

Understanding The Net Zero Emission Target And The Best Practices To Achieve It

THE BALANCING ACT FOR THE GREENER FUTURE



EnviroVigyan

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About The EnviroVigyan

EnviroVigyan is a registered not-for-profit, non-government organization (NGO), founded by Dr. Anchal Garg in the year 2021. The scientific activities of this organization are supported by a dedicated team of experts drawn from academia and research institutions. The self-motivated dynamic group of experts works in multi-disciplinary areas of societal importance covering different issues of environmental concern. The research, training, and awareness programme focus on the thematic areas ranging from air pollution, waste management, water and sanitation, to climate change, ecosystem restoration, and associated public health.

About The Environmental Times

The Environmental Times is a monthly report prepared by EnviroVigyan. The aim of The Environmental Times is to highlight the significance, major contribution, and way forward to solve the major environmental issue. It also focuses on changing our pathways from unsustainable to sustainable practices.

About The Authors



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Dr. Anchal Garg

Anchal is the Founder at EnviroVigyan since 2021. She is a researcher, consultant, activist, and educator in the field of Environment Management. She completed her Ph.D. in Environmental Science.

What is Net Zero Emission?

Net-zero can simply be stated as equalizing the greenhouse gases (GHGs), particularly carbon dioxide sources and GHGs. In another word, we can understand that Net Zero Emission means balancing the sources and sink of carbon dioxide in the environment. Since the half-life of one of the major contributors to climate change i.e., CO₂ is 120 years so work is also needed to remove the emissions done over the past years.

What is India's Commitment to Net Zero Emission Target?

Climate change is a very serious concern that increases temperature, emission of more GHGs, changes in precipitation patterns, and increases in the number of natural hazards which in turn results in the loss of flora and fauna, and impacts human life. Every year, through the conference of parties (COP), the discussions are going on to mitigate the climate change-related problems. Every country's representative target their action plans to mitigate climate change.

PARIS AGREEMENT

As stated by the Paris Agreement (CoP 21) that the increase in global temperature needs to be maintained well below 1.5°C above the pre-industrial levels and for that to achieve overall emissions need to be reduced by 2030.

PANCHAMRIT OF INDIA

In the COP 26 Summit that took place in Glasgow, the Prime Minister of India, Shri Narendra Modi presented the '**Panchamrit**', the five elements, that will help India in attaining the **Net Zero target by 2070**.



The five elements are increment in the non-fossil fuel energy to 500 GW, meeting 50% of our energy requirement from non-renewable sources, reducing the carbon emissions by 1 billion tonnes, and reducing the carbon intensity of our economy by 45% by 2030. The fifth element was the promise to attain the net-zero target by 2070.

Source: Google Image

Why more awareness is required for Net Zero Emissions?

Though Climate change has become a grievous issue in the world, many people are still unaware of the meaning and significance of the net-zero target that we as a country have promised to achieve by 2070. The general public needs to know about the reasons for promoting e- vehicles or the plantation drives by the government so that conscious and collective action can be taken by all individuals to make this Earth a more sustainable place to live as emphasized by the slogan of this year’s Environment Day.

What is the status of other countries in achieving Net Zero?

In COP 26 at Glasgow: List of Countries Pledged To Achieve Their [EnviroVigyan](#)

NET-ZERO TARGET

‘Net Zero Emissions’ refers to achieving an overall balance between greenhouse gas emissions produced and greenhouse gas emissions taken out of the atmosphere.

Already Achieved	2030	2035	2040	2045	2050				2053	2060	2070
Bhutan	Barbados	Finland	Austria	Germany	Andorra	Dominican Republic	Liberia	Seychelles	Turkey	Bahrain	India
	Maldives		Iceland	Sweden	Argentina	European Union	Lithuania	Solomon Islands		China	Mauritius
	Mauritania			Nepal	Australia	Fiji	Luxembourg	Slovakia		Kazakhstan	
					Brazil	France	Malawai	Slovenia		Nigeria	
					Bulgaria	Hungary	Marshall Islands	South Korea		Russia	
					Canada	Ireland	Monaco	Spain		Saudi Arabia	
					Cape Verde	Israel	Montenegro	Switzerland		Sri Lanka	
					Chile	Italy	Nauru	UAE		Ukraine	
					Colombia	Jamaica	New Zealand	UK			
					Costa Rica	Japan	Panama	US			
					Cyprus	Laos	Portugal	Uruguay			
					Denmark	Latvia	Rwanda	Vatican			
								Vietnam			

2nd Half of 21st Century

Malaysia Namibia Singapore Thailand

Net-Zero target set in law or policy

Political pledge to reach Net-Zero

Achieving net-zero emissions means that some greenhouse gases are still released, but these are offset by removing an equivalent amount of greenhouse gases from the atmosphere and storing it permanently in soil, plants, or materials.



While the countries like Germany and Sweden have set their target of 2045, the UK, European Union, and South Korea have set 2050 as their target for net-zero. All these countries have included the net-zero target as a legally bound target in their law.

Some countries like Brazil, Thailand, and South Africa have pledged to achieve the target by 2050. Many other countries like the USA (2050), Australia (2050), China (2060), and Sri Lanka (2060) have included the net-zero target in their policy document.

Why achieving Net Zero is so important?



*Two countries namely **Bhutan and Suriname** have already achieved their net-zero targets and have become carbon neutral.*

The latest report of IPCC 2022 has indicated a bleak future for our environment if proper and on-time actions are not taken by the world leaders.

- With just 1.1°C of warming, climate change is causing extreme heat waves, floods, and threatening our food security, the latest report indicates that keeping the global temperature below the suggested 1.5°C will still not be sufficient or safe for many cities and countries.
- Climate change has already made millions of people homeless all over the world and the report estimates that in the next decade it will lead approximately 30-132 million people into extreme poverty.
- Apart from threatening food security and hazards such as floods, there will be an increase in the incidence of heat-related mortality (which has already started), health risks like heart problems, mental health issues, and forcing people into becoming climate refugees.
- One issue due to climate change can lead to another or multiple risks can affect an area or country at the same time. Though climate change affects everyone equally, its impacts are not felt equally by everyone as it majorly affects the vulnerable section of our society threatening them socially, and economically by affecting their livelihoods, health, and necessities of life.
- Hence it is important to work together to combat this catastrophe, and help our country and the entire globe to achieve their Net Zero Emission Targets.



Source: World Ocean forum



Source: ICCCAD

Why do we need to focus more on the energy sector?

The United Nations Environment Programme (UNEP) suggested working on the six sectors to reduce our emissions which are energy, agriculture and food waste, buildings and cities, nature-based solutions, industries, and lastly transport. Out of this, **energy sectors contribute about 65% to the total GHG emissions**, the highest among all the six sectors which also leaves us with the hope that we can reduce the emissions by switching to non-fossil fuel and non-renewable energy-based practices. The transformation from non-renewable to renewable energy will help achieve the net-zero target.

What we can do to achieve Net Zero?



We can all on individual levels can contribute to this by using public transport, e-vehicles, cycling or walking for short distances, etc.



Climate change has also impacted our agriculture, the need of the hour is to promote innovative and sustainable technology and food wastage shouldn't be done as it leads to GHG emissions too.



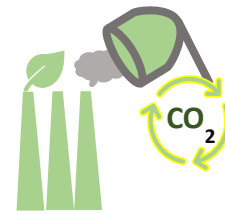
Adopting nature-based solutions is another approach for climate change mitigation which generally includes increasing the sinks for GHG by restoration of degraded ecosystems, wetlands conservation, afforestation, etc.



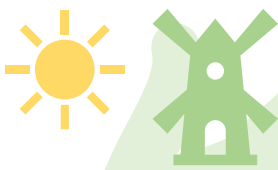
Urbanization is also one of the reasons for emissions of GHG gases which we can manage by eco-friendly buildings and smart and resilient cities.



Managing and recycling water, combating air pollution, reducing the urban heat islands by plantation in and around our houses, and minding the carbon footprints of the building materials are some of the steps that we as a community can take to make our cities eco-friendlier.



There should be the promotion of low-carbon industrial processes and industries should be encouraged to adopt sustainable practices like carbon-intensive technologies and the use of renewable energies for meeting their energy demand.



To achieve such a huge target, a complete switch in our consumption and production pattern is required for example the transition from fossil fuel to non-fossil fuel energy, non-renewable energy, e- vehicles, the latest eco-friendly technology in industries, and many more.

Planting trees is also one of the most important factors to increase the carbon sinks. Not wasting food, recycling water, using CNG cylinders, using the three R's for waste, keeping our surroundings clean, switching off the power supply when not in use, installing solar panels in our houses, adopting a sustainable lifestyle, and most importantly spreading awareness among our families, peers, and colleague in whichever medium we can.

It is important to be hopeful as well as resilient in our actions to repair our environment which can only be done by constant and collective efforts.

