



**KAMARAJ IAS ACADEMY**  
Only IAS Academy by Grandson of "Per.uthalsivar Kamarajar"

# Green Ammonia

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**Why is in news?** Green Ammonia Imported through VOC Port, Tamil Nadu for the first time

On September 23, 2023, V.O. Chidambaranar Port Authority, Tamil Nadu successfully handled 3x20 ISO Green Ammonia Containers, weighing 37.4 tons of Green Ammonia, from Damietta Port, Egypt, for M/s. Tuticorin Alkali Chemical and Fertilizers Ltd (TFL).

Conventionally, **Grey Ammonia** is utilized for soda ash production.

As a Go Green initiative, TFL has imported Green ammonia to produce Green soda Ash, on a trial basis. Further, TFL is planned to import 2000 MT this year subject to the availability of Green Ammonia.

## About:

Ammonia is a chemical which is used **mainly in the manufacture of nitrogenous fertilizers**, like urea and ammonium nitrate, but can be put to other uses too, such as to run engines.

Green ammonia production is where the **process of making ammonia is 100% renewable and carbon-free**.

One way of making green ammonia is by **using hydrogen from water electrolysis and nitrogen separated from the air**.

These are then fed into the **Haber process** (also known as Haber-Bosch), all **powered by sustainable electricity**.

In the Haber process, hydrogen and nitrogen are reacted together at high temperatures and pressures to produce ammonia,  $\text{NH}_3$ .

## Significance:

Green ammonia is intended to be used in the production of carbon-neutral fertiliser products, decarbonising the food value chain, and also has potential as a future climate-neutral shipping fuel.

Green ammonia production makes use of renewable energy sources such as hydro-electric, solar power or wind turbines.

Green ammonia is crucial to tackle the existential challenges of producing enough food to feed a growing global population and generating  $\text{CO}_2$ -free energy.

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