

Be that Change Change the Climate

Climate is definitely changing.

This is not just an environmental problem. Climate change affects our economy and our social development. Climate change affects us in more ways than one.

But we are also part of the solution.

In Mahatma Gandhi's words, we can Be the Change.

What is climate change?

Weather refers to short term seasonal changes. Climate is the average weather experienced over a long period. Over the last century, our Earth warmed by 0.74°C. About 0.4°C of this warming has occurred since the 1970s. Scientists across the world note that the rate at which the Earth is heating up is faster today than ever before. When temperatures rise, they alter the wind and rainfall patterns.

What causes climate change?

Human activity causes climate change. Rapid industrialisation, aeroplanes, energy guzzling motor cars and household appliances and even bad smelling compost in our garden emit carbon dioxide, methane and nitrous oxide, the 3 key 'greenhouse' gasses. These are called greenhouse gasses (GHGs in short) because they envelop the Earth and then prevent the heat from escaping the Earth's surface.

What is the impact of climate change?

Rising temperatures are altering the wind and rainfall patterns. This is affecting our food supplies from our farms. It is making the sea level rise and floods, droughts and cyclones to become more frequent, intense and more unpredictable. These gases are 'eating up' the Ozone layer of the Earth's outer atmosphere. They are causing less of Ozone to remain up there so we talk of the 'hole' in the Ozone layer the largest was 3 times the size of Australia in the year 2000. The Ozone layer acts like our sunscreen lotion it absorbs the ultraviolet rays and heat from the sun so that we don't burn under it.

The most authoritative global scientific report predicting the changes to come is the 2007 Fourth Assessment Report of the UN Intergovernmental Panel on Climate Change (IPCC). The IPCC is headed by Dr R.K. Pachauri, the Indian 2007 Nobel Peace Prize winner.

What are the world leaders and India doing about climate change?

World leaders including India, came together in March 1994 to sign the United Nations Framework Convention on Climate Change (UNFCCC) to prevent further damage to the climate and help poor people adapt to the impacts of climate change. The Framework recognised that the climate system cuts across national boundaries so all countries agreed to cooperate and share their information, knowledge, technologies and finance on climate change. As the rich industrialised countries are most responsible for the damage, it was agreed that they needed to commit to reduction of emissions first and also compensate developing countries through transfer of cleaner technologies and funds.

In February 2005, under the global Framework, world leaders including India agreed to the Kyoto Protocol, a legally binding agreement that set targets for 37 industrialised countries to reduce their greenhouse gas emissions by 2012. These countries are still far from fulfilling their targets, especially because it also implies changing lifestyles based on over-consumption of fossil fuels.



What are the effects of climate change on our food basket?

1. *Fewer and more expensive apples in the market*

In Himachal Pradesh, rising temperatures are causing apple yields to fall as farmers are shifting to other crops. Apple orchards are shifting to cooler villages in higher altitudes, new infrastructure has to be developed and apples have to travel longer distances to urban markets.

2. *If you are staying on the Arabian sea coast and you love to eat sardines*

Surface sea temperatures are rising and making the Arabian Seas non-habitable for sardines, the small, oily highly nutritious fish. This may soon become true for other sea foods as well. Get ready to change your eating habits: sea fishes may soon become a rarity.

3. *Fresh drinking water will become a precious liquid*

As temperatures in high altitudes rise, the quantity of ice formation on the mountains in winters is decreasing and threatening our main fresh water supply source. India's satellite imagery and other space pictures shows the thinning of Himalayan glaciers over the last decade. Higher temperatures also means ice is melting faster than ever before and as more ice melts it causes more floods.

4. *There will be fewer and more expensive ground nuts to munch in winters*

Traditional hubs that produce groundnuts are struggling to cope with climate change. For instance in dry Anantpur, Andhra Pradesh, five days of heavy rains destroyed three-fourths of the groundnut pods just as they were ready to mature. Distribution of rain, more than the quantity of total rain, is critical for crops, most of which are grown by small and marginal farmers in rainfed areas.

5. *Will we have to abandon eating rotis?*

Wheat yields are dwindling due to climate change

Wheat crop requires low temperatures for a considerable while to help its grain formation. Rising temperatures and heat waves are not giving the crop that time so the yields are falling.

How can I stop climate change?

When you and I conserve energy and water, take the train instead of the plane, pool our car rides to school and office, use energy-efficient appliances, recycle our waste, donate, share and re-use where we can and say 'no' to plastic, we reduce our own contribution to the greenhouse gas emissions.

Every drop counts. If you and I can tell our friends, work with people who are trying to save the Earth and us, lobby the government to invest in low-carbon growth path and to help us adapt to climate change, each one of us can indeed,

Be that Change.

