

## Indian business and climate change - survey results

A survey of top businesses in India has found significant concern about current and future impacts of climate change. Key results included:

- Businesses are feeling the effects of recent droughts, which have increased prices and reduced water availability.
- Survey participants linked drought, fossil fuel use and climate change, and were concerned about the future effects of climate change on their operations and customers.
- Some businesses are already taking action to cut emissions and prepare for the impacts of climate change.
- Several interviewees expressed a desire for the government to introduce regulations and incentives to reduce emissions, and to ensure that water supplies continue to be available.

The survey was conducted with senior decision-makers from 11 top businesses in India, with annual revenues of up to USD 10.5 Billion.

### Context: India faces a growing threat from climate change

Climate change presents a growing threat to Indian businesses. Human activities have warmed the planet by more than 1°C since the 19th Century.<sup>1</sup> Temperatures in India rose by 0.5°C in 50 years alone.<sup>2</sup>

These temperature increases resulted in changes to the summer monsoon in India.<sup>3</sup> In the second half of the 20th Century, monsoon rainfall became both less frequent and more intense - increasing the risk of both drought and flood damage to crops.<sup>4</sup> Changes to rainfall have reduced India's rice yields since the 1960s.<sup>5</sup>

In 2014 and 2015 India experienced weak rainfall during the monsoon, and in 2016 a drought led to water shortages and agricultural difficulties that affected a quarter of the population, according to the Government of India.<sup>6</sup> Other effects include:

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<sup>1</sup> <https://public.wmo.int/en/media/press-release/provisional-wmo-statement-status-of-global-climate-2016>

<sup>2</sup> <http://advances.sciencemag.org/content/3/6/e1700066.full>

<sup>3</sup> <http://www.nature.com/nclimate/journal/v4/n6/abs/nclimate2208.html>

<sup>4</sup> <https://link.springer.com/article/10.1007/s10584-011-0208-4>

<sup>5</sup> <https://link.springer.com/article/10.1007/s10584-011-0208-4>

<sup>6</sup> <http://timesofindia.indiatimes.com/India/Over-25-of-Indias-population-hit-by-drought-Centre-tells-Supreme-Court/articleshow/51901956.cms>

- A 12% drop in tea production in south India in 2016, due to drought;<sup>7</sup> the drought in Tamil Nadu was the worst in 140 years.<sup>8</sup>
- A coal power plant in West Bengal had to shut most of its power-generating capacity for 10 days in 2016 because it did not have enough water for cooling - the first time it had done so in its 30-year history.<sup>9</sup>
- Water storage in India's reservoirs is currently 55% of total capacity, according to the Central Water Commission - compared with 84% on average during the same period over the last 10 years.<sup>10</sup>

Further climate change is likely to mean these problems will worsen. For example, the 2030 Water Resources Group, an international organisation, warns that India "faces a looming water crisis where demand is set to outstrip supply by 50% by 2030".<sup>11</sup> Studies suggest climate change will make India's summer monsoon much more unpredictable.<sup>12</sup>

Businesses are worried about this threat, according to the results of a survey of a number of India's top companies. The results show that many Indian businesses are already experiencing the consequences of climate change and are concerned about the threat as its effects grow.

## Survey details

**CarbonCopy**, a fortnightly environment, climate and energy newsletter, conducted qualitative interviews with senior decision-makers at 11 major Indian businesses and Indian offices of global businesses in water-intensive industries. Interviewees were asked about the impacts of drought and climate change on their business, their understanding of the causes of droughts, what measures their company was taking to address climate change and their views on the government's measures to manage climate change.

Researchers interviewed executives from major companies in a range of sectors, including manufacturers of mechanical goods, chemicals, pharmaceuticals, beverages and other consumer goods, and companies that sell products directly to consumers. The companies surveyed have annual revenues up to around USD 10.5 Billion. The interviews were conducted confidentially, so companies are not identified.

<sup>7</sup> <http://www.thenewsminute.com/article/dry-storm-tea-cup-drought-hit-coonoor-suffering-tourism-plantations-lose-money-59308>

<sup>8</sup> <http://www.thehindu.com/todays-paper/tp-national/tamil-nadu-in-the-cycle-of-drought-and-floods/article17530359.ece>

<sup>9</sup> <http://www.bbc.co.uk/news/world-asia-india-35888535>

<sup>10</sup> [http://202.159.215.250:83/DocumentUploadRoot/DocumentId\\_12477/31.08.2017\\_CWC\\_Bull.pdf](http://202.159.215.250:83/DocumentUploadRoot/DocumentId_12477/31.08.2017_CWC_Bull.pdf)

<sup>11</sup> <https://b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/000/893/original/CDP-india-business-case-for-water-disclosure.pdf?1472051621>

<sup>12</sup> <http://www.worldbank.org/en/news/feature/2013/06/19/india-climate-change-impacts>

## Indian businesses are worried about climate change

Many companies are feeling the effects of increasing drought:

*“The two consecutive years of poor monsoons, water shortage in reservoirs, as well as lowering of groundwater table impacted businesses at large ... poor monsoons impacted the overall production of crops, mainly rice and corn. This impacted the procurement cost for all manufacturers including us. For example, corn prices saw the highest ever price in 2016.”*

(food company)

*“Last year we had a government order for restriction in supply of municipal water by 40 percent for two months”*

(beer manufacturer)

*“A few of our manufacturing sites had to transport water using tankers for short periods”*

(beverage company)

Interviewees linked the use of fossil fuels with climate change and drought - although some noted that poor management of water resources is also a factor:

*“Climate change does impact the rain patterns and certainly fossil fuels are one of the major contributor to the energy dissipation in the environment and release of CO2”*

(chemicals manufacturer)

*“A lot of climate change, melting of glaciers, droughts, floods may be attributed to climate change”*

(pharmaceutical company)

*“Usage of fossil fuel increases global warming”* (diversified manufacturer)

*“Shortage of water in India is arising more out of mismanagement of available water and unplanned urbanization”* (glass manufacturer)

While not all interviewees said their business is already experiencing climate change, most were concerned about how climate change will affect their business. Some were worried about the direct effects of climate change on their operations:

*“It adds to uncertainty and we have to provide for the risk mitigation”*

(chemicals manufacturer)

*“Maybe after 20 years if water become scarce due to lack of recharge or scanty rainfall”*

(glass manufacturer)

Others were concerned that **climate change will harm their customers**, which will therefore hurt sales:

*“India still is an agrarian economy and if that sector is deeply impacted, all others will too. If the buying power of this sector dips, so will those of others.”*

(direct-selling company)

*“There will be a change in consumer behavior and lots of our products are related to health care”*

(consumer goods manufacturer)

## **Indian businesses support action to limit climate change**

Some businesses are taking action now to **reduce their emissions and improve their ability to cope** with increasing extreme weather:

*“Work on improving energy efficiency of fossil fuels and electricity. We have internal target of 10% reduction in unit energy consumption on year-on-year basis through various measures”*

(chemicals manufacturer)

*“Our efforts in the country include improving yields, building climate resilience, and reducing GHG emissions from agricultural practices, to make a difference for the people and places where we grow and make our foods”*

(food company)

Interviewees want the government to set **rules to reduce emissions** of gases that cause climate change:

*“In order to stop climate change the government should enforce strict norms to all stakeholders who contribute to climate change”*

(diversified manufacturer)

*“Government can make pollution control norms more stringent”*

(pharmaceutical company)

*“Encourage solar energy infrastructure and [make] introduction of LED compulsorily for all industry to reduce power consumption”*

(glass manufacturer)

*“Set uniform regulations which don’t discriminate any particular industry and strengthen enforcement”* (beverage company)

Some interviewees also emphasised the potential for government to create **incentives to cut emissions**:

*“Incentivize business of all kinds on reducing carbon footprints, monetize the process of carbon reduction so that retail participation can be there, make carbon trading easier and convenient, educate students, general public, corporates etc, encourage green bonds, have sustainability index percolated to district levels.”*

(pharmaceutical company)

*“Tax breaks for high energy efficiency machinery and implementation of global emission standards for the fossil fuel energy. Also work on setting up year-on-year efficiency gain targets. This should be linked to tax incentives.”*

(chemicals manufacturer)

*“Subsidy for cleaner energy and its transmission too. Subsidy/grant for operating expenditures in cleaner and environment-friendly technologies that have positive impact on electricity consumption, carbon, water and waste.”*

(food and beverage company)

Not all interviewees thought the government should provide relief to businesses affected by increasing drought, but there is wider agreement that the **government should ensure water is available**:

*“Government must provide relief. This could be in form of compensation for lost assets - inventory, fixed assets, cost of rebuilding, rehabilitation etc”*

(pharmaceutical company)

*“Government should not provide financial support to businesses that are affected by drought or water shortages. But, considering it is government’s responsibility to provide water to industries for running their operations in their states, government should take necessary actions and work on projects by which it can supply water to industries from nearby water resources.”*

(mechanical goods manufacturer)

*“Government should look for ways and means to make water available for industrial and human consumption through water recharge and conservation programs”*

(consumer goods manufacturer)