



Protecting Animals and Their Environment: Wildlife, Biodiversity and Sustainable Livestock Management in India

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Animal welfare and environmental protection are closely interconnected. Animals depend on clean water, suitable habitats, adequate food, healthy surroundings and functioning ecosystems. At the same time, livestock production and animal-related establishments can influence environmental quality through wastewater, solid waste, odour and greenhouse-gas emissions. India has therefore developed a regulatory framework that combines animal welfare, wildlife conservation, biodiversity protection and environmental management.

Wildlife Protection in India

The **Wild Life (Protection) Act, 1972** is the principal legislation for wildlife conservation in India. It created a legal framework for protected areas such as:

- National Parks
- Wildlife Sanctuaries
- Conservation Reserves
- Community Reserves
- Tiger Reserves

The legislation was developed in response to serious declines in wildlife populations and created mechanisms for different levels of species protection. The Wild Life (Protection) Amendment Act, 2022 introduced several important changes. It rationalised the earlier six schedules into four and incorporated provisions related to CITES implementation and invasive alien species.

India's International Wildlife Responsibilities

Wildlife conservation does not stop at national borders. International trade in wildlife is regulated through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

CITES has three appendices:

- **Appendix I** – species threatened with extinction, for which commercial international trade is generally prohibited except under limited circumstances.
- **Appendix II** – species whose trade requires regulation so that exploitation does not threaten their survival.
- **Appendix III** – species protected in at least one country where international cooperation is sought to control trade.

The 2022 amendment to India's wildlife legislation incorporated CITES-related provisions into domestic law.

Biodiversity Conservation

The **Biological Diversity Act, 2002** provides another important component of India's environmental framework.

Its major objectives are:

1. Conservation of biological diversity.

2. Sustainable use of biological resources.
3. Fair and equitable sharing of benefits arising from the use of biological resources and associated traditional knowledge.

The Act established a three-level institutional structure:

National level → National Biodiversity Authority

State level → State Biodiversity Boards

Local level → Biodiversity Management Committees

This structure recognises that biodiversity conservation requires participation at national, state and community levels.

Environment Protection and Animal Agriculture

The **Environment (Protection) Act, 1986** is India's broad environmental legislation. It was enacted following the Bhopal gas tragedy and provides wide powers to the Central Government for protecting and improving environmental quality, including establishing standards for emissions and effluent discharge.

The relevance to animal agriculture is significant. Dairy farms, slaughterhouses, poultry units, meat-processing facilities and other livestock-related establishments may generate:

- wastewater,
- solid waste,
- odour,
- manure and
- other environmental pollutants.

The assignment notes that environmental management is therefore directly relevant to animal-related establishments.

Sustainable Infrastructure for Livestock Farms

Good infrastructure can simultaneously support animal welfare and environmental protection. For dairy farms and gaushalas, the assignment highlights the importance of:

- Impervious but non-slippery flooring,
- prevention of seepage,
- wastewater collection systems,
- adequate ventilation,
- appropriate space and
- treatment of effluent before discharge.

These measures illustrate an important principle:

A well-designed livestock facility should protect both the animal and the surrounding environment.

For example, appropriate flooring can improve animal safety while preventing contaminated wastewater from entering the surrounding soil.

Livestock and Methane Mitigation

Livestock production is also associated with greenhouse-gas emissions, particularly enteric methane. The assignment notes that CPCB guidelines refer to collaboration with organisations such as the National Dairy Development Board (NDDB) for reducing enteric methane emissions through improved livestock nutrition and management. This demonstrates how improvements in livestock management can potentially address both production and environmental objectives.

Better:

Nutrition + Housing + Waste Management + Farm Management

can contribute to:

Animal Health + Animal Welfare + Environmental Protection

Institutions Working Together

India's regulatory system involves several organisations rather than one single authority.

Important institutions described in the assignment include:

- **Animal Welfare Board of India (AWBI)** – animal welfare
- **Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD)** – livestock and animal husbandry policy
- **Ministry of Environment, Forest and Climate Change (MoEFCC)** – environment and wildlife
- **Central Pollution Control Board (CPCB)** – pollution-control standards
- **National Board for Wildlife (NBWL)** – wildlife policy and protected-area matters
- **National Tiger Conservation Authority (NTCA)** – tiger conservation
- **Wildlife Crime Control Bureau (WCCB)** – wildlife crime
- **National Biodiversity Authority (NBA)** – biodiversity and benefit-sharing
- **Committee for Control and Supervision of Experiments on Animals (CCSEA)** – animal experimentation.

This multi-institutional structure is necessary because animal welfare and environmental protection overlap several different areas of governance.

Major Challenges

Despite the extensive legal framework, implementation remains challenging.

The assignment identifies several important issues:

1. Infrastructure deficits

Some animal-related facilities require better infrastructure for humane and environmentally compliant operations.

2. Fragmented enforcement

Responsibilities are distributed among several departments and agencies, which can make coordination difficult.

3. Human–wildlife conflict

Increasing interaction between human settlements and wildlife creates difficult conservation and management challenges.

4. Conservation and commercial utilisation

The assignment notes concerns raised by some stakeholders regarding changes in biodiversity regulation and the need to balance legitimate scientific and commercial use with conservation objectives.

5. Livelihood concerns

Animal-related regulations can affect traditional practitioners and small livestock keepers. Effective implementation therefore also needs to consider the socioeconomic realities of communities dependent on livestock-related activities.

The Way Forward

The future approach should connect three objectives:

Animal Welfare + Environmental Sustainability + Livelihood Security

For livestock farming, this means encouraging:

- scientific animal husbandry,
- appropriate housing,
- proper manure and wastewater management,
- efficient use of natural resources,
- veterinary care,
- responsible livestock handling,
- environmental monitoring and
- farmer awareness.

For wildlife, effective habitat protection, biodiversity conservation and appropriate regulation of wildlife trade remain essential components.

Conclusion

India's animal-related environmental framework is not based on a single law. It is a combination of constitutional provisions, animal welfare legislation, wildlife legislation, biodiversity law, environmental regulation, government institutions and judicial oversight. The central challenge is not merely creating regulations but ensuring that these regulations work effectively on the ground. Sustainable animal agriculture and conservation require cooperation between government agencies, veterinarians, farmers, researchers, local communities and the public. Ultimately, protecting animals and protecting their environment are interconnected goals. Healthy animals require healthy surroundings, and responsible management of livestock and natural resources can contribute simultaneously to animal welfare, environmental quality and sustainable development.

References

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