive and zero solid waste discharge (it has already achieved the first two and is close to achieving the third) demonstrates the enormous breadth of mitigation efforts that visionary companies can engage in.

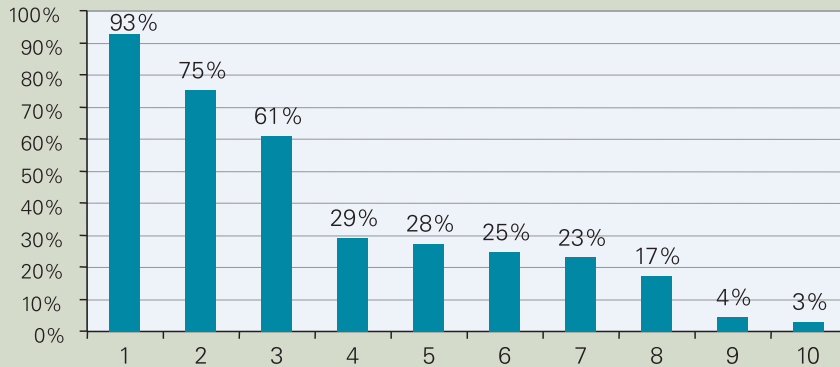
Apart from ensuring energy efficiency in daily operations through energy efficient appliances, the company's broad-based mitigation efforts include producing renewable energy internally through solar systems and recycling by-products, waste recovery, and odor abatement systems, among others.

Importantly, the organization has demonstrated how responding to climate change does not have to come at the expense of loss of business, registering a 1.73 percent reduction in total energy consumption despite significant growth in all its businesses.

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<sup>8</sup> ITC Sustainability Report, 2007

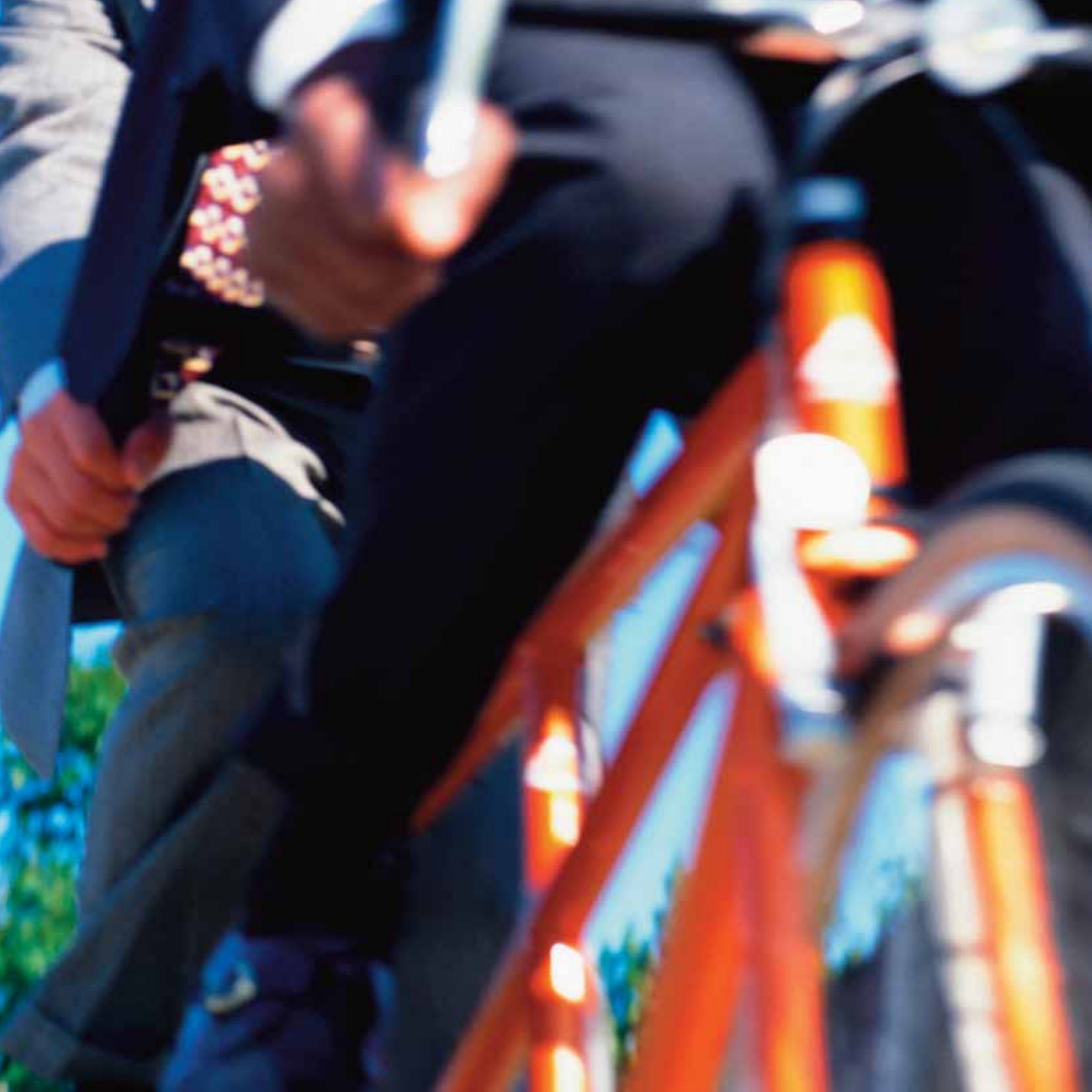
**Figure : 12 Measures to tackle climate change that businesses engage in/plan to engage in**



**Legend(Figure12)**

Label	Response
1	Installing / using energy efficient appliances (such as lighting, heating, and air conditioning)
2	Educating and training employees on environment friendly business practices
3	Recycling / using recycled products
4	Reviewing and updating global supply chain to improve energy efficiency
5	Achieving carbon neutral status
6	Discontinuing high energy / carbon services
7	Donating to organizations / charities working towards combating climate change
8	Reducing air travel and using vehicles with cleaner technologies
9	None of these, but intend to implement similar practices within next years
10	None of these and none applicable





# 7 Conclusion: Bridging the gap between intention and action

**In summary, this study found that Indian businesses regard climate change as an important business issue. However, an appreciation of why it is important and how it can affect business appears to be relatively low. This, coupled with little stakeholder pressure, results in lack of structured approach to responding to climate change.**

There is some degree of jingoism in the belief that India should lead the way, though the leadership role is largely left to the Government. At the business level, while a number of companies believe they have targets for reducing their carbon impact, the ability to measure success seems to be low, which would result in continued skepticism around the seriousness of such measures.

## ***Why companies should be thinking more actively about actions***

The threat of climate change mitigation becoming a direct cost for business is real. A high level investment commission under Mr. Ratan Tata has reported that “while long –term energy security would require India gets a large share of power generated from domestic resources of coal, increased concern about the impact of carbon emission and global warming will likely to result in a global effort to take concrete step such as introduction of carbon tax.” Economic Times , 2008

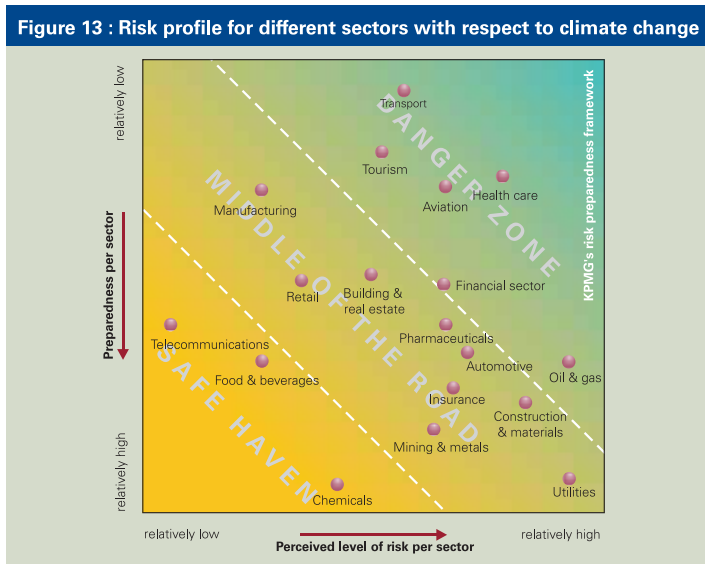
Developing countries are expected to play an increased role in the new international collective agreements. With the Indian economy getting increasingly integrated in global trade and business, the pressure from European Union and USA could get difficult to ignore.

## ***What should businesses be asking themselves, and doing***

The focus of the Government and of leading industry associations has largely been at the economy level issues and impacts. Sector specific associations and individual companies would need to ask questions specific to them. The impact, risks and opportunities need to be understood, and actions prioritized, at the micro level.

An example of this level of analysis is provided in figure 13 below, through a framework developed by KPMG in the Netherlands on the risk profiles of various sectors as a result of climate change.

A critical success factor is likely to be the ability to incorporate mitigation initiatives into a coherent business strategy that enables full utilization of the opportunities presented by climate change and minimizes its exposure to the risks. Businesses would thus need to complement their own sector expertise with deep-rooted and broad-based knowledge of the macro environment. In order to lend credibility to the mitigation strategy developed in this way, businesses would want to use globally accepted methodologies to evaluate the true state of a firm or industry's level of emissions and carbon footprint, and apply systems and processes to validate the results of their actions. An example of this level of analysis is provided in Figure 13 below, through a framework developed by KPMG Netherlands on the risk profiles of various sectors as a result of climate change



Source: Climate Changes Your Business: KPMG's Review of the Business Risks and Economic Impacts at Sector Level, 2007"

Hence, a structured response at individual business leaders' level would typically involve the following components:

- 1 Measurement of the carbon footprint of the business
- 2 Projecting the likely carbon footprint if the business continues to grow under the ' Business As Usual (BAU)' scenario
- 3 Analysis of the risk of climate change issues to the sector and the business
- 4 Identification of opportunities within the business, and beyond (CDM projects, clean technologies, renewables, etc) to maintain growth, but with a different approach
- 5 Preparation of a time bound action plan for reducing the carbon footprint compared to the projected carbon footprint
- 6 Institutionalize the action plan in business processes
- 7 Institutionalize a measurement and verification system to monitor progress against the plan
- 8 Periodically report progress to stakeholders.



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