



NET ZERO ISN'T ZERO-SUM

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(Mains GS3: Conservation, environmental pollution and degradation, environmental impact assessment.)

Context:

- Recently many countries announced net-zero emission targets.
- In the next 30 years, they aim to reduce their emissions of climate change-causing carbon dioxide and other GHGs.
- For this target, some countries may bet on technological advances to capture carbon, which would allow them to continue drilling for oil and gas.
- Others could seek to offset their emissions by buying credits for green projects like tree-planting programs.

Build cleaner infrastructure:

- The International Energy Agency predicts that much of India's future emissions will come from things that have not yet been built – transport infrastructure, industry, and buildings – pointing to the opportunity to build cleaner.
- The union territory of Ladakh, the state of Sikkim, the cities of Chennai and Bengaluru, and the panchayat of Meenangadi in Wayanad, Kerala are already planning for carbon neutral development.

Clean energy: good for economy and health:

- Actions to reduce emissions in different sectors could be the foundation of a stronger economy and a healthier population.
- Most of India's thermal power plants use scarce freshwater for cooling.
- As India moves to cleaner sources of electricity, water consumption by power plants will decrease from more than 2.5 billion cubic metres per year to less than 1 billion cubic metres per year in 2050.
- Actions to reduce carbon dioxide will also reduce other pollution.

Technology transformation:

- For realizing net zero GHG's emission, greater electrification and using hydrogen as a fuel in industries like cement, iron and steel, and chemicals will be required.
- Other big contributions can come by commercially producing hydrogen from electrolysis rather than fossil fuels, and if we retire existing coal power plants earlier than scheduled.
- There is considerable scope to improve energy efficiency in large industries, and their supply chains of MSMEs which have the potential to save energy but lack capital.

Need policy intervention:

- Policies which would lead to significant fuel savings and dramatically reduce the country's crude oil import bill in the long run are required.
- The catch is that 25 per cent of the Centre's tax revenue comes from the energy sector, so weaning away from fossil fuels will also deplete the government's coffers.
- One way to offset this loss is through a carbon tax on industry, slowly phased in from a small amount roughly equivalent to the existing coal cess (or GST compensation cess) to reach Rs 2,500 per tonne of carbon dioxide by the middle of the century.

Clean energy creates more employment:

- A strong set of climate actions across multiple sectors can generate 24 million jobs in just 15 years.
- For example, more ambitious policies to promote electric vehicles along with cleaner electricity and hydrogen electrolysis can create jobs in the auto manufacturing industry and in the electricity and construction sectors.
- Some jobs may decline in vehicle maintenance and repair, but far more jobs are likely to be induced by government and household spending.
- We must also prepare for the fact that job gains might not occur in the same locations as job losses.
- Women, whose participation in the workforce has been harder hit in the pandemic, may not easily be able to access certain new jobs.
- Most new jobs are expected to be non-unionised, often lacking safety nets.
- Carbon tax revenues may need to be recycled back to poorer households who spend a large fraction of their income on energy.
- We need to respect people's rights to land and common property resources.
- Just as we need strong climate policies, we also need strong social policies and local institutions to ensure that the clean energy transition is fair and just.

Conclusion:

- Flattening the emissions curve will not happen by itself. But the important thing is that many of the needed policies are already underway.
- These policies need to be accelerated with investments of finance and technology.
- A net-zero emissions future need not be a zero-sum game. Strong environmental policies can create prosperity and well-being.
- With imaginative policies, robust institutions, and international finance, India will be able to declare its freedom from polluting fossil fuels in the hundredth year of its independence.