

# Biofuels

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## Why in news?


New targets have been set under the national policy of biofuels

## What are they?

- Biofuels are fuels made directly or indirectly from organic material, such as compost, which includes plant materials and animal waste.
- Overall, around 10 percent of the world's total energy demand is bioenergy.
- Biofuels may be rigid, gaseous or liquid.
- These can also be derived from crop residues, forestry products, farming products etc..

## Types

There are **four generations of biofuel**:

- Biofuels of the first generation are also known as **conventional biofuels**. They're made of sugar, starch or vegetable petroleum (all these are food products).
- Non-food crops are used in the production of 2nd generation biofuels.
- Biofuels of second generation are commonly called "**advanced biofuels**."
- Biofuels of third generation are **algae-based biofuels** which do not require cultivable land.
-  Proposed **fourth generation fuels** are extension of third generation algal biofuels which has an added feature of **carbon capture (CO2) ability**.

## Benefits:

- Remove our reliance on fossil fuels, thus reducing our

dependence on imports.

- This cleans up the environment with fewer GHG emissions.
- Elements such as discarded cooking oil, municipal waste and other problems will get solved.
- This sector has the potential to create opportunities and provide employment for hundreds of people through different development segments.