

Blue Revolution in India

The term **blue revolution** refers to the remarkable emergence of aquaculture as an important and highly productive agricultural activity. Aquaculture refers to all forms of active culturing of aquatic animals and plants, occurring in marine, brackish, or fresh waters.

The **Blue Revolution**. The concept of rapid increase in the production of fish and marine product through package programme is called as **blue revolution**. It was launched in **India** during the seventh Five-year plan (1985-1990) when the Central Government sponsored the Fish Farmers Development Agency (FFDA).

Dr. **Hiralal** Chaudhuri and Dr. Arun Krishnsnan known as Father of Blue revolution.

Blue Revolution, the Neel Kranti Mission has the vision to achieve economic prosperity of the country and the fishers and fish farmers as well as contribute towards food and nutritional security through full potential utilization of water resources for fisheries development in a sustainable manner, keeping in view the bio-security and environmental concerns.

The Blue Revolution also known as the Neel Kranti Mission is an initiative taken by the government for the growth of the aquaculture industry. The main objective of this scheme was the promotion of fishing as an important activity in order to double the incomes of the farmers. The Blue Revolution first started in China as it accounts for around two-thirds of the total aquaculture production worldwide.

Recently, the aquaculture industry has been growing at an average rate of 9% a year and India is one of the fastest growers. The Neel Kranti Mission was the start of the Blue Revolution in India with the vision to achieve the economic prosperity of India keeping in view the sustainability, bio-security and environmental concerns.

Vision

Blue Revolution in India

The Blue Revolution in India was launched during the 7th Five Year Plan (1985-1990) during the sponsorship of the Fish Farmers Development Agency (FFDA) by the Central Government of India. Later, during the 8th Five Year Plan (1992-97), the Intensive Marine Fisheries Program was launched and eventually the fishing harbours in Vishakhapatnam, Kochi, Tuticorin, Porbandar and Port Blair were also established over the period of time.

The Ministry of Agriculture and Farmers Welfare along with the Department of Animal Husbandry, Dairying & Fisheries planned to restructure this scheme along with the other ongoing schemes by merging it together under a single umbrella of 'Blue Revolution'. This scheme focused on the development and management of fisheries controlled by the National Fisheries Development Board (NFDB).

The components that are included under the Blue Revolution Schemes are :

- National Fisheries Development Board (NFDB) and its activities
- Strengthening of Database & Geographical Information System of the Fisheries Sector
- Development of Inland Fisheries and Aquaculture
- National Scheme of Welfare of Fishermen
- Development of Marine Fisheries, Infrastructure and Post-Harvest Operations
- Monitoring, Control and Surveillance (MCS) and other need-based Interventions
- Institutional Arrangement for Fisheries Sector

Creating an enabling environment for integrated development of the full potential of fisheries of the country, alongwith substantially improvement in the income status of fishers and fish farmers keeping in view the sustainability, bio-security and environmental concerns.

Objectives

- To fully tap the total fish potential of the country both in the inland and the marine sector and triple the production by 2020.
- To transform the fisheries sector as a modern industry with special focus on new technologies and processes
- To double the income of the fishers and fish farmers with special focus on increasing productivity and better marketing postharvest infrastructure including e-commerce and other technologies and global best innovations
- To ensure inclusive participation of the fishers and fish farmers in the income enhancement
- To triple the export earnings by 2020 with focus on benefits flow to the fishers and fish farmers including through institutional mechanisms in the cooperative, producer companies and other structures
- To enhance food and nutritional security of the country

Features of the Blue Revolution Scheme

Some of the salient features of the Blue Revolution Scheme are:

- Providing suitable linkages and convergence with the ‘Sagarmala Project’ of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNAREGA), Ministry of Shipping, National Rural Livelihoods Mission (NRLM), Rashtriya Krishi Vikas Yojana (RKVY) etc.
- The Blue Revolution scheme concentrates mainly on enhancing the production and productivity of aquaculture and fisheries both from the inland and marine sources.
- Promoting and encouraging the economically backward sections like the Scheduled Castes, Scheduled Tribes, Women and their co-operatives to take up fishing.
- The Blue Revolution Scheme also encourages entrepreneurship development, private investment, Public-Private Partnership (PPP) and better leveraging of institutional finance.

Duration and outlay

The restructured Plan Scheme on Blue Revolution - Integrated Development and Management of Fisheries has been approved at a total central outlay of Rs 3000 crore for implementation during a period of five years (2015-16 to 2019-20).

Components

The Ministry of Agriculture and Farmers Welfare, Department of Animal Husbandry, Dairying & Fisheries has restructured the scheme by merging all the ongoing schemes under an umbrella of Blue Revolution. The restructured scheme provides focused development and management of fisheries, covering inland fisheries, aquaculture, marine fisheries including deep sea fishing, mariculture and all activities undertaken by the National Fisheries Development Board (NFDB).

The Blue Revolution scheme has the following components:

1. National Fisheries Development Board (NFDB) and its activities
2. Development of Inland Fisheries and Aquaculture
3. Development of Marine Fisheries, Infrastructure and Post-Harvest Operations
4. Strengthening of Database & Geographical Information System of the Fisheries Sector
5. Institutional Arrangement for Fisheries Sector
6. Monitoring, Control and Surveillance (MCS) and other need-based Interventions
7. National Scheme of Welfare of Fishermen

Central Financial Assistance

Broad patterns of Central funding for new projects under four components viz (a) National Fisheries Development Board (NFDB) and its activities, (b) Development of Inland Fisheries and Aquaculture, (c) Development of Marine Fisheries, Infrastructure and Post- Harvest Operations and (d) National Scheme of Welfare of Fishermen are as below:

- 50% of the project/unit cost for general States, leaving the rest to State agencies/organisations, corporations, federations, boards, Fishers cooperatives, private entrepreneurs, individual beneficiaries.
- 80% of the project/unit cost for North-Eastern/Hilly States leaving the rest to State agencies/Organizations, Cooperatives, individual beneficiaries etc.
- 100% for projects directly implemented by the Government of India through its institutes/organisations and Union Territories.

Projects under the remaining three components scheme namely (i) Strengthening of Database & Geographical Information System of the Fisheries Sector, (ii) Institutional Arrangement for the Fisheries Sector and (iii) Monitoring, Control and Surveillance (MCS) and other need-based

interventions shall be implemented with 100% central funding. Individual beneficiaries, entrepreneurs and cooperatives/collectives of the Union Territories shall also be provided Central financial assistance at par and equal to such beneficiaries in General States.

Implementation agencies

The scheme would be implemented through the following agencies:

- Central Government, Central Government Institutes/Agencies, NFDB, ICAR Institutes etc.
- State Governments and Union Territories
- State Government Agencies, Organisations, Corporations, Federations, Boards, Panchayats and Local Urban Bodies
- Fishers Cooperatives/Registered Fishers Bodies
- Individual beneficiaries/fishers, Entrepreneurs, Scheduled Castes(SCs), Scheduled Tribes (STs) Groups, Women and their Co-operatives, SHG's and Fish Farmers and miscellaneous Fishermen Bodies

Blue Revolution in India – Outcomes

The Blue Revolution in India along with the Fish Farmers Development Agency (FFDA) brought an improvement in the aquaculture and fisheries sector with the introduction of new techniques of rearing, marketing, exporting and fish breeding.

Some of the major outcomes of the Blue Revolution in India are mentioned below:

1. Currently, the Indian Fisheries Sector reached a production of 4.7 million tonnes of fish from a limit of 60,000 tonnes including 1.6 million tonnes of fish from freshwater aquaculture.
2. India is recorded to achieve an average annual growth of 14.8% as compared to the global average percentage of 7.5 in the production of fish and fish products.
3. The fishery has become India's largest agricultural export over the last five years with a growth rate of 6% – 10%.
4. India has become the world's second-largest producer of fish with exports worth more than 47,000 crore rupees.
5. The fisheries and aquaculture production contributes 1% and 5% to India's GDP and Agricultural GDP respectively.

Unutilized Potential

- It is a matter of great concern that India is **able to exploit only a fraction of the aquaculture potential available** to it.
- India uses only about 40% of the available ponds, tanks and other water bodies for freshwater aquaculture and 15% of total potential of brackish water resources.

Recent Steps Taken By the Government

Blue Revolution 2.0/ Neel Kranti Mission

- The focus of the Blue Revolution 2.0 is on **development and management of fisheries**. This covers inland fisheries, aquaculture, marine fisheries including deep sea fishing, mariculture and all activities undertaken by the National Fisheries Development Board.
 - The **National Fisheries Development Board (NFDB)** was established in 2006 as an autonomous organization under the administrative control of the Department of Fisheries, Ministry of Agriculture and Farmers Welfare, to enhance fish production and productivity in the country and to coordinate fishery development in an integrated and holistic manner.
 - Now, the Board works under the Ministry of Fisheries, Animal Husbandry and Dairying.
- It aims to **achieve economic prosperity of fishers and fish farmers**. The same will be done by developing fisheries in a sustainable manner keeping in view biosecurity and environmental concerns.
- The Program has certain **objectives** which includes:
 - Fully tapping the total fish potential of the country, both in the inland and the marine sector and triple production by 2020.
 - Transforming the fisheries sector as a modern industry with special focus on new technologies and processes.
 - Doubling the income of fishers and fish farmers with special focus on increasing productivity and better post harvest marketing infrastructure including e-commerce and other technologies and global best innovations.
 - Ensuring inclusive participation of fishers and fish farmers in the income enhancement.
 - Tripling export earnings by 2020 with focus on benefits flow to fishers and fish farmers.
 - Enhancing food and nutritional security of the country.

Pradhan Mantri Matsya Sampada Yojana

- The Scheme is aimed to **turn India into a hotspot for fish and aquatic products** through appropriate policy, marketing and infrastructure support.
- With the Scheme, the government intends to bring all fishermen under the ambit of farmer welfare programmes and social security schemes.
- Through this scheme, the Department of Fisheries will establish a robust fisheries management framework. This will **address a critical gap in the value chain** including infrastructure modernisation, traceability, production, productivity, post harvest management and quality control.

Financial Allocation

- The government has allocated **804.75 crore rupees** for the fisheries sector in the current fiscal.
- It's aim is to augment fish production to achieve its target of 15 million tonnes by 2020 under the Blue Revolution and raise it thereafter to about 20 million tonnes by 2022-23.

Initiative Taken under the MGNREGA

- The government under the MGNREGA has started to **develop the farm ponds**, where pisciculture is taking place.

Challenges

- The Food and Agriculture Organization (FAO) points out that nearly **90% of the global marine fish stocks have either been fully exploited** or overfished or depleted to the extent that recovery may not be biologically possible.
- **Discharge of harmful substances** like plastics and other waste into water bodies that cause devastating consequences for aquatic life.
- **Changing climate.**

Way Forward

- India's long coastline has the potential of becoming the strength of the economy particularly through the exploitation of the Blue Revolution.
- India can grow to the extent of 10 trillion dollar economy as against 2.7 trillion dollar today with the help of the Blue Economy.
- India **needs to develop more scientifically its fishing system** and other related aspects such as freezing, packaging, etc.

