



GREEN INSIGHTS

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Newsletter on "Environment Literacy - Eco-labelling and Eco-friendly Products"



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Environment Literacy - Eco-labelling and Eco-friendly Products

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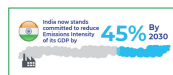
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Foreword

The UN Climate Change Conference in Glasgow (COP26) brought together 120 world leaders to commit towards climate change. Countries reaffirmed the Paris Agreement goal of limiting the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C and recognized the repercussions of climate change. The goal of COP 26 is to keep cutting emissions until they reach net zero by mid-century. To achieve this goal, each country has defined its own NDCs, wherein they have committed themselves in reducing their greenhouse gas emissions and reaching their net zero target.

All fossil fuels such as coal, petroleum, and natural gas, when burned releases carbon dioxide. The released carbon dioxide is a potent greenhouse gas which prevents the infrared radiation of sun to escape the earth's atmosphere. This phenomena creates a heat-trapping effect. Over

time, the accumulation of greenhouse gases in the atmosphere has contributed to climate change and has caused nonreversible harm to the environment. Carbon pricing is one such instrument adopted by the governments around the globe to curb carbon emission. Though taxing carbon can help in achieving a wide range of policy initiatives, it mainly focuses on reducing greenhouse gas emissions. By setting a price on carbon, the emitters are forced to reduce their emissions and opt for greener and cleaner alternatives.

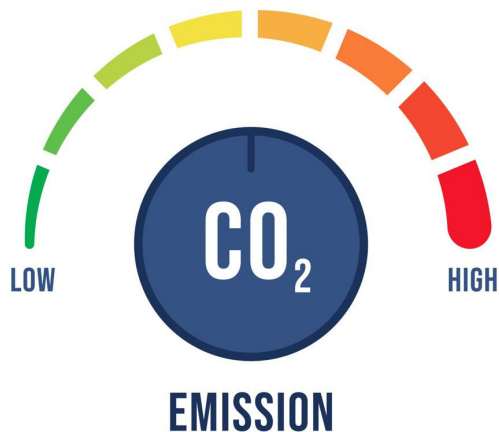
Globally, the government policies and market scenarios are signaling an urgency in increasing finance in mitigation & adaptation to the effects of climate change. One such efforts is through pricing the carbon. This issue of Green Insight briefs about carbon pricing systems such as carbon tax and Emission Trading system. It also sheds light on the India's commitment towards net zero target.

Carbon Pricing



Image Source: <https://www.worldbank.org/en/news/feature/2016/06/29/a-look-at-carbon-pricing-and-competitiveness>

“Carbon” is the buzz word when it comes to climate change. To avoid the global temperature rise to 2 degrees in the coming decade, political leaders around the globe have committed themselves to net zero emissions of greenhouse gases. The earth’s atmosphere gets heated up because of the increase in the concentration of major greenhouse gases such as CH₄, SO_x, NO_x and carbon dioxide.



The change in climate and global warming varies with the increase in the concentration of carbon in the atmosphere. This has resulted in climate change repercussions such as increase in magnitude and frequency of natural calamities like sea level rise, floods, storms etc. A considerable loss and damage of environmental and societal health can be attributed to the perils of climate change. Under the Paris Agreement of 2015, each participatory signatory

has defined their own NDCs’ (Nationally Determined Contribution) and has agreed to work together to keep the global average rise in temperature well below 2 degree Celsius of pre industry levels. India’s NDC target by 2030 is to reduce Emissions Intensity of its GDP by 45 percent by 2030, from 2005 level and achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.

Globally countries have decided different policy instruments in varied sectors to achieve their targets. One such tool adopted by countries to keep their emissions in check is through ‘Carbon tax’ or ‘pricing the carbon’ to bring down the emissions and drive the investments towards cleaner and greener options. A carbon tax is defined as the price imposed by the governments on the emitters for each ton of greenhouse gas emissions they emit. A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or – more commonly – on the carbon content of fossil fuels. There are several ways by which the government tax carbon – such as on fossil fuels on how much carbon they emit and on measure emissions of power plants, industries and automobiles. A carbon tax is designed keeping in mind for those who are responsible for it and who can reduce it. Carbon taxes helps in addressing the most important problem faced by our economy i.e when market actors engage themselves in economic

transactions through exchange of goods and services, they often indulge in emissions of greenhouse gases. These emissions in turn result in climate change. The catastrophic damage of livelihood, health, infrastructure etc incurred due to climate change is equally borne by everyone, including those who have never been part of any engagement. The negative effect of economic transaction on those who were not part of or were external to it is called Externality, for example, a person who is born today will have to bear the negative consequences of climate change such as tropical storms or floods or droughts, even though he/she is not responsible for the emissions due to anthropogenic activities before his/her lifetime. Here, is where the government intervenes and puts a price on the greenhouse gas emissions factoring in the social cost of emissions. These carbon prices sends a signal to all the market actors to reduce the production of goods and services that demand GHG emissions. With the enhanced ambition to tackle climate change, these taxes collected can be used for the betterment of the society by public spending. Public spending can target climate change through mitigation measures such as reforestation programmes, capacity building programmes for small scale farmers, vulnerable groups etc. Carbon pricing does not indicate who should pay the price, rather it provides with an economic signal wherein the polluters can decide on themselves whether to discontinue their polluting activity, reduce emissions, or continue polluting and pay for it. It also stimulates adoption of cleaner technology and cleaner production methods through use of an alternate non-conventional resources and new market innovations.

There are two main types of carbon pricing: **Emissions Trading Systems (ETS)** and **Carbon Taxes**.

Emissions Trading Systems (ETS)

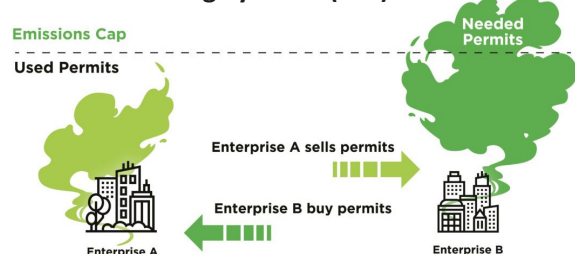


image source: <https://www.teraenergies.com/insights/china-carbon-trading-market/>

An Emissions Trading System (ETS) often referred as a cap-and-trade system as it limits the total level of greenhouse gas emissions. Parties committed to Kyoto protocol have accepted these targets which are levels of allowed emissions of greenhouse gases. These allowed emissions are divided into assigned amount units (AAUs). In Emissions Trading System,

the industries are with low emissions to sell their extra allowances to larger emitters. This resulted in the creation of new commodity for emission reductions and removal. Since CO₂ is one of the major greenhouse gas, it is often spoken as trading of carbon as it is now tracked and traded as a commodity. This is known as the “carbon market.” The units that are transferred under the Kyoto Protocols emissions trading scheme where each equal to one ton of CO₂ are in the form of:

- A removal unit (RMU) on the basis of land use, land-use change and forestry (LULUCF) activities such as reforestation
- An emission reduction unit (ERU) generated by a joint implementation project
- A certified emission reduction (CER) generated from a clean development mechanism project activity

Transfers and acquisitions of these units are tracked and recorded through the registry systems under the Kyoto Protocol. An international transaction log ensures secure transfer of emission reduction units between countries.

To avoid the parties from overselling the units and then be unable to meet their own targets, each party is required to maintain a reserve of ERUs, CERs, AAUs and/or RMUs in its national registry. This reserve which is known as the “commitment period reserve”, should not drop below 90 per cent of the Party’s assigned amount or 100 per cent of five times its most recently reviewed inventory, whichever is lowest.

Joint Implementation:

It is a mechanism defined in Article 6 of the Kyoto Protocol, which allows a country with emission reduction or limitation commitment under Kyoto Protocol to earn emission reduction units (ERUs), each equivalent to one ton of CO₂, from an emission reduction or emission removal project in another signatory country which it can count towards meeting its commitment target. Joint Implementation offers the signatory countries a flexible and cost efficient means of fulfilling a part of their Kyoto commitments, while the host country benefits from foreign investment and technology transfer.

Clean Development Mechanism:

Article 12 of the Kyoto Protocol is about The Clean development Mechanism (CDM). It allows a country with emission reduction or emission limitation commitment under the Kyoto Protocol to implement an emission reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER).

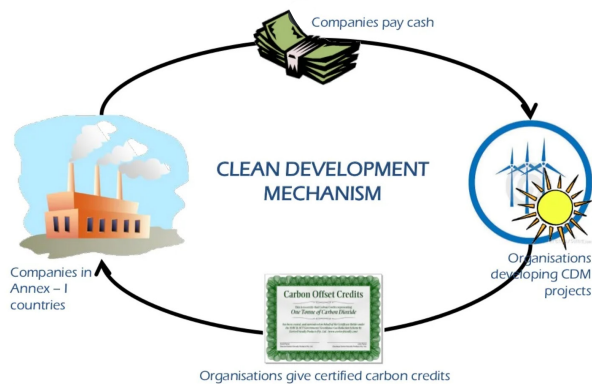


Image Source: <https://www.indiamart.com/proddetail/clean-development-mechanism-service-16351363797.html>

Clean Development Mechanism (CDM) has incorporated sustainable development as one of their objectives. These objectives gives the companies an increasing motivation to contribute to sustainable development through their Corporate Social Responsibility (CSR).

Carbon Tax:



A carbon tax directly sets a price on the carbon content of fossil fuels. It is different from an ETS, in that the emission reduction outcome of a carbon tax is not pre-defined but the carbon price is. It is used as an incentive to reduce the economy-wide usage of high-carbon fuels and to protect the environment from the harmful effects of excessive carbon dioxide emissions. The core policy for reducing and eventually eliminating the use of fossil fuels whose combustion is destabilizing and destroying our climate. A carbon tax is a powerful monetary disincentive that motivates the industries to switch from carbon intensive fuels to non-carbon energy efficient clean fuels. Carbon taxes allows consumers, producers and investors to decide how best to reduce emissions.

If a factory decides to reduce its carbon tax bill by cutting emissions in half, it has to pay for any new technologies or practices it needs to adopt to achieve that cut and pay a tax on the remaining emissions.

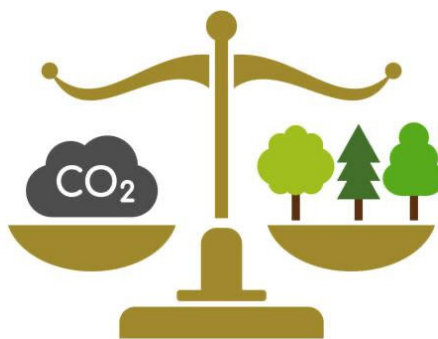
Carbon taxes and emissions trading systems both seek to reduce emissions by pricing in the costs of emissions into the emitting activity. Thus, they can also raise revenue for the government.

The primary difference between the two is the point of control. Where taxes specify a price on emissions and subsequently allow the market to determine the quantity of emissions, an ETS sets the quantity and allows the market to determine the price. Generally speaking, taxes provide certainty regarding the carbon price over a given period, often crucial for facilitating private investment in emission mitigation. An ETS can provide more certainty regarding the ability to meet a specific mitigation target but provides less certainty on the price.

Emissions trading can bring economic efficiency gains by allowing participants to exploit the lowest-cost mitigation options across covered sectors. However, this presumes well-functioning markets with sufficient numbers of participants.

In practice, carbon taxes and ETSs have differed significantly, particularly in terms of pricing. This is due to a number of factors, including the location of the schemes and the difficulties ETSs have experienced in managing the impact of market volatility on prices. This may change however as ETSs introduce further measures to control price volatility.

From an administrative point of view, where a carbon tax can often be piggybacked onto an existing tax administration, an ETS usually requires a new administrative structure to track and enforce allowance ownership. This condition often makes carbon taxes more suitable for jurisdictions that lack the substantial capacities to implement emissions trading.



Source:

1. <https://www.un.org/en/climatechange/net-zero-coalition>
2. <https://www.imf.org/en/Publications/WP/Issues/2022/04/01/Policy-Sequencing-Towards-Carbon-Pricing-Empirical-Evidence-From-G20-Economies-and-Other-515609>
3. <https://www.oecd.org/environment/Aligning-Policies-for-a-Low-carbon-Economy.pdf>
4. <https://www.worldbank.org/en/programs/pricing-carbon>
5. <https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading>
6. <https://www.epa.gov/emissions-trading-resources/how-do-emissions-trading-programs-work>

Carbon Reduction Commitments by India



India now stands committed to reduce Emissions Intensity of its GDP by

45% By 2030



India, a signatory to the Paris Agreement has announced its emission targets at the global climate meet in Glasgow in October 2021.

Earlier, India submitted its Intended Nationally Determined Contribution (NDC) to UNFCCC on October 2, 2015. The 2015 NDC comprised eight goals; three of these have quantitative targets upto 2030 namely, cumulative electric power installed capacity from non-fossil sources to reach 40%; reduce the emissions intensity of GDP by 33 to 35 percent compared to 2005 levels and creation of additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover.

The Union Cabinet chaired by the Prime Minister Shri Narendra Modi, has approved India's updated Nationally Determined Contribution (NDC) to be communicated to the United Nations Framework Convention on Climate Change (UNFCCC).

The updated NDC seeks to enhance India's contributions towards achievement of the strengthening of global response to the threat of climate change, as agreed under the Paris Agreement. Such action will also help India usher in low emissions growth pathways. It would protect the interests of the country and safeguard its future development needs based on the principles and provisions of the UNFCCC.

India at the 26th session of the Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC) held in Glasgow, United Kingdom, expressed to intensify its climate action by presenting to the world five nectar elements (Panchamrit) of India's climate action.

This update to India's existing NDC translates the 'Panchamrit' announced at COP 26 into enhanced climate targets. The update is also a step towards achieving India's long term goal of reaching net-zero by 2070.



India's five new pledges are:

1. Net-zero emissions by 2070
2. By 2030 achieving non-fossil fuel energy capacity of 500 GW
3. 50% energy requirements from renewable sources
4. Reducing total projected carbon emissions by 1 billion tonnes
5. Reducing the carbon intensity of the economy to less than 45%.

The Hon'ble Prime Minister's vision of sustainable lifestyles and climate justice to protect the poor and vulnerable from adverse impacts of climate change. The updated NDC reads "To put forward and further propagate a healthy and sustainable way of living

India's updated NDC has been prepared after carefully considering our national circumstances and the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC). India's updated NDC also reaffirms our commitment to work towards a low carbon emission pathway, while simultaneously endeavoring to achieve sustainable development goals.



LIFE envisions replacing the prevalent ‘use-and-dispose’ economy—governed by mindless and destructive consumption—with a circular economy, which would be defined by mindful and deliberate utilization. The Mission intends to nudge individuals to undertake simple acts in their daily lives that can contribute significantly to climate change when embraced across the world.

2021-2030. The updated framework, together with many other initiatives of the Government, including tax concessions and incentives such as Production Linked Incentive scheme for promotion of manufacturing and adoption of renewable energy, will provide an opportunity for enhancing India's manufacturing capabilities and enhancing exports. It will lead to an overall increase in green jobs such as in renewable energy, clean energy industries- in automotives, manufacturing of low emissions products like Electric Vehicles and super-efficient appliances, and innovative technologies such as green hydrogen, etc. India's updated NDC will be implemented over the period 2021-2030 through programs and schemes of relevant Ministries /departments and with due support from States and Union Territories. The Government has launched many schemes and programs to scale up India's actions on both adaptation and mitigation. Appropriate measures are being taken under these schemes and programs across many sectors, including water, agriculture, forest, energy and enterprise, sustainable mobility and housing, waste management, circular economy and resource efficiency, etc. As a result of the aforesaid measures, India has progressively continued decoupling of economic growth from greenhouse gas emissions. The Net Zero target by 2030 by Indian Railways alone will lead to a reduction of emissions by 60 million tonnes annually. Similarly, India's massive LED bulb campaign is reducing emissions by 40 million tonnes annually.

India's climate actions have so far been largely financed from domestic resources. However, providing new and additional financial resources as well as transfer of technology to address the global climate change challenge are among the commitments and responsibilities of the developed countries under UNFCCC and the Paris Agreement. India will also require its due share from such international financial resources and technological support.

India's NDC do not bind it to any sector specific mitigation obligation or action. India's goal is to reduce overall emission intensity and improve energy efficiency of its economy over time and at the same time protecting the vulnerable sectors of economy and segments of our society.

<https://piib.gov.in/PressReleaseframePage.aspx?PRID=1847812#:~:text=As%20per%20the%20updated%20NDC,based%20energy%20resources%20by%202030.>

GREEN INSIGHTS

Ways to reduce individual carbon footprint



Cut down on single use plastics



Switch off electrical appliances when not in use



Carpooling



Use renewable energy



Use public transport



Eat plant based diet



Proper insulation of homes



Buy more sustainable fashion



Green Celebrations



Print less



Reduce food waste



Buy local and seasonal



Use energy efficient lighting



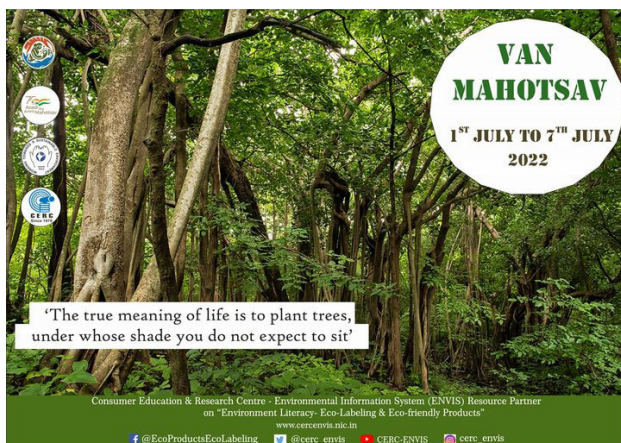
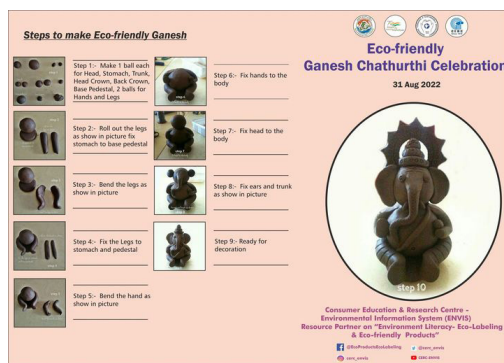
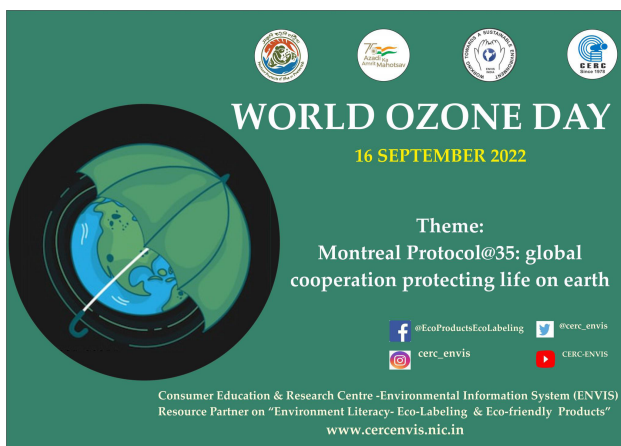
Install solar panels



Compost



Events (July-September 2022)



Posters on different environmental themes



Promoting "Ban on identified single-use plastic items"



Environmental Awareness Rally



Celebration of Van Mahotsav



Valedictory function of GSDP Electrical Course Batch-II



Workshop on 'Making of Eco-friendly Rakhi'



KVM International School,
Praladnagar

Maharaja Agrasen Vidyalaya
Memnagar

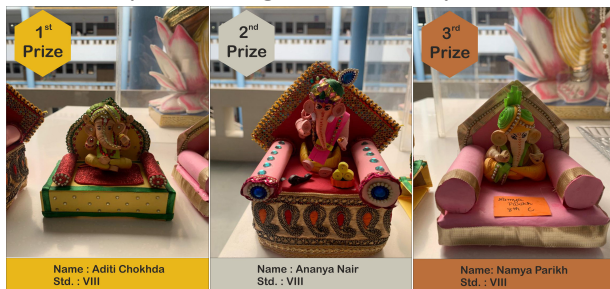
Mount Carmel School,
Navrangpura

Posters on different types of eco-friendly Ganesha Idol

Awareness programme on Eco-labelling, eco-friendly & Sustainable Lifestyle products at various schools



Workshop on making of Eco-friendly Ganesh Idol



Competition on 'Making of Eco-friendly Ganesh Idol



Som Lalit High School,
Navrangpura

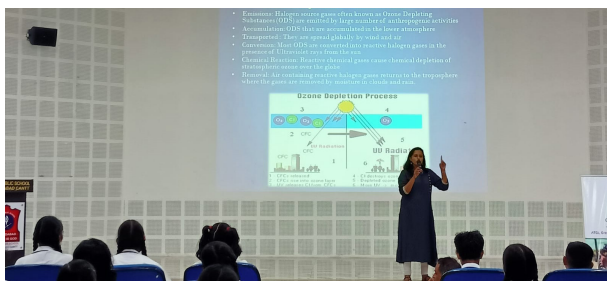
V R Shah Smruti High School,
Vasna



Eco-friendly celebration of Ganesh Chaturthi
at CERC



Som Lalit School, Navrangpura



Army Public School, Shahibaug



Pravin High School, Ranip



WORLD OZONE DAY 2022

Quiz on 'Ozone'

Full Name: _____
Class & Section: _____

- Who discovered the ozone layer?
a. Henri Buisson & Charles Fabry
b. Carl Sagan & Charles Fabry
c. G.M.B Dobson
d. Carl Sagan & G.M.B Dobson
- What is an Ozone-Layer formed from?
a. 3 oxygen atoms
b. 3 carbon dioxide atoms
c. 2 carbon dioxide atoms
d. 2 hydrogen atoms and 1 oxygen atom
- What is the name of the international agreement committing parties to phasing out

Quiz on Ozone



Celebration of World Ozone Day



VR Shah Smruti High School, Vasna



Axay High School, Bapnagar

Awareness Programme on Reintroduction of
Cheetah in India at various schools




The Environmental Information System acronymed as ENVIS was implemented by the Ministry of Environment & Forests by end of 6th Five Year Plan as a Plan Scheme for environmental information collection, collation, storage, retrieval and dissemination to policy planners, decision makers, scientists and environmentalists, researchers, academicians and other stakeholders.


The Ministry of Environment and Forests has identified Consumer Education and Research Centre (CERC), Ahmedabad, as one of the Resource Partners to collect and disseminate information on "Environment Literacy - Eco-labelling and Eco-friendly Products". The main objective of this ENVIS Resource Partner is to disseminate information on Eco products, International, and National Eco labeling programmes.

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**Write to us: We value your views and suggestions.
Please send your feedback on this issue. We would
also like to invite your contributions on the Eco Product
and Eco Labelling.**

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