Achieving COP21 NDC targets

What is the issue?

- During the run-up to the Paris climate change meeting (COP-21) in 2015, each country decided the level and kind of effort it would undertake to solve the climate change problem.
- These actions were referred to as nationally determined contributions (NDC).

What is India's NDC?

- India promised to take steps to reduce the greenhouse gas (GHG) emissions and to adapt to living in a warmer world. NDCs include,
    1. By 2030, there will be about 1/3rd reductions in the emissions intensity of the GDP below 2005 levels.
    2. By 2030, there will be a total of 40% of the installed capacity for electricity from non-fossil fuel sources.
    3. By 2030, it promised an additional carbon sink (a means to absorb carbon dioxide from the atmosphere) through additional forest and tree cover.
- Trees and other vegetation fix carbon as part of photosynthesis. **Soil** too holds organic carbon from plants and animals.

How to enhance the green cover?

- Forest Survey of India (FSI) study estimated the costs involved, and the opportunities and potential actions needed for additional forest and tree cover to meet the NDC target.
- Recently, there is a gradual increase in the forest and green cover.
- The additional increase in carbon sinks is to be achieved by restoring impaired and open forests; afforesting wastelands, Agro-forestry, etc.,
- 72.3%of the increase will be by restoring forests and afforestation on wastelands, with a modest rise in total green cover.
- The green cover increase will provide many other benefits like improving the water quality, storage of water in wetlands, etc.

What is the role of Natural forests?

- **A recent study in *Nature*** - Provides insights into what works well with regard to green cover.

- Locking up the carbon from the atmosphere in trees, ground vegetation and soils is one of the safest ways with which to remove carbon.
- Allowing land to be converted into forests naturally will sequester the carbon more efficiently than the artificial conversion of a land to a plantation or to an Agroforest.
- **A study in *Science*** - Estimates that it is possible to add 0.9 billion hectares of canopy cover worldwide.
- This could potentially mitigate up to 2/3rdof historical GHG emissions, which would prevent or delay the worst impacts from climate change.

Why is restoration type a key?

- **Studies** - Indicate that forest restoration has enormous potential in mitigating climate change.
- The amount of carbon stored depends on the type of forest restoration carried out.
- The most effective way is through **natural forest regeneration** with appropriate institutions to facilitate the process.
- **First**, India needs to ensure that deforestation is curtailed to a maximum extent.
- **Second**, the area allocated to the restoration of impaired and open forests and wastelands should be focussed on natural forests and agroforestry.
- Instead of plantations, growing food forests managed by local communities would have additional co-benefits.
- Protecting the established natural forests is important.
- Protecting and nurturing public lands and preventing their private enclosure is also paramount.
- **Active forest management by local people** has long history in India and needs to expand to meet climate, environment and social justice goals.

Source: The Hindu

Quick Facts

Paris Agreement (COP21)

- Paris Agreement is an agreement under the United Nations Framework Convention on Climate Change (UNFCCC) to combat climate change.
- Aims of Paris Agreement are,

1. To keep the global temperature rise of this century well below 2°C above the pre-industrial level

2. To pursue efforts to limit the temperature increase further to 1.5°C
3. To strengthen the ability of countries to deal with the impacts of climate change

