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National and International Laws on Animal Genetic Resources Sharing

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Abstract

Animal Genetic Resources (AGR) represent the genetic variability found in domesticated animal species that support food production, livelihoods, and ecological stability. With rapid advances in biotechnology and increasing international exchange of animal germplasm, the risk of genetic erosion and unfair exploitation has grown. To address these concerns, several national and international legal instruments have been developed to regulate access, promote conservation, and ensure equitable sharing of benefits derived from the use of AnGR. This article discusses the major international agreements and Indian national laws governing animal genetic resource sharing, highlighting the role of the Indian Council of Agricultural Research (ICAR) in conservation and policy implementation.

Introduction

Animal Genetic Resources include livestock breeds, their genetic material such as semen, embryos, ova, and DNA, along with traditional knowledge associated with animal breeding and management. These resources are vital for improving productivity, enhancing disease resistance, and adapting livestock systems to climate change. However, unregulated transfer and commercial use of genetic material can threaten indigenous breeds and undermine the rights of source countries. Recognizing these challenges, legal frameworks at both national and international levels have been established to regulate access to animal genetic resources and to ensure fair benefit sharing. India, as a country rich in livestock diversity, has adopted specific laws and institutional mechanisms aligned with global agreements.

International Legal Framework for Animal Genetic Resources

1. Convention on Biological Diversity (CBD), 1992

The Convention on Biological Diversity provides the foundation for global governance of biological resources, including animal genetic resources. It affirms that biological resources fall under the sovereign control of individual nations. The Convention promotes conservation of biodiversity, sustainable use of genetic resources, and equitable sharing of benefits arising from their utilization. Under the CBD framework, access to animal genetic resources requires prior permission from the provider country and must be governed by mutually agreed conditions. Although initially

focused more on plant and microbial resources, the principles of the CBD are equally applicable to livestock genetic diversity.

2. Nagoya Protocol on Access and Benefit Sharing

The Nagoya Protocol was adopted to strengthen and operationalize the access and benefit-sharing principles of the CBD. It establishes clear obligations for users of genetic resources to share benefits with provider countries. In the context of animal genetic resources, benefits may include financial returns, joint research programs, training, technology transfer, and sharing of research outcomes. The Protocol helps prevent biopiracy and ensures transparency in international exchange of animal germplasm.

3. FAO Global Plan of Action for Animal Genetic Resources

The Food and Agriculture Organization developed the Global Plan of Action for Animal Genetic Resources as a strategic framework for managing livestock diversity worldwide. It emphasizes breed identification, monitoring of population trends, conservation of endangered breeds, and responsible use of animal genetic material. While the Global Plan of Action is not legally binding, it guides national governments in developing policies for sustainable use and controlled sharing of animal genetic resources.

National Legal Framework in India

1. Biological Diversity Act, 2002

India's Biological Diversity Act, 2002, provides the legal basis for regulating access to biological resources, including animal genetic resources. The Act aims to conserve biodiversity, promote sustainable utilization, and ensure equitable sharing of benefits with local communities. It restricts access by foreign individuals and organizations without prior approval and regulates the transfer of research results derived from Indian genetic resources.

2. Institutional Mechanism for Implementation

The National Biodiversity Authority (NBA) is the apex body responsible for enforcing the provisions of the Biological Diversity Act. It evaluates requests for access to animal genetic material and ensures that benefit-sharing mechanisms are properly implemented. State Biodiversity Boards and Biodiversity Management Committees assist in local-level governance and documentation of biological resources.

3. Role of ICAR in Animal Genetic Resource Sharing

The Indian Council of Agricultural Research (ICAR) plays a central role in the scientific management of animal genetic resources. Through specialized institutions such as the National Bureau of Animal Genetic Resources (NBAGR), ICAR undertakes breed registration, genetic characterization, conservation planning, and policy advisory functions. ICAR ensures that research, exchange, and utilization of animal genetic material comply with national biodiversity laws and international commitments.

Conclusion

The sharing of animal genetic resources must balance scientific progress with conservation

and equity. International agreements such as the CBD, Nagoya Protocol, and FAO Global Plan of Action provide guiding principles, while national laws like India's Biological Diversity Act ensure country-specific regulation. Institutions such as ICAR strengthen this framework through research, documentation, and policy support. Together, these legal and institutional mechanisms promote responsible use, conservation, and fair benefit sharing of animal genetic resources.

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