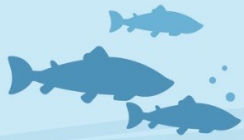
THE BLUE ECONOMY.

uses smart shipping to lessen the impacts on the environment

is inclusive and improves the lives of all

harnesses renewable energy

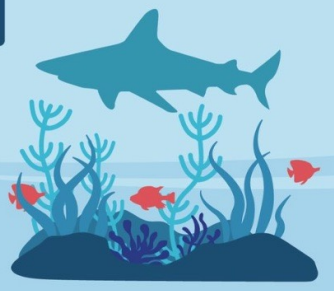


is based on sustainable fisheries

takes action against illegal fishing

creates jobs, reduces poverty and ends hunger

protects coastal communities from the impacts of climate change



conserves marine life and oceans

tackles marine litter and oceans pollution

Blue Economy

What is Blue Economy? What are its components?

- Blue Economy refers to sustainable use of ocean resources for economic growth
- Its components include fisheries, aquaculture, marine tourism, renewable ocean energy, seabed mining, off-shore oil and gas, etc.

How oceans help our economy?

Developmental needs	Contribution by Oceans
Food	Fishes, shrimps, prawn are rich in protein; Edible seaweed are rich in protein and fibre
Jobs	People involved in fisheries and marine tourism
Fuel	Off-shore oil and gas Methane hydrates (world's largest natural gas reserves)
Renewable energy	Wave energy; tidal energy; off-shore wind energy; floating solar power plants
Metals; Rare Earth metals	Seabed mining; Polymetallic nodules
Trade	90 percent of world trade is carried by sea

Challenges to Blue economy?

- Unsustainable fishing, e.g. bottom trawling, dynamite fishing
- Marine pollution: sewage, agri-runoff, dead zones, micro plastics, crude oil spill
- Maritime boundary issues with neighboring countries, e.g. Sri Lanka
- Off-shore fossil fuel reserves will run out
- Mining methane hydrates is technologically challenging. Burning methane will cause global warming.
- Renewable energy faces challenges of irregular power generation.
- Seabed mining in international waters needs permission of ISA.
- Seabed mining is technologically challenging and financially expensive.
- Maritime piracy

India as Blue Economy:

a) India has 7,517 km long coastline and 23 lakh km^2 of EEZ.
b) Ocean Policy Statement 1982 focused on developing technologies for sustainable harnessing of ocean resources.
c) In 1987 India was given 1.5 lakh km^2 in central Indian Ocean basin for nodule exploration.
d) Indian National Centre for Ocean Information Services (INCOIS) gives advisories on potential fishing zones.
e) Sagarmala project for port lead development.
f) Deep Ocean Mission (PT365 Environment class-9 at 58:33)

g) **O-SMART Scheme** of Ministry of Earth Sciences. Ocean Services, Modelling, Applications, Resources and Technology.

h) In 2015, India stated Security and Growth for All in the Region (**SAGAR**) vision for maritime cooperation in Indian Ocean region.

i) In March 2020, India joined **Indian Ocean Commission** as Observer.

Way forward:

a) Arresting marine **pollution** at source; use of sewage treatment plants.

b) Increasing fishermen's capabilities for sustainable **fishing techniques**.

c) More international **cooperation** for seabed mining.

d) Use of **Blue Bonds** to finance ocean-based projects e.g. Seychelles.

Additional comments:

a) **SDG goal 14** aims for sustainable use of marine resources.

b) Ocean ecosystem has its limits. Oceans are **not unlimited** source of fishes and waste dumping ground.

c) Indian ocean is a vast natural resource, whose sustainable use can bring **double digit growth** to our economy.

95% seabed not explored yet.

Minerals and energy , blue economy.

Deep ocean mission. 6 components
1. Robotics
2. Climate change advisories + weather advisories
3. Biodiversity
4. Deep ocean mapping
5. Energy ocean - wave thermal
6. Advanced marine station for ocean biology

3 legged mission - Knowledge ,grooming scientist + Blue economy + climate change

Potential of mission : sea bed contains what ?
4000 cr. For 5 yrs.

Animal husbandry and fisheries - blue economy
Close gap - knowledge , ability and economics (reaping benefits)