PrepAlpine

The Next-Generation UPSC Institution

Where Research Meets Mentorship & Precision

Preparation Meets Precision

A Next-Generation Learning Institution

Disclaimer

The information contained in this book has been prepared solely for educational purposes. While every effort has been made to ensure accuracy, PrepAlpine makes no representations or warranties of any kind and accepts no liability for any errors or omissions. The use of any content is solely at the reader's discretion and risk.

DAILY CURRENT AFFAIRS DATED 13.04.2026

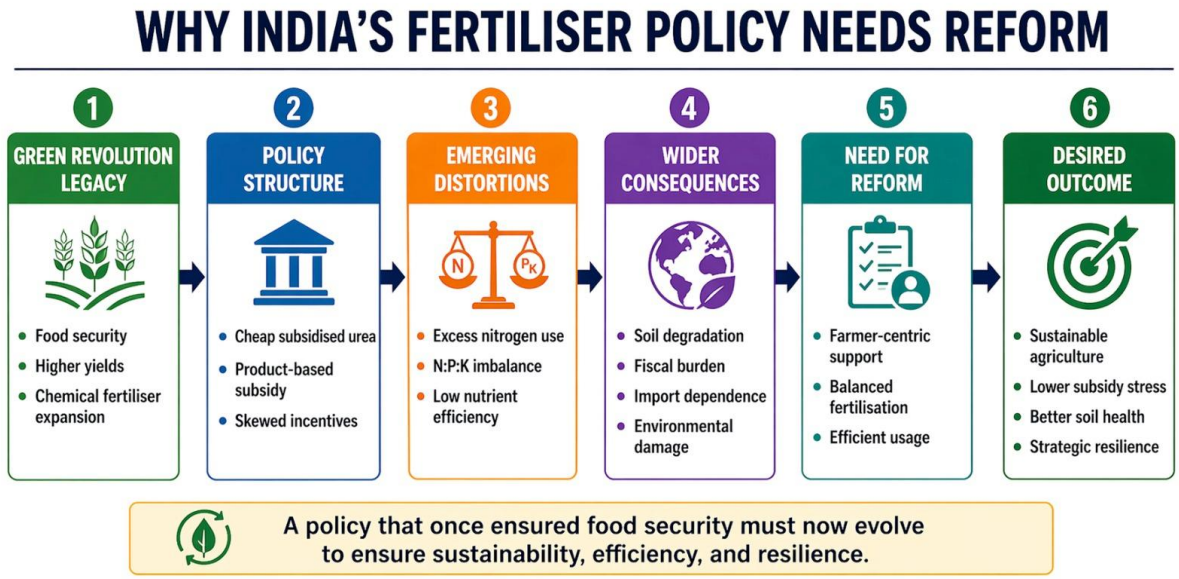
GS Paper III: Economics

1. Fertiliser Policy in India – Need for Reform

a. Introduction: From Food Security to Sustainability

Fertilisers have played a foundational role in India's agricultural transformation, particularly since the Green Revolution. The widespread use of chemical fertilisers—especially nitrogen-based urea—enabled India to move from food scarcity to self-sufficiency.

However, the very policy framework that once ensured food security is now showing signs of stress. Over time, distortions in pricing, excessive dependence on a single nutrient, and rising fiscal costs have made the fertiliser regime increasingly unsustainable. Today, fertiliser policy intersects not only with agriculture, but also with fiscal management, environmental sustainability, and national security.



b. Structure of Fertiliser Use in India: The Emerging Imbalance

Fertilisers provide three primary nutrients essential for plant growth—nitrogen (N), phosphorus (P), and potassium (K). Ideally, these should be used in a balanced proportion to maintain soil health and optimise productivity.

In India, however, usage is skewed heavily towards nitrogen (urea), while phosphorus and potassium are underutilised.

Nature of Imbalance

- Urea dominates fertiliser consumption due to lower prices
- Phosphatic and potassic fertilisers are relatively expensive
- Result: distorted N:P:K ratio — ideal ~4:2:1 vs India ~7:3:1 or worse

Consequences of Imbalance

- Short-term yield gains but long-term soil degradation
- Declining micronutrient availability
- Increasing dependency on fertilisers for same output

Thus, the issue is not just how much fertiliser is used, but how it is used. This imbalance directly stems from deeper policy distortions, which necessitate reform.

c. Why Fertiliser Policy Needs Reform

Import Dependence and Strategic Vulnerability

- Heavy reliance on imports for fertilisers and raw materials
- Urea production depends on imported natural gas
- Exposure to global price shocks and geopolitical disruptions

Distorted Pricing and the "Cheap Urea" Problem

- Urea is highly subsidised, thus artificially cheap
- Farmers overuse nitrogen instead of balanced nutrients
- Policy-driven distortion, not agronomic necessity

Overuse and Declining Soil Health

- Excess urea reduces soil fertility over time
- Loss of natural nutrient balance
- Increasing fertiliser requirement for same yield

Low Nutrient Use Efficiency

- Large portion of fertiliser is wasted
- Losses through volatilisation (gas loss), leaching (water loss), runoff
- Only a fraction is absorbed by plants

Environmental and Health Consequences

- Groundwater contamination — nitrates
- Contribution to greenhouse gas emissions
- Health risks like "blue baby syndrome" and metabolic issues

Rising Subsidy Burden

- Fertiliser subsidy is a major fiscal expense
- Increasing global prices, higher subsidy bill
- Opportunity cost: less spending on health, education, infrastructure

Leakages and Diversion

- Cheap fertilisers diverted to non-agricultural uses
- Black marketing and smuggling
- Inefficiency in subsidy delivery

These challenges highlight that the problem is rooted in how the policy itself is designed.

d. Structural Issues in Policy Design

Product-Based Subsidy System

- Subsidies linked to fertiliser products, not farmers
- Leads to overconsumption and misuse
- Encourages quantity over efficiency

Exclusion of Tenant Farmers

- Policies linked to land ownership, not cultivation
- Tenant farmers often excluded from benefits
- Weak targeting reduces equity and effectiveness

e. Key Concepts for Understanding Reform

Nutrient Use Efficiency (NUE)

- Refers to how much fertiliser is actually absorbed by crops
- Higher NUE implies less wastage and better productivity
- Precision methods (like drip irrigation) improve NUE

Balanced Fertilisation

- Correct proportion of N, P, K based on soil needs
- Maintains soil health and long-term productivity
- Shifts focus from quantity to quality

f. Reform Options: Towards a Rational Fertiliser Policy

Direct Benefit Transfer (DBT) to Farmers

- Subsidy transferred directly to farmers' accounts
- Farmers choose fertilisers based on need, not price distortion
- Reduces leakages and improves targeting

Per-Acre Income Support

- Support linked to land under cultivation
- Decouples subsidy from fertiliser consumption
- Promotes efficient use

Rationalisation of Urea Use

- Limits based on landholding and crop type
- Prevents excessive usage
- Encourages scientific application

Promotion of Efficient Technologies

- Drip irrigation and fertigation i.e., fertiliser via irrigation
- Precision agriculture techniques
- Reduces wastage and improves productivity

Correcting Nutrient Imbalance

- Promote phosphorus and potassium use
- Pricing reforms and awareness campaigns
- Balanced fertiliser availability

Strengthening Domestic Production

- Expand domestic fertiliser manufacturing
- Diversify import sources
- Strategic global partnerships

These reforms collectively aim to transform the fertiliser ecosystem.

g. Significance of Reform

Economic Benefits

- Reduced subsidy burden
- Better resource allocation

Agricultural Benefits

- Improved soil health
- Sustained productivity

Environmental Benefits

- Reduced pollution
- Lower emissions

Strategic Benefits

- Enhanced fertiliser security
- Reduced import dependence

Thus, reform has multidimensional national importance.

h. Challenges in Implementation

Political Sensitivity

- Fertiliser prices directly impact farmers
- Risk of resistance to reforms

Identification of Beneficiaries

- Difficulty in identifying tenant farmers
- Land records issues

Short-Term Impact on Farmers

- Possible increase in input costs initially
- Risk to farm incomes

Therefore, reform must be carefully designed and implemented.

i. Way Forward: A Balanced Transition

Gradual Shift to Farmer-Centric Subsidy

- Move from product-based to income-based support
- Ensure smooth transition

Strengthening Institutional Support

- Soil Health Cards and mapping
- Extension services for farmer awareness

Promoting Sustainable Practices

- Precision farming techniques
- Balanced fertilisation

Integrating Policy with Sustainability Goals

- Align with climate commitments
- Ensure ecological balance

This approach ensures that reform is both effective and inclusive.

Conclusion

India's fertiliser policy stands at a critical juncture. The challenge is to move beyond a system that prioritises cheap inputs towards one that promotes efficient and balanced nutrient management.

In simple terms, the future of food security will depend not on how much fertiliser is used, but on how intelligently it is used. A reformed policy must therefore shift its focus from subsidising products to empowering farmers—ensuring that agricultural productivity and environmental sustainability advance together.

GS Paper III: Economics

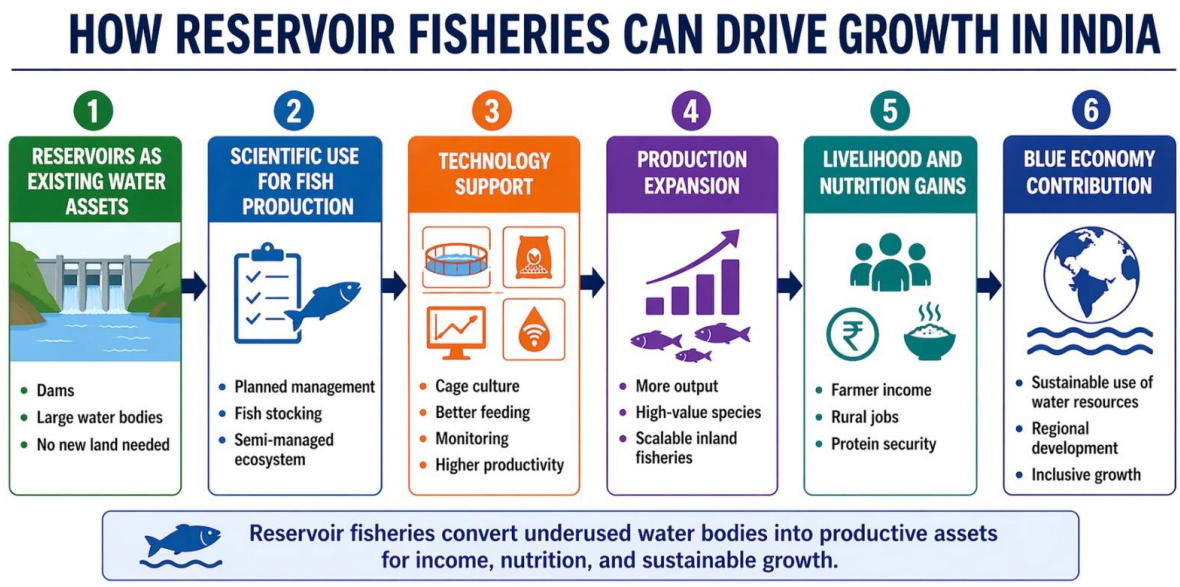
2. Reservoir Fisheries in India – A High-Potential Area for Growth

a. Introduction: Expanding the Horizon of Inland Fisheries

India's water resources have traditionally been used for irrigation, drinking water, and hydropower. However, these same water bodies—especially reservoirs—hold a largely untapped opportunity for fish production.

Reservoir fisheries refer to the scientific and planned use of large water bodies created by dams or natural depressions for fish farming. Unlike ponds, they do not require new land; instead, they utilise existing ecosystems to generate income.

In a country facing rural livelihood challenges and nutritional deficiencies, reservoir fisheries offer a way to combine economic growth with social welfare.



b. Fisheries in India: A Structural Shift towards Inland Waters

India is among the world's leading fish-producing countries. A key trend is the rising dominance of inland fisheries over marine fisheries.

Nature of the Shift

- Inland sources (rivers, ponds, lakes, reservoirs) now contribute a major share
- Marine fisheries face issues like overfishing and ecological stress
- Inland systems offer controlled and scalable production

Implication of the Shift

- Transition from capture fishing (natural catch) to culture fishing (planned production)

- Reservoirs emerge as the next growth frontier
- Greater scope for scientific management

Thus, reservoirs are becoming central to the future expansion of fisheries.

c. Understanding Reservoir Fisheries

Reservoir fisheries involve using large water bodies for fish production in a planned and scientific manner.

Key Features

- Large surface area → scope for large-scale operations
- Natural ecosystem → reduces need for full artificial control
- Semi-managed system → balance between nature and technology

Advantages

- Low land requirement
- Cost-effective compared to pond aquaculture
- High scalability

However, effective utilisation requires technological support—especially cage culture.

d. Cage Culture: The Technological Backbone

Cage culture is a method where fish are reared in net enclosures (cages) placed within reservoirs.

How It Works

- Cages are floated or anchored in water
- Natural water flow provides oxygen and nutrients
- Fish are fed and monitored within the enclosure

Benefits

- Controlled fish growth and feeding
- Efficient use of water space
- Higher productivity per unit area

Significance

- Enables intensive farming within large reservoirs
- Reduces dependence on land
- Makes reservoir fisheries commercially viable

This technological shift also supports diversification in fish species.

e. Species Diversification: Moving Beyond Traditional Fish

Traditionally, reservoir fisheries depended on species like Catla, Rohu, and Mrigal.

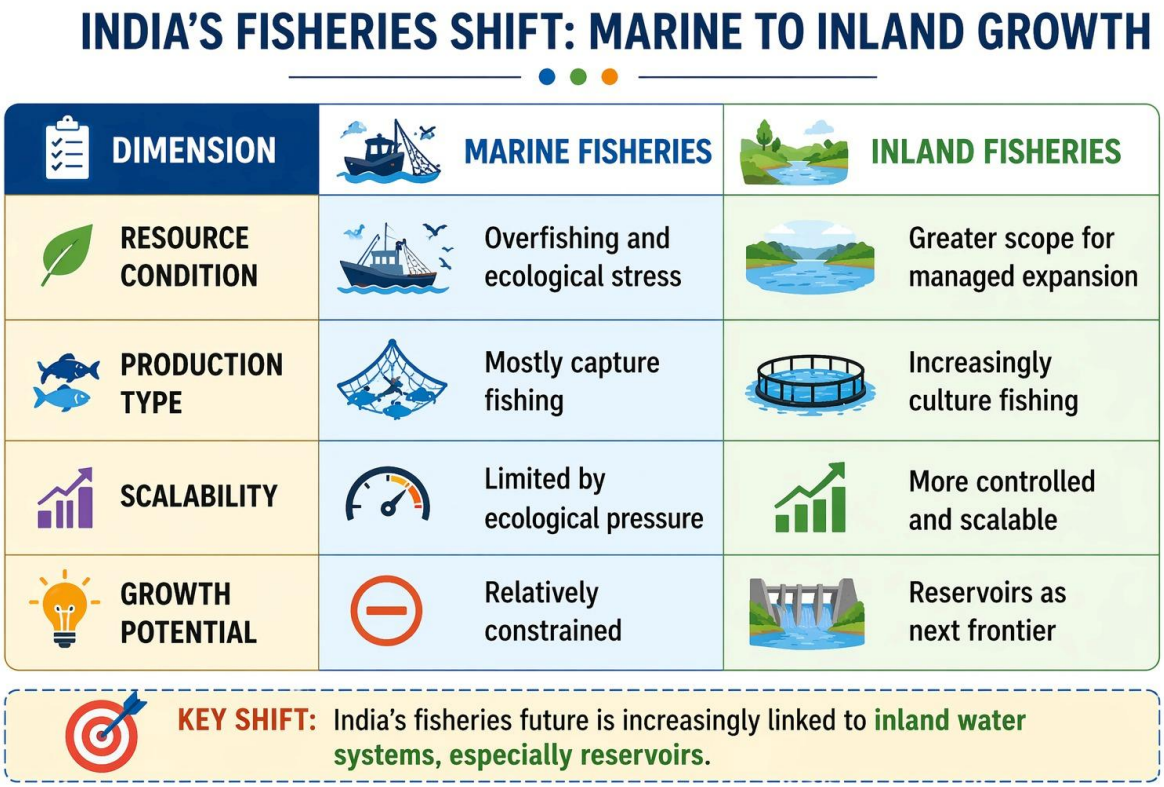
Emerging Trends

- Introduction of high-value species like Tilapia and Pangasius
- Focus on fast-growing and market-demand species

Benefits of Diversification

- Higher income potential
- Reduced risk — not dependent on one species
- Better alignment with consumer demand

Thus, fisheries are shifting from subsistence activity to market-oriented production systems.



f. Current Status: Growth with Untapped Potential

India has a vast reservoir area, yet productivity remains below global standards.

Present Situation

- Increasing production over time
- Low yield per hectare compared to potential

Core Issue

- Gap between potential and actual output
- Constraints lie in technology, skills, and management—not resources

This highlights why reservoir fisheries deserve focused policy attention.

g. Why Reservoir Fisheries Matter

Income and Livelihood Security

- Provides additional income to farmers
- Useful in areas with low agricultural productivity

Employment Generation

- Jobs in production, processing, transport, marketing
- Strong rural employment linkages

Food and Nutritional Security

- Fish is a rich source of protein and healthy fats
- Helps address malnutrition

Efficient Resource Utilisation

- Uses existing water bodies
- No additional land requirement

Contribution to the Blue Economy

- Promotes sustainable use of water resources
- Generates economic value from aquatic ecosystems

As the sector expands, focus must shift beyond production to the entire value chain.

h. Value Chain Development: From Production to Market

Modern fisheries include the entire process from production to sale.

Components of Value Chain

- Fish seed production
- Feed supply
- Cold storage and processing
- Transportation and marketing

Importance

- Better prices for fishers
- Reduced post-harvest losses
- Higher overall profitability

Without value chain integration, production gains do not fully benefit fishers.

i. Institutional Support and Policy Framework

Government support plays a key role in developing reservoir fisheries.

Role of Institutions

- Financial assistance and subsidies
- Training and technical guidance
- Market access support

Organisational Structures

- Cooperatives
- Fisher Producer Organisations (FPOs)

Benefits

- Improved bargaining power
- Better coordination
- Efficient operations

To further scale the sector, cluster-based approaches are being adopted.

j. Cluster-Based Development: Scaling Efficiency

Cluster-based development involves managing multiple reservoirs and fishers together.

Key Features

- Grouping reservoirs geographically
- Organising fishers into cooperatives

Advantages

- Economies of scale
- Reduced costs
- Better access to inputs and markets

This approach enhances efficiency and coordination at a regional level.

k. Integrating Small Water Bodies: The Role of Local Initiatives

Local water bodies are also being integrated into fisheries development.

Role of Small Water Bodies

- Support fish farming
- Contribute to water conservation

Community Participation

- Local involvement in management
- Link between sustainability and livelihoods

Such decentralised approaches strengthen both environment and economy.

l. Challenges: Structural and Operational Constraints

Despite high potential, several challenges remain.

Institutional Issues

- Unclear ownership and fishing rights
- Fragmented governance

Infrastructure Gaps

- Lack of cold storage and processing facilities
- Weak supply chains

Skill Deficit

- Limited knowledge of cage culture and modern practices
- Poor disease management

Environmental Concerns

- Overfishing and excessive stocking
- Risk of ecological imbalance

Market Constraints

- Price fluctuations
- Limited market access

These challenges must be addressed for sustainable growth.

m. Way Forward: Towards Sustainable Expansion

Short-Term Measures

- Training and capacity building for fishers
- Financial support for technology adoption

Medium-Term Measures

- Develop value chain infrastructure
- Strengthen cooperatives and FPOs

Long-Term Measures

- Scientific management of fish stocks
- Ecological sustainability
- Better policy coordination

Thus, a phased and balanced approach is essential.

Conclusion

Reservoir fisheries represent a high-potential but underutilised sector in India. By combining natural resources with modern technology and institutional support, they can significantly enhance rural incomes and nutritional security.

In simple terms, reservoirs should not be seen only as water storage systems, but as centres of livelihood generation and economic growth. With the right policy direction, they can become a key pillar of inclusive and sustainable development in India.

Reader's Note — About This Current Affairs Compilation

Dear Aspirant,

This document is part of the PrepAlpine Current Affairs Series — designed to bring clarity, structure, and precision to your daily UPSC learning.

While every effort has been made to balance depth with brevity, please keep the following in mind:

1. Orientation & Purpose

This compilation is curated primarily from the UPSC Mains perspective — with emphasis on conceptual clarity, analytical depth, and interlinkages across GS papers.

However, the PrepAlpine team is simultaneously developing a dedicated Prelims-focused Current Affairs Series, designed for:

- factual coverage
- data recall
- Prelims-style MCQs
- objective pattern analysis

This Prelims Edition will be released separately as a standalone publication.

2. Content Length

Some sections may feel shorter or longer depending on topic relevance and news density.
To fit your personal preference, you may freely resize or summarize sections using any LLM tool (ChatGPT, Gemini, Claude, etc.) at your convenience.

3. Format Flexibility

The formatting combines:

- paragraphs
- lists
- tables
- visual cues

—all optimised for retention.

If you prefer a specific style (lists → paras, paras → tables, etc.), feel free to convert using any free LLM.

4. Monthly Current Affairs Release

The complete Monthly Current Affairs Module will be released soon, optimized to a compact 100–150 pages — comprehensive yet concise, exam-ready, and revision-efficient.