Geography · GS - I

Defining blue revolution, explain the problems and strategies for pisciculture development in India.

EXAM YEAR	PAPER	SUBJECT
2018	GS - I	Geography

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Fisheries development; aquaculture; fish productivity; livelihood generation; disease management; water quality; infrastructure gaps; sustainable fishing; technology adoption

Model Answer

Introduction

The Blue Revolution refers to the expansion and modernisation of fisheries and aquaculture to increase fish production, improve livelihoods and strengthen food and nutritional security. Pisciculture specifically involves the breeding and rearing of fish.

Problems in Pisciculture Development

1. **Limited infrastructure:** Inadequate hatcheries, cold storage, processing facilities and transport lead to post-harvest losses.
2. **Quality inputs:** Shortages of quality seed, affordable feed and technical guidance constrain productivity.
3. **Disease and water quality:** Poor pond management, pollution and disease outbreaks reduce yields.
4. **Financial constraints:** Small-scale fish farmers may lack affordable credit, insurance and market access.
5. **Climate risks:** Floods, droughts, warming and water scarcity threaten aquaculture systems.
6. **Environmental concerns:** Excessive stocking, chemical misuse and poorly planned farms can damage ecosystems.

Strategies for Development

1. **Scientific aquaculture:** Promote improved breeds, quality seed, balanced feed and better pond management.
2. **Infrastructure investment:** Expand hatcheries, cold chains, processing units and hygienic landing facilities.
3. **Institutional support:** Improve access to credit, insurance, extension services and producer organisations.
4. **Technology adoption:** Encourage water-quality monitoring, disease surveillance and appropriate intensive farming methods.
5. **Sustainability:** Regulate effluent discharge, protect mangroves and wetlands, and promote responsible stocking.
6. **Market development:** Strengthen value addition, traceability, cooperative marketing and export quality standards.

Conclusion

A sustainable Blue Revolution should raise productivity while protecting aquatic ecosystems. Science, infrastructure, financial inclusion and responsible resource management are essential for long-term growth.

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