



Humane
World for
Animals™



Safeguarding Biodiversity and Public Health

A legislative and policy analysis
of exotic pet trade in India

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About Humane World for Animals India:

Humane World for Animals India Foundation (formerly Humane Society International India) is an animal protection organization dedicated to tackling the root causes of animal cruelty.

Addressing the complex jigsaw puzzle of animal protection demands concerted, long-term commitment. Humane World India adopts a holistic, multipronged approach to address these challenges effectively.

Incorporated in India: 2012

Type: Section 8 Company, 501(c) registered non-profit

Reach: Presence across 10+ states in India

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Suggested citation:

Balaji, K., Sotie, S., & Bindumadhav, S. (2026). Safeguarding Biodiversity and Public Health: A Legislative and Policy Analysis of Exotic Pet Trade in India. Humane World for Animals India.



Executive summary

The exotic pet trade in India has evolved from a niche activity into a significant industry operating at the intersection of legal commerce, illegal trafficking, and organized crime. The 2020 Voluntary Disclosure Scheme revealed over 40,000 individuals across 30 states and union territories keeping exotic pets, though this likely represents only a fraction of actual ownership. Valued at approximately USD 42.6 million in 2024, industry estimates project the market to grow to USD 75.8 million by 2030. Reptiles and birds dominate, including green iguanas, royal ball pythons, African grey parrots, and blue-and-gold macaws, alongside growing demand for mammals and invertebrates.

We identify severe consequences to this trade across four critical domains: zoonotic disease risks across the trade chain and in households; ecological disruptions as escaped or released pets establish invasive populations; institutional overload for rescue facilities and zoos in the lifetime management of seized animals; and welfare harms to species in captivity, including those fundamentally unsuited to private ownership such as non-human primates.

Current legal framework

To understand how India’s legal architecture addresses these challenges, this report examines current legislation

across two dimensions: the laws regulating trade into India of non-native wild animal species and inter-state commerce in such species, and the laws mitigating its impacts. Trade regulation is primarily governed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Wild Life (Protection) Act, 1972 (WLPA), amended in 2022 to regulate import, export, possession, and breeding of CITES-listed species through Chapter VB. The Foreign Trade (Development and Regulation) Act, 1992 governs import of non-CITES species, while the Customs Act, 1962 provides port-level enforcement. Laws addressing the impacts of exotic pet trade, including zoonotic disease risks and threats from invasive non-native species (referred to in law as “Invasive Alien Species” or IAS), include the Livestock Importation Act, 1898, the Biological Diversity Act, 2002, and the Living Animal Specimen Rules, 2023. The Prevention of Cruelty to Animals Act, 1960 (PCA) and the Supreme Court’s recognition of the Five Freedoms framework establish welfare standards for animals in captivity.

Critical policy gaps

Our analysis reveals that while the WLPA amendments introduced significant reforms to regulate trade in CITES-listed exotic species, critical gaps persist.

Domain	Gap
Disease Management and Zoonotic Threats	No mandatory health standards for exotic pets, post-import. Vaccination, testing, and quarantine requirements exist at ports of entry but not thereafter; veterinary health records remain siloed across import, registration, and clinical databases. Frontline staff face significant exposure risk. Enforcement and rescue personnel routinely handle seized animals without PPE, biosecurity protocols, or species-specific training. No mandatory disease reporting. Veterinarians are not required to flag suspected zoonotic infections in exotic species.
Invasive Species Control	The WLPA’s key provision is un-operationalised. Section 62A empowers the Central Government to regulate or prohibit invasive non-native species but has never been formally activated. No binding national species list exists. Multiple agencies publish inventories, but none are consolidated into a single gazette-notified list with legal force. Impact-focused laws do not cover ecological risk. The Livestock Importation Act, 1898 and Customs Act, 1962 address disease transmission but provide no mechanism to prevent ecologically harmful introductions.
Post-Seizure Management	No standardised repatriation protocols. Bilateral agreements, funding mechanisms, and procedures for returning species of unknown origin are absent. No framework for lifetime care. Zoos and rescue facilities absorb unrepatriated animals indefinitely, without a national strategy or dedicated resources. No euthanasia guidelines for exotic wildlife. Decisions are inconsistent across states and facilities, with no species-specific protocols or mandatory authorisation procedures.
Animal Welfare	No enforceable care standards for exotic pets. The PCA and WLPA lack species-specific husbandry norms; current rules were designed for domestic and farm animals. No restrictions on species that pose potential danger to humans. There is no framework prohibiting private ownership of species that pose serious public safety risks, including venomous snakes, non-human primates, and big cats. No restrictions on species for whom captivity causes severe harm. There is no framework to restrict ownership of species for whom captivity is inherently unsuitable, such as great apes and other highly social species. Petting zoos and aviaries operate in a regulatory gray zone. Legal ambiguities allow facilities to avoid registration under both CZA and AWBI requirements.

<p>Digital and Informal Trade</p>	<p>Online platforms function as unregulated marketplaces. Social media and messaging applications host active trade in exotic species without mandatory disclosure, seller verification, or proactive monitoring obligations. Informal transactions bypass all biosecurity checks. Species traded online circumvent import documentation, health screening, and registration requirements.</p>
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Framework for reform

To address these gaps, this report proposes a comprehensive strategy organized across five thematic areas, each with specific actions, implementation timelines, and success metrics.

Thematic Area	Recommendation
<p>Legislative and Regulatory Measures</p>	<p>Enact a comprehensive Invasive Alien Species Act with binding species lists, risk assessment requirements, and enforcement powers.</p> <p>Operationalise a national framework to restrict private ownership of species that pose danger to humans or are inherently unsuited to captivity.</p> <p>Expand WLPA regulatory oversight to non-CITES and unlisted exotic species.</p> <p>Develop a national surrender policy with intake mechanisms and approved placement protocols.</p> <p>Create a dedicated regulatory framework for petting zoos and aviaries with mandatory registration and cross-agency oversight.</p> <p>Develop species-specific health and traceability standards for all exotic animals in trade. Mandate platform-level controls and seller verification for digital and online trade.</p>
<p>Capability and Capacity Building</p>	<p>Institutionalise standardised training for enforcement, customs, and forest staff on exotic animal handling and biosecurity.</p> <p>Integrate exotic wildlife medicine into undergraduate veterinary curricula and fund specialist postgraduate programmes.</p> <p>Upgrade diagnostic laboratories and treatment facilities in high-ownership and high-trafficking states.</p> <p>Expand quarantine infrastructure to land border crossings and secondary international airports.</p> <p>Establish an interoperable data-sharing system linking customs, forest departments, veterinary services, and public health authorities.</p>
<p>Disease Surveillance and Biosecurity Integration</p>	<p>Formally expand the National One Health Mission mandate to include exotic wildlife trade risks.</p> <p>Extend NADRS and IDSP coverage to zoonotic diseases associated with exotic species.</p> <p>Develop species-specific quarantine and immunisation protocols for commonly traded taxa.</p> <p>Mandate veterinary reporting of suspected zoonotic infections in exotic pets.</p> <p>Develop and institutionalise emergency outbreak protocols for exotic pet-related disease events.</p>
<p>Public Awareness and Responsible Ownership</p>	<p>Publish legally endorsed national exotic pet ownership guidelines with enforceable care standards and penalties.</p> <p>Launch targeted public campaigns on zoonotic risks, ecological impacts, and welfare consequences of exotic pet ownership.</p> <p>Mandate standardised risk disclosure at point of sale, registration, and online listing.</p>

<p>Research</p>	<p>Fund interdisciplinary research on pathogen spillover, disease transmission dynamics, and trade chain analysis.</p> <p>Conduct invasion risk assessments and long-term monitoring for commonly traded non-native species.</p> <p>Establish adaptive management systems to track emerging trade trends and inform regulatory updates.</p>
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As the country's exotic pet market continues to expand, implementing these recommendations becomes increasingly urgent. The proposed framework offers an opportunity to develop a comprehensive regulatory system that moves beyond reactive enforcement toward

preventive, science-based governance. Enactment positions India as a leader in addressing the complexities of globalised wildlife commerce, while safeguarding its ecological heritage, public health security, and the welfare of the species involved.



Editorial Note: In this publication, 'native' refers to wild animals that occur naturally in a region without human introduction, and is distinguished from 'endemic,' which describes native species whose range is restricted to a particular geographic area. 'Exotic pet,' 'exotic wildlife,' and 'exotic animals' are used interchangeably to refer to non-native wild animals kept as pets or traded for pet keeping.



Acknowledgements

The authors would like to express their sincere gratitude to all those who contributed to the development and publication of this document.

We are thankful to Ms. Esha Patel for her invaluable assistance in refining the document, including meticulous proofreading, and cross-checking of references, which greatly strengthened the clarity and rigour of the analysis. We are grateful to Wildlife Conservation Society-India, particularly the Counter Wildlife Trafficking team, for their collaborative efforts in the early development of this research and for helping establish its conceptual framework.

We extend our sincere appreciation to RESQ Charitable Trust, Pune, for the invaluable knowledge they shared on the rescue and rehabilitation of exotic wild animals, and for the remarkable work they continue to do in advancing wildlife welfare and conservation.

We thank Ms. Priya Poonia for being a valued brainstorming partner, and for her thoughtful feedback and constant encouragement.

We also acknowledge the managing director of Humane World for Animals India, Ms. Alokparna Sengupta, for her careful review and constructive feedback, which helped sharpen the document's relevance and applicability.

We extend our appreciation to other staff members of Humane World for Animals India for their support and collaboration in bringing this publication to fruition.

We thank Ms. Malavika Sagar for designing and formatting this report, and for helping present the material with clarity and professionalism.

Finally, we also gratefully acknowledge the donors and supporters whose continued trust and generosity made this work possible.

Context and scope

India, as a mega biodiverse country, plays a pivotal role in global wildlife conservation. The protection of wildlife and the environment is a constitutional and moral responsibility that is reflected in the country's comprehensive legal architecture. Key national legislation including the Wild Life (Protection) Act, 1972, the Forest (Conservation) Act, 1980, and the Biological Diversity Act, 2002 provides the foundation for domestic protection and conservation efforts. On the global stage too, India is a signatory to several treaties such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Convention on Biological Diversity, and the Global Biodiversity Framework, reinforcing its commitment to protecting endangered species.

Rapidly emerging trade in exotic (non-native) wildlife as pets in India presents a new and complex challenge, one that threatens to accelerate biodiversity loss, increases the risk of novel disease transmission, strains public institutions, destabilizes native ecosystems, and compromises the welfare of animals in trade. The interlinked ecological, socio-economic, and public health impacts highlight the urgent need for coordination and collaboration across disciplines. Recent regulatory measures have made significant progress to address certain aspects of exotic pet ownership and trade. However, the dynamic and legally intricate nature of this issue requires more robust policy interventions and effective enforcement mechanisms.

This report aims to address the need by providing a comprehensive legal analysis of the exotic pet landscape in India. Drawing on key legislation, published literature, and domain expertise, this report outlines the background of exotic wildlife trade, examines its impacts, analyses the current legal framework, identifies critical gaps, and offers practical recommendations to strengthen India's policy responses to the escalating challenges of exotic wildlife trade. The analysis focuses primarily on national (central) legislation, while acknowledging that states have taken independent legislative or enforcement measures to tackle some of the issues discussed herein.

The species scope of this report lies primarily on terrestrial and semi-aquatic wildlife, that is, mammals, birds, reptiles, and to an extent, amphibians and invertebrates. Pet trade in marine and other aquatic species, while alluded to in certain sections, has not been comprehensively dealt with. The legal frameworks and enforcement mechanisms are significantly different, warranting distinct analysis. Future research may build upon this report to develop a legal and policy gap analysis incorporating marine and other aquatic exotic pet species. The scope of this report also excludes exotic specimens transferred between zoological institutions and for scientific research purposes.



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List of abbreviations

Acronym	Full Name / Description
ABS	Access and Benefit Sharing
ACQS	Animal Quarantine and Certification Service
AVMA	American Veterinary Medical Association
AWBI	Animal Welfare Board of India
BDA	The Biological Diversity Act, 2002
BNS	Bharatiya Nyaya Sanhita, 2023
BNSS	Bharatiya Nagarik Suraksha Sanhita, 2023
CEBPOL	Centre for Biodiversity Policy and Law
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CoP15	15th Conference of the Parties to the CITES
CWLW	Chief Wildlife Warden
CZA	Central Zoo Authority
DAHD	Department of Animal Husbandry & Dairying
DBT	Department of Biotechnology
DGCA	Directorate General of Civil Aviation
DGFT	Directorate General of Foreign Trade
FAO	Food and Agriculture Organization
FTDRA	Foreign Trade (Development and Regulation) Act, 1992 Foreign Trade Policy
FTP	Foreign Trade Policy
GCETWO	Global Coalition to End Wildlife Trafficking Online
GST	Goods and Services Tax
IAS	Invasive Alien Species

IATA	International Air Transport Association
IATA LAR	IATA Live Animal Regulations
ICFRE	The Indian Council of Forestry Research and Education
ICMR	Indian Council of Medical Research
IDSP	Integrated Disease Surveillance Programme
IEC	Importer-Exporter Code
IUCN	International Union for Conservation of Nature
MEITY	Ministry of Electronics and Information Technology
MoCI	Ministry of Commerce and Industry
MoFAHD	Ministry of Fisheries, Animal Husbandry and Dairying
MoEFCC	Ministry of Environment, Forest and Climate Change
MoHFW	Ministry of Health and Family Welfare
NADRS	National Animal Disease Reporting System
NBA	National Biodiversity Authority
NBAP	National Biodiversity Authority
NBFGR	National Bureau of Fish Genetic Resources
NCDC	National Centre for Disease Control
NGO	Non-Governmental Organization
NOC	No Objection Certificate
NOHM	National One Health Mission
NWHP	National Wildlife Health Policy
PARIVESH	Pro-Active and Responsive facilitation by Interactive, Virtuous and Environmental Single-window Hub
PCA	Prevention of Cruelty to Animals Act, 1960

PQO	Plant Quarantine (Regulation of Import into India) Order, 2003
SARS	Severe Acute Respiratory Syndrome
SBB	State Biodiversity Board
SOP	Standard Operating Procedure
VCI	Veterinary Council of India
VDS	Voluntary Disclosure Scheme
WCCB	Wildlife Crime Control Bureau
WHO	World Health Organization
WLPA	Wildlife (Protection) Act, 1972
WOAH	World Organization for Animal Health
ZSI	Zoological Survey of India

1. Background of exotic pet trade in India

Summary: This chapter establishes the scale and complexity of India's exotic pet trade, tracing its evolution from historical bird imports to a now diverse and economically booming market encompassing numerous taxa. The chapter also examines key demand drivers including urban affluence and commercial ventures, while mapping the air and overland trafficking routes and domestic supply chains.

India is witnessing a rising trade in exotic wildlife, species which are not native to the country, driven by their appeal as unique and unusual pets. This trade poses significant ecological, legal, and ethical concerns, adding a complex layer to the country's ongoing conservation efforts.

While trade in exotic species is not new, recent years have witnessed notable changes in the volume and diversity of species traded. Since the 1980s, birds, including conures and lorikeets, have been imported and bred within India, with some lineages continuing into current generations.¹ Commercial trade in exotic reptiles intensified only in the past two decades, with 17 species legally imported between 1976 and 2018.² In the last five years, a steep increase in seizures reflects a surge in illegal trade. In 2022 alone, World Wild Fund for Nature-India (WWF-India) documented 56 seizures, involving approximately 4,000 exotic animals spanning a wide range of taxa.³

Today, the exotic pet market includes an intricate mix of legal and illegal supply chains. Animals are imported through authorized channels, smuggled across borders, or bred domestically in licensed and illegal facilities. Concerningly, wild-caught individuals, captured from habitats worldwide, are incorporated to diversify stock or directly meet consumer demand.⁴

1.1 Current trends and demand drivers

The Voluntary Disclosure Scheme (VDS), launched by the Ministry of Environment, Forest and Climate Change in 2020, reveals the scale of exotic pet keeping in the country. By February 2021 over 40,000 individuals across 30 states and union territories had registered their possession of exotic pets.⁵

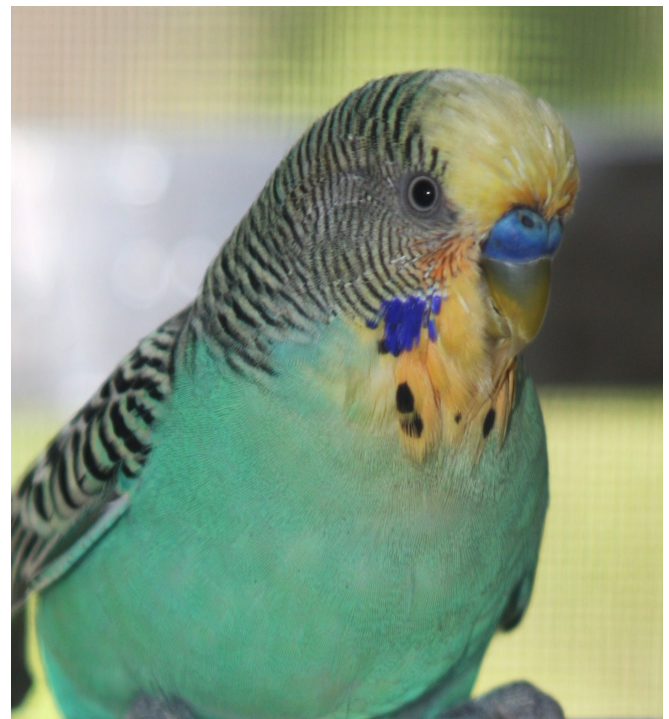
Reptiles and birds seemingly dominate the market, with species such as green iguanas, sulcata tortoises, ball pythons, African grey parrots, and blue-and-gold macaws frequently traded. Mammals, including pygmy marmosets and sugar gliders, are also traded, alongside a growing but lesser-known market for invertebrates like tarantulas.^{6,7} Seizures of niche primates, venomous snakes, and rare hornbills further point to sophisticated, high-value underground networks operating through informal, illicit channels.^{8,9,10}

Urban areas, particularly Tier I and Tier II cities, have emerged as hubs of trade. Exotic pets are widely seen as status symbols, attracting a diverse spectrum of buyers

across age groups, ranging from first-time owners to seasoned collectors. Exotic pet keeping also highlights a shift in societal preferences, with unconventional companions gradually supplementing or replacing traditional domesticated pets such as dogs and cats.¹¹ In recent years, there has been a notable rise in individuals keeping exotic animals at volumes verging on private zoo-scale collections.

The exotic pet market in India represents a substantial and rapidly growing economic sector. Industry estimates value the market at USD 42.6 million in 2024, with projections indicating growth to USD 75.8 million by 2030, a compound annual growth rate of 10.2%.¹² This economic expansion reflects both the increasing demand for exotic species and the proliferation of supporting commercial infrastructure, including specialized veterinary services, pet products, and breeding operations.

Commercial ventures such as petting zoos, aviaries, and exotic animal cafés are also rapidly gaining popularity in India as recreational venues where visitors, often families, can interact with wildlife.^{13,14} In some instances, animals are rented out for private events and parties, reinforcing their commodification as objects of entertainment.



1.2 Trafficking routes and hotspots

India's geographic position, coupled with its vast and porous borders, places it at the intersection of major international wildlife trafficking routes, with limited enforcement capacity in certain regions compounding the problem. Exotic wildlife native to Southeast Asia, Australasia, and Central and South America are observed trafficked into the country. Seizures indicate two primary routes, overland through Northeast India's borders with Bangladesh and Myanmar, and by air via major international airports.¹⁵ Three airports stand out as major nodes: Chennai International Airport, Kempegowda International Airport in Bengaluru, and Chhatrapati Shivaji Maharaj International Airport in Mumbai, all receiving direct international flights from Thailand and Malaysia. These function not only as ports of entry for smuggled consignments, but also as domestic redistribution hubs. Seizures at smaller international airports in Kochi, Visakhapatnam, and Port Blair further highlight the extent to which smuggling networks adapt to evade detection.^{16,17,18}

Once in India, trafficked wildlife are transported by road or rail to urban centres including Kolkata, Hyderabad, Ahmedabad, Delhi, and Kochi, besides Bengaluru, Chennai, and Mumbai. From there, these animals may be sold legally or illegally in various pet markets such as

Crawford Market and Pallavaram market, or via online platforms and communication applications. Social media platforms further accelerate trends by showcasing exotic pets through posts and videos, creating a borderless digital marketplace that transcends geographic boundaries.^{19,20,21}

Today, the exotic pet market includes an intricate mix of legal and illegal supply chains. Animals are imported through authorized channels, smuggled across borders, or bred domestically in licensed and illegal facilities.



2. Impacts of exotic pet trade

Summary: This chapter unpacks the wide-ranging threats and challenges posed by exotic pet trade. It highlights how the trade increases the risk of zoonotic disease spillovers, drives biological invasions through abandoned or escaped pets, and stretches the capacity of zoos and enforcement agencies. The trade also commodifies sentient animals unsuited for captivity, raising serious welfare concerns in both government facilities and private ownership.

Unchecked, exotic pet trade carries wide-ranging consequences, extending far beyond individual transactions. The extraction of wildlife from native habitats accelerates the extinction risk for globally threatened species, draws vulnerable communities into illicit supply chains, deepens social and economic inequalities, and fundamentally undermines the ecological autonomy and welfare of species. This chapter examines the impacts of exotic pet trade in India with a focus on four dimensions: zoonotic disease risk, invasive species threat, burden on public systems, and the welfare of species in captivity.

2.1 Risk to public health from zoonotic diseases

The risk of zoonosis, infections that spread from non-human animals to humans, has gained renewed prominence in the aftermath of global outbreaks such as Severe Acute Respiratory Syndrome (SARS), avian influenza, Ebola, and most notably, COVID-19. Zoonotic diseases encompass a wide range of illnesses that affect the respiratory, gastrointestinal, dermatological, and other organ systems. Infections are caused by an array of pathogens including bacteria, viruses, and parasites. The scale of zoonotic threat is substantial. An estimated 75% of Emerging Infectious Diseases (EID) are zoonotic in nature, and approximately 1.7 million unknown viruses are thought to exist among mammals and birds, with up to 850,000 capable of infecting humans.^{22,23}

Spillover events are driven by common ecological and anthropogenic factors, including intensified human-wildlife interactions and illegal movement of wild species.^{24,25} The exotic pet trade exemplifies these risk factors through the capture, transport, and keeping of live animals, many of whom carry zoonotic pathogens.²⁶ Exotic species are typically moved through long, multi-stage supply chains spanning numerous countries, crowded together with other wildlife in cramped and unsanitary quarters. In markets and stores, they are housed alongside domestic animals such as pigeons, poultry, dogs, and cats, creating ample opportunities for pathogens to jump between species.²⁷ Such stressful conditions weaken species immunity and increase viral shedding, amplifying pathogen loads and heightening the risk of potential spillover to humans.

Exposure to and transmission of zoonotic pathogens

occurs through multiple pathways, not only bites and scratches, but also direct contact with animals, contaminated environments (enclosures, surfaces, or water), inhalation of infectious particles, and handling of animal products or waste. The risk extends across the trade chain, with enforcement officials, traders, market vendors, transporters, and buyers equally vulnerable. Seized or rescued animals are transferred to zoos, rescue centres, or transit facilities with limited quarantine, exposing veterinary staff, caretakers, and even visitors to potential infection. Petting zoos and aviaries rent exotic birds and reptiles for children's birthday parties and private events, where they are handled by young children with minimal oversight or health protocols.

Exotic pet owners may also be unaware of the health risks posed by the species they keep. Reptiles frequently carry *Salmonella* spp., which causes gastrointestinal illness in humans that can be particularly severe in children and immunocompromised individuals.²⁸ Exotic birds may transmit Avian Influenza and *Chlamydia psittaci*, the causative agent of psittacosis (parrot fever), a respiratory infection that can progress from mild flu-like symptoms to severe pneumonia.^{29,30} All non-human primates are capable of transmitting multiple life-threatening zoonotic diseases to humans, including fatal encephalitis from Cercopithecine herpesvirus 1 (B-virus), hepatitis, tuberculosis, intestinal infections, and parasitic diseases.^{31,32} The lack of visible signs of illness in some species, combined with frequent physical contact and limited access to veterinary care, creates conditions conducive to transmission across households and communities. The absence of systematic disease surveillance of exotic pet populations also means potential zoonotic spread remains undetected until human transmission or outbreaks occur.³³



Venomous species and antivenom gaps

Alongside zoonotic concerns, the keeping of exotic venomous snakes in homes, pet shops, or breeding facilities also poses serious health threats due to the lack of exotic species-specific antivenom. From anecdote, global snake hobbyists are also known to interbreed and trade species, creating new hybrids for which it is difficult to predict toxicity, further complicating treatment options in the event of a snakebite.

Recent seizures have uncovered trafficking of highly venomous species, for which Indian antivenoms offer little to no protection. In May 2025, Bengaluru customs discovered venomous Wagler's pit vipers, among other species smuggled. In June 2025, Mumbai customs intercepted 52 exotic reptiles, including 44 venomous Indonesian pit vipers, from a passenger arriving from Bangkok. Also seized were three spider-tailed horned vipers, a species rare to see even in its native range of western Iran and bordering Iraq, and for which no antivenom exists.^{34,35}

The escape of exotic venomous snakes from private collections into residential areas poses an additional danger to the public, with no protocols in place for safe capture. In the absence of regulations and safety protocols for venomous species, owners, authorities, and first responders face significant risk in the event of a bite, with potentially fatal outcomes.³⁶

2.2 Threat to ecosystem integrity by invasive alien species

The International Union for Conservation of Nature (IUCN) defines Invasive Alien Species (IAS) as organisms introduced by humans, either intentionally or accidentally, into places outside their natural range, which negatively impact native biodiversity, ecosystem services, or human economy and well-being. Non-native animals introduced into new environments lack predators, parasites, and diseases that regulate their population, allowing them to proliferate and outcompete native species.

India already faces significant ramifications from IAS, affecting biodiversity, agriculture, fisheries, and the economy.^{37,38} A 2018 list compiled by the Centre for Biodiversity Policy and Law (CEBPOL) and the National Biodiversity Authority (NBA), identifies 169 IAS (fauna and flora) in India, including 14 species of inland fish.³⁹ The Zoological Survey of India (ZSI) has separately listed 157 IAS, including 19 species of fish, many of which are in the exotic pet trade.⁴⁰

The invasion pathway created by exotic pet trade is formidable. Animals escape, are abandoned, or deliberately released into the wild when owners underestimate the space, care, cost, and longevity of species, particularly true in the case of reptiles and fish who are sold when they are small and manageable, but can grow to be exceptionally large. Urban areas such as Mumbai and Bangalore have seen red-eared sliders dumped into creeks, beaches, and public gardens, while escaped ball pythons have been discovered on roads.⁴¹ The country's diverse climatic zones provide suitable habitats, increasing the likelihood that released animals will survive and reproduce. Once established, invasive populations are difficult or impossible to eradicate, creating permanent alterations to ecosystem structure and function.

The ornamental fish trade, active in India since the 1960s, acutely illustrates the threat of invasion.⁴² An estimated 291 exotic fish species have been introduced into the country through trade, and current fish invasions in native freshwater ecosystems have been directly linked to aquarium releases.⁴³ The scale of potential escapes was illustrated during the 2018 and 2019 Kerala floods,

when at least 10 alien fish species from illegal aquaculture facilities, aqua-tourism destinations, amusement parks, and private aquarium collections escaped into Western Ghats river systems.⁴⁴ Some other IAS threats include:

- **Red-eared Slider (*Trachemys scripta elegans*):** Native to the southern United States and northeastern Mexico, this species has been identified by IUCN as among the world's 100 worst invasive species. It is one of the most popular exotic pet turtles widely available in aquarium stores across India. When released into waterbodies, it competes with native turtles for food and basking sites, disrupts aquatic ecosystems, and transmits diseases to native wildlife. Recorded across nine Indian states, individuals have been documented aggressively preying on hatchlings, sub-adults, and adults of native species, including the Indian Roofed Turtle and Indian Flap-shell Turtle.^{45,46}
- **Green Iguana (*Iguana iguana*):** Native to Central and South America, this large, arboreal lizard has already established invasive populations in the Caribbean, Florida, Hawaii, and several Pacific islands. Popular in the exotic pet trade in India, this species poses a significant invasion risk, as habitat suitability modelling indicates it could acclimatize to a wide range of Indian habitats, including the Western Ghats, Eastern Himalayas, and coastal regions.^{47,48}



- **Alligator Gar (*Atractosteus spatula*):** A large, predatory fish, native to North America, and commonly kept in aquariums as a juvenile, but they can grow up to 10 feet in length and weigh up to 150 kilograms. They are frequently released or escape into local water bodies when they outgrow captivity. The species has been recorded in Kashmir's Dal Lake, the Ganga River system, and multiple cities including Pune, Mumbai, Kolkata, and across Odisha, Kerala, Telangana, and Andhra Pradesh. Alligator gars feed on any prey they can swallow whole, including native fish, waterfowl, and other aquatic wildlife, and have no natural predators in India.^{49,50}
- **Goldfish (*Carassius auratus*):** Originally from East Asia, this ubiquitous aquarium fish has caused significant ecological damage in peninsular India, particularly in southern states and the Western Ghats. Its benthic foraging behaviour uproots aquatic vegetation, increases water turbidity, and releases nutrients that promote harmful algal blooms. The species preys on eggs, larvae, and adult native fish and can hybridize with other carp species, threatening the genetic integrity of native aquatic biodiversity.⁵¹
- **Three-spot Cichlid (*Amphilophus trimaculatum*):** Marketed in the aquarium trade as "Flowerhorn" for their purported Feng shui value, these hybrid of South American cichlids are highly predacious and capable of outcompeting and devouring smaller fish species across the habitats they colonize.⁵² Although releases of three-spot cichlids into the wild are documented, their distribution has not been comprehensively mapped.
- **Loricariid Catfishes (*Pterygoplichthys spp. and Hypostomus plecostomus*):** Commonly sold in aquariums across the country as algae-cleaners under the common names "pleco" or "suckermouth catfish," these South American armoured catfishes have established invasive populations in multiple Indian river systems. CEBPOL and NBA have identified *Pterygoplichthys* species (*P. pardalis*, *P. multiradiatus*, *P. anisitsi*, and *P. disjunctivus*) among India's IAS. Recorded across Kerala and Tamil Nadu river systems, they damage riverbanks through burrowing, disrupt native bottom-dwelling fish habitats, and have caused significant economic losses to fisherfolk, particularly in the Cauvery and Vaigai river basins. A closely related species, *Hypostomus plecostomus*, has also been confirmed in the Ganga River at Varanasi, with sightings since 2010 across Uttar Pradesh, Bihar, West Bengal, Tamil Nadu, Andhra Pradesh, and Assam.^{53,54}

2.3 Strain on institutions and infrastructure through post-seizure management

Unlike indigenous fauna that can be rehabilitated and released in native habitat, seized exotic species must be managed through alternative pathways to prevent the ecological disruptions documented in the previous section. The diversion of resources towards post-seizure management of exotic species inevitably pulls capacity away from national conservation priorities such as habitat protection and native species recovery. Authorities involved, including state forest departments, border guarding agencies, the Wildlife Crime Control Bureau (WCCB), and zoo's bear heavy operational burdens and financial costs for animal care, facility maintenance, and staff training. Non-governmental organisations (NGOs) and rescue centres play a critical complementary role by offering emergency medical care, species-specific handling expertise, and temporary housing for seized animals. However, such involvement is typically ad hoc, and dependent on the financial and operational capacity of individual organisations.



Three main post-seizure management options exist for exotic wildlife: repatriation, long-term captivity, or humane euthanasia.

- **Repatriation:** Returning seized live exotic animals to their country of origin or natural habitat is often viewed as most ethically sound option. In practice, however, it is rarely straightforward. Repatriation decisions often involve overlapping legal, ecological, welfare, and biosecurity considerations, requiring collective efforts from multiple authorities and civil-society organizations across different countries, alongside compliance with international treaties and transport and quarantine standards. Repatriation is viable only when the country of origin of the consignment (not necessarily where the animal is from) is known, and that country is willing to accept the species. While this may be feasible with airport seizures, where animals can be sent back on the next available flight, seizures occurring along land borders present greater challenges. In these cases, animals have been smuggled across multiple geographic boundaries, making it difficult to determine which country to repatriate them to. Even when repatriated, exotic wildlife are typically placed in the receiving country's zoos, rescue centres, or sanctuaries, shifting the long-term burden of care from one nation to another, without resolving the fundamental challenges of lifetime captive management. Further, return to the wild is rarely feasible. In most cases, it is extremely difficult to establish the geographic origin of animals, as they may have been moved through multiple supply chains or held in captivity for extended periods. They may have also been exposed to pathogens during captivity and transport, posing biosecurity risks to wild populations. Many species are captive bred with no known geographic origin, lacking the genetic compatibility and behavioural adaptations necessary for wild release. Hybridized, injured, or long-captive individuals are entirely unsuitable for release. Successful wild reintroduction requires ensuring genetic compatibility with wild populations, comprehensive health screening, and immense financial resources — conditions that are usually not met for exotic pets.
- **Long-term captivity:** Seized consignments who cannot be repatriated are typically transferred to temporary holding facilities or designated zoos for immediate care. While this addresses urgent medical needs, it creates challenges for sustained management. Lifetime care of seized species requires specialized facilities equipped to meet the husbandry needs of exotic wildlife and increases the administrative and operational burden on national institutions such as zoos and rescue centres, many of which are already under-resourced and lack expertise in non-native taxa. The institutional implications of long-term captivity are discussed further in Sections 2.3.1 and 2.3.2.
 - **Humane euthanasia:** This remains last resort where neither repatriation nor long-term captivity is viable. This option carries ethical and operational complexities, including the need for species-specific protocols for drug administration, trained veterinary professionals to carry out procedures, and safe disposal of carcasses in compliance with health and hazardous waste standards. The

absence of standardized guidelines specific to seized exotic wildlife complicates decision-making, resulting in inconsistent application of this option across different states and facilities.



2.3.1 Infrastructure in hotspot states

The challenges of providing adequate facilities for seized exotic wildlife have been particularly acute in India's Northeast, which has been a transit point in illegal wildlife trade. The porous international borders with Myanmar and Bangladesh have facilitated large-scale smuggling operations, with states such as Mizoram, Manipur, and Assam serving as key transit routes for exotic wildlife destined for domestic and international markets.⁵⁵ This has resulted in unprecedented volumes of seizures, with states facing difficulties in accommodating seized exotic species and in meeting their specialized husbandry needs. For instance, Lady Hydari Park Zoo in Shillong, Meghalaya, has had to turn away seized exotic wildlife on multiple occasions, as the zoo only had space to house its own animal collection or at most provide temporary shelter for rescued native wildlife.⁵⁶

The scale of the challenge has been keenly evident in Mizoram's Champhai district, located near the Myanmar border, which emerged as a significant hub for exotic wildlife smuggling. Between February 2021 and September 2022, enforcement agencies seized 582 wild animals from 25 species. In May 2022, the state recorded its largest single seizure: 468 animals, including 442 lizards, 11 snakes, four sloths, four pottos, four tortoises, two beavers, and one wildcat. The volume of seizures placed considerable pressure on Aizawl Zoological Park, which received 910 exotic animals between July 2019 and September 2022. Of these, only 274 survived until December 2022. Deaths included meerkats, a three-toed sloth, capybaras, red-faced spider monkeys, indri lemurs, and several species of birds.⁵⁷ The zoo lacked separate enclosures for exotic animals and was forced to house them in available space, with mortality attributed to lack of space, stress, and climatic unsuitability. By March 2023, the zoo recorded the deaths of 10 seized animals and birds, including seven crocodile hatchlings, two hornbills, and one leopard tortoise.⁵⁷

Considering the scale of exotic wildlife trafficking, state authorities have highlighted the need for dedicated rescue facilities and specialized training for the scientific upkeep of exotic species. In response, the Central Zoo Authority's technical committee recommended approval for new rescue centres in Mizoram, Tripura, and Meghalaya in mid-April 2023, with plans for separate enclosures for exotic animals, specialized quarantine cells, and enhanced veterinary facilities.



2.3.2 Staffing and technical expertise

Since zoos serve as the primary institutions responsible for managing seized exotic species, their capacity to provide adequate care becomes critical. Smuggled exotic animals often arrive in severely compromised conditions, requiring specialized veterinary care, monitoring for stress, and carefully designed diet and quarantine regimes. Yet, few zoos have trained biologists, wildlife nutritionists, and veterinarians with expertise in exotic taxa.

Of the 157 zoos operating in the country at the time of the 2022–23 reporting period, only 74 uploaded their annual reports. Data from these reports, compiled by the Central Zoo Authority (CZA), revealed significant gaps in compliance with mandatory staffing requirements: 45 zoos had not filled the four mandatory posts of



veterinarian, education officer, curator, and biologist; 22 zoos employed only a single veterinarian; eight zoos operated without a veterinarian altogether; 27 zoos either lacked the mandatory health advisory committee or had not convened one in more than a decade; and only 15 zoos had active research programmes with published outputs.⁵⁸

The combination of understaffing, limited technical specialization in exotic taxa, and resource constraints has created challenges for many Indian zoos in addressing the care of rescued exotic wildlife. Significant investment in infrastructure, training, and capacity building is necessary to manage exotic animals more effectively.

2.4 Animal welfare concerns

Trade and ownership of exotic pets raises persistent and serious welfare concerns. From capture to captivity, exotic pets are routinely denied the internationally recognised "Five Freedoms" of animal welfare: freedom from hunger and thirst, freedom from discomfort, freedom from pain and injury, freedom from fear and distress, and freedom to express natural behaviours.⁵⁹

In source habitats, cruel methods are used to capture species to supply the exotic pet trade. African grey parrots, commonly observed as exotic pets in Indian households, are extracted as chicks from tree nests or trapped using adhesive glues painted onto branches. In some operations, entire nest trees are felled to access young, destroying future breeding sites and decimating wild populations.^{60,61} Mortality rates for wild-caught birds range from 30% to 90% before they even reach export markets.⁶² Animals smuggled into India are crammed into suitcases, plastic bottles, and concealed compartments, often sedated and deprived of food and water for days.^{63,64} In February 2023, six capuchin monkeys arriving at Bengaluru airport from Bangkok were found dead. In January 2026, another Bengaluru seizure revealed seven of eight albino sugar gliders, four of 11 iguanas, and one of two squirrel monkeys had died in transit.^{65,66} Conservative estimates suggest three animals die for every one successfully traded in the live exotic pet trade.⁶⁷

In India, there are no defined standards for exotic pet care in captivity. Many require precise environmental regulation and specialized diets that are difficult to replicate outside

their native habitats. As a result, exotic pets often experience chronic physical and psychological distress due to inappropriate housing, inadequate nutrition, social isolation, and lack of veterinary care. Welfare outcomes rely heavily on the awareness and capacity of owners or institutions. This leaves thousands of animals vulnerable to neglect, abandonment, or premature death. Even for species that survive long-term captivity, quality of life is often compromised.



2.4.1 In private ownership

Unlike domesticated species such as dogs and cats, most exotic pets are fundamentally unsuited to a life in captivity. As wild animals, they have evolved precise adaptations to their native ecosystems that are difficult or near impossible to replicate in captivity. Reptiles in captivity require carefully controlled temperature gradients for thermoregulation which includes a basking area, specialized ultraviolet lighting, controlled humidity levels, and appropriate species-specific substrate. Birds need spacious enclosures, perches that mimic natural roosting sites and nesting opportunities, and carefully balanced diets that provide minerals and micronutrients typically obtained from wild foods. Beyond physical habitat requirements, exotic pets also need extensive enrichment including foraging opportunities, species-appropriate play structures, sensory stimulation, and social interaction to prevent the chronic stress and boredom that captivity imposes. Many species, including those observed in Indian markets such as parrots, meerkats, and marmosets, are highly social animals who form complex flock or group structures in the wild. Their prolonged isolation through captivity leads to severe psychological distress and stereotypic behaviours such as feather plucking and self-harm.^{68,69}

Captive requirements vary dramatically even within taxonomic groups, such as desert versus tropical reptiles or aquatic versus terrestrial turtles. Owners often underestimate or are entirely unaware of the multidimensional biological and ecological needs of individual species, leading to neglect, disease, and premature mortality.⁷⁰ Animals are also bought impulsively

through informal trade channels or online marketplaces, where novelty trumps responsible care. The result is a pattern of unnecessary suffering for animals, and in many cases the owners who care for them. One illustrative case involved two juvenile red-eared sliders sold with a “turtle aquarium”, marketed as a complete habitat. The enclosure provided less than 7.5 litres of water, falling dramatically short of the minimum requirement of 76 litres per inch of body length. Within weeks, the turtles developed severe nutritional deficiencies, ultimately leading to blindness and death within 45 days.⁷¹

Compounding these challenges, many exotic species live 20 to 80 years in captivity.⁷² As owners’ circumstances change with relocation, financial burden, or inability to manage increasingly difficult behaviours, animals are frequently abandoned or rehomed between multiple owners. Rehomed animals face extreme stress, resulting in greater risk of pathogen shedding and zoonotic transmission (as described in Section 2.1). Released animals face starvation, predation, or injury, dying slowly. More concerning, those who do survive may become invasive (as described in Section 2.2). For enforcement agencies and rescue facilities, each abandonment adds to an already unsustainable burden (as described in Section 2.3).



Beyond physical habitat requirements, exotic pets also need extensive enrichment including foraging opportunities, species-appropriate play structures, sensory stimulation, and social interaction to prevent the chronic stress and boredom that captivity imposes.

Non human primates a welfare and public safety concern

The keeping of non-human primates, which are increasingly trafficked into India, presents even more profound welfare challenges. Conservationists have raised concern around the alarming influx of gibbons into the country, primarily by air from Thailand and Malaysia.⁷³ In November 2024, officials uncovered a juvenile orangutan along with exotic reptiles in a residential flat in Dombivli, Maharashtra, all intended for further trafficking.⁷⁴

While primates may be desired in the exotic pet trade for their human-like qualities, these sentient animals have complex cognitive and social needs that are impossible to meet in household settings, especially for apes such as gibbons and orangutans. Tragically, young primates are cruelly and forcefully separated from their mothers within days of birth to meet demand for pet keeping, with most mothers killed in the process.⁷⁵ The trauma of trade and early social deprivation increases the likelihood of unpredictable or dangerous behaviour in captivity. Behavioural challenges intensify as individuals reach sexual maturity, typically between 3 to 7 years depending on species. Hormonal changes trigger increased aggression, territorial behaviour, and unpredictable outbursts that overwhelm owners, who are often unprepared for the transformation from manageable juvenile to sexually mature adult.⁷⁶ This can be witnessed in the cases of attacks by pet chimpanzees and macaques in the United States, where animals have caused serious injury or death to their owners.⁷⁷ Throughout their lives, confinement in small cages and inadequate nutrition also increases psychological distress and self-harming. Stress from captivity can also impair immune function, increasing their vulnerability to diseases that are dangerous for both the animals and their human handlers.

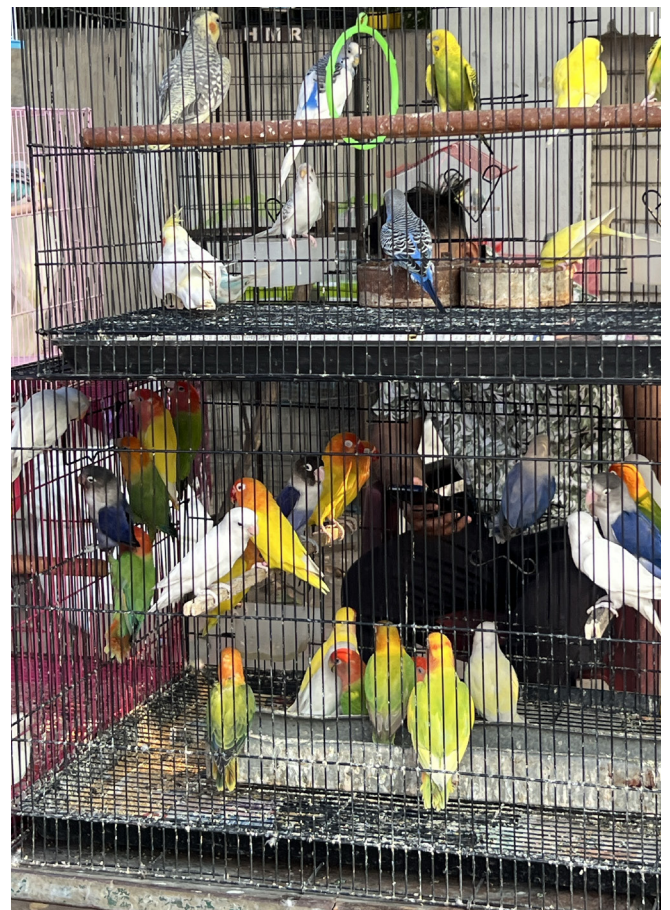
Between 1990 and 2013, Humane World for Animals noted 275 human injuries from non-human primates in private ownership in the United States, highlighting the inherent danger in keeping such sentient species in private homes. Many countries—including Belgium, the Netherlands, Canada, Australia, and 24 U.S. states—have already banned or restricted private primate ownership due to welfare and public safety concerns.⁷⁸ There is a pressing need to prohibit the private ownership of nonhuman primates in India as well.

2.4.2 Gaps in veterinary care

The welfare risks of exotic pets are compounded by the lack of specialized veterinary capacity in the country. International surveys of veterinarians highlight consistent difficulties in diagnosing and treating exotic pets, including limited treatment options, challenges in handling, and poor owner compliance. Many species of turtles, parrots, and other exotic birds, who are also commonly kept in India, are among the most presented, often with nutritional, respiratory, or digestive disorders.⁷⁹ Veterinarians regularly encounter turtles and tortoises suffering from anorexia, hypocalcaemia, pneumonia, and injuries from household accidents. Nutritional deficiencies observed in birds also commonly result in metabolic bone disease, organ failure, and premature death.^{80, 81}

In India, the majority of veterinary education is oriented towards livestock production, with limited exposure to wildlife, especially exotic wildlife, medicine.⁸² Practitioners wanting to specialize must either seek short-term training abroad or pursue niche courses within a handful of institutions — options that remain inaccessible for most. Veterinary clinics with capacity to treat exotic species are concentrated almost exclusively in Tier I cities, leaving exotic pet owners in Tier II and III cities with no access to specialized care. This geographic disparity is particularly problematic given that exotic pet keeping is pervasive across urban and semi-urban India, yet the necessary veterinary capacity remains localized to metropolitan centres. Owners in smaller cities often rely on veterinary practitioners trained primarily for dogs and cats, who may lack diagnostic facilities and expertise to treat exotic species. In many forest divisions, livestock veterinarians are pressed into service during wildlife emergencies, despite lacking species-specific training.⁸³

In light of the zoonotic pandemics exposing critical vulnerabilities in wildlife health management, inadequate veterinary preparedness is not only a welfare issue but also a biosecurity concern that reinforces the public health risks outlined in Section 2.1.



3. Legal framework governing exotic pet trade in India, and gaps therein

Summary: This chapter maps India's multi-layered regime governing exotic species — anchored in the WLPA and CITES, with intersecting roles for DGFT/Customs, DAHD-AQCS, AWBI, and state authorities. It explains the 2022 WLPA amendments (Schedule IV/Chapter VB) and subsequent rules, alongside import and trade in CITES and non-CITES listed species. It then surfaces persistent gaps including quarantine and One Health linkages, low post-import surveillance, limited tools for invasives, and loopholes around petting zoos and online markets. A table consolidates the most critical gaps across disease risks, invasive species, post-seizure management, and animal welfare to guide targeted reforms.

The Wildlife (Protection) Act, 1972 (WLPA) forms the backbone of the country's legislative efforts to protect species and their habitats. Complementing this, India is also a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which ensures that international trade in wildlife specimens does not threaten their survival. As a signatory, India carries a clear responsibility to prevent the exploitation and illegal trade of all listed species. Other relevant legislation intersecting with the trade of exotic species includes the Customs Act, 1962; Foreign Trade (Development and Regulation) Act, 1992 and its accompanying Foreign Trade Policy; the Livestock Importation Act, 1898; and the Prevention of Cruelty to

Animals Act, 1960. Together, these instruments create a multi-layered regulatory regime, implemented through different ministries and agencies, which aims to better regulate international trade and domestic enforcement on the import, export, and possession of exotic species, as detailed in Table 1.⁸⁴

In practice, however, enforcement faces various hurdles, as outlined in the previous chapter, that are magnified by variable policy application, fragmented jurisdictions, and resource constraints. To understand how these challenges manifest, it is necessary to examine both the statutory provisions governing exotic pets and the policy and implementation gaps that weaken their effectiveness.



Table 1: Key institutional roles and regulatory instruments in the governance of exotic pet species

S No.	Executive Authorities	Implementing Agency/ Department	Roles and Responsibilities	Primary Legal Instruments
1	Ministry of Environment, Forest and Climate Change (MoEFCC)	Wildlife Division / Forest Services	Overall wildlife protection policy, enforcement of WLPA, CITES compliance	WLPA; Biological Diversity Act, 2002; CITES
2		Wildlife Crime Control Bureau (WCCB)	Investigates and controls organized wildlife crime along with enforcement support	WLPA
3		Management Authority (designated nodal officers)	Issues permits and licenses under CITES, evaluates trade impact, ensures compliance	WLPA; CITES
4		Scientific Authority (designated research or autonomous institutes)	Provides scientific assessments on species conservation, trade impact, and sustainable management	WLPA; CITES
5	Ministry of Commerce and Industry (MoCI)	Directorate General of Foreign Trade (DGFT)	Issues import/export licenses, regulates foreign trade of restricted species	Foreign Trade (Development and Regulation) Act, 1992; Foreign Trade Policy
6		Central Board of Indirect Taxes and Customs	Enforces import/export regulations at ports, inspects shipments, seizes illegal wildlife shipments	Customs Act, 1962; WLPA
7	Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD)	Department of Animal Husbandry & Dairying (DADH), Animal Quarantine and Certification Service (ACQS)	Implements quarantine and animal health certification for imported live animals	Livestock Importation Act, 1898; Notification for Import of 'livestock', SOPs for Import of Live Animals
8		Animal Welfare Board of India (AWBI)	Oversees and enforces animal welfare standards	Prevention of Cruelty to Animals Act, 1960; Pet Shop Rules, 2018
9	State Governments	Chief Wildlife Wardens / State Forest Departments	Issues NOCs for import/export, regulates possession, breeding, and trade within states	WLPA
		State Police Departments	Investigate complaints of cruelty, poor upkeep, and abuse of animals	Prevention of Cruelty to Animals Act, 1960; WLPA; Bharatiya Nyaya Sanhita, 2023 (BNS) [Sections 291 & 325]

3.1 Regulation of trade in cites-listed exotic species

In 2022 the WLPA was amended to introduce chapter VB, a landmark **reform regulating the possession and trade of exotic species listed in Appendices I, II, and III of CITES through their inclusion in Schedule IV of the WLPA**. The Amendment filled a longstanding grey zone, creating clearer mechanisms to protect exotic species and regulate

their trade. The Amendment also empowered forest officers to act against violations related to exotic species trade, authority that was previously limited to enforcement agencies empowered under the Customs Act, 1962. Other key features of the Amendment are included in Table 2.

Table 2: Key provisions regarding exotic species introduced by the WLPA (Amendment) Act, 2022

S No.	Provision/Section	Key Features
1	Chapter VB – Regulation of International Trade in Endangered Species	<ul style="list-style-type: none"> - Dedicated chapter aligning WLPA with CITES obligations. - Empowers central government to regulate or prohibit import/export of scheduled exotic species.
2	Section 49H – International Trade in Scheduled Specimens	<ul style="list-style-type: none"> - Prohibits trade of scheduled species except as provided under Chapter VB. - Requires clearance only at designated ports of entry/exit.
3	Section 49I – Conditions for Export of Scheduled Species	<ul style="list-style-type: none"> - Establishes export permit requirements for species in Schedule IV Appendices I-III. - Requires approval from the Management Authority with recommendation from the Scientific Authority for sustainability.
4	Section 49J – Conditions for Import of Scheduled Species	<ul style="list-style-type: none"> - Stipulates import permit conditions, including export/re-export certificate. - Restricts import of Appendix I species for primarily commercial breeding purposes and if detrimental to species survival. - Requires consideration of suitability in housing and welfare of specimen with recipient.
5	Section 49M – Possession, transfer, and breeding of living scheduled animal species.	<ul style="list-style-type: none"> - Ensures mandatory declaration and registration of Schedule IV animals. - Outlines protocol applicable for imports, breeding, births, transfers, and deaths of Schedule IV species.
6	Section 49N & 49-O – Licence for Breeders of Appendix I species	<ul style="list-style-type: none"> - Provides stipulations that no person can breed Schedule IV Appendix I species without a licence from the Chief Wildlife Warden. - Specifies that breeders and possessors must maintain detailed records of each exotic specimen. - Details inspection by authorities.
7	Section 49Q – Scheduled Specimens as Government Property	<ul style="list-style-type: none"> - Specifies that confiscated specimens become government property. - Specifies that live specimens may be returned to exporting country or placed in recognized institutions.
8	Section 49R – Application of the Act with respect to Schedules I, II and IV	<ul style="list-style-type: none"> - Notes stricter rules for species falling under both Schedule IV and Schedule I/II: penalties under Schedule I/II apply. - Notes that sections 49M, 49N, and 49O do not apply in such cases
9	Section 50 – Powers of Search and Arrest	<ul style="list-style-type: none"> - Authorises forest officers, customs, police, and coast guard empowered to seize illegal exotic species.
10	Section 62A – Regulation of ‘Invasive Alien Species’	<ul style="list-style-type: none"> - Central Government authorized to notify species as invasive, and regulate or prohibit their possession, breeding, or trade, and authorise their destruction.
11	Schedule IV	<ul style="list-style-type: none"> - Introduces a separate schedule specifically for CITES-listed species. - Enables stricter compliance with CITES appendices.

Following the amendment, the Ministry of Environment, Forest and Climate Change (MoEFCC) issued key rules and notifications to operationalize the new framework, including:

- a. **The Wild Life (Protection) International Trade of Specimen Rules, 2023:**⁸⁵ Provides procedures for the import and export of CITES-listed exotic species. Permits are coordinated through the authorised Management and Scientific authorities, with authorisation granted by the Directorate General of Foreign Trade (DGFT) and the other countries involved.
- b. **The Breeders of Species Licence Rules, 2023:**⁸⁶ Establishes protocols for monitoring of captive breeding in Schedule IV species listed under

Appendix I. In line with CITES requirements, such facilities breeding and commercially trading must be registered with the CITES Secretariat.

- c. **Living Animal Species (Reporting and Registration) Rules, 2024:**⁸⁷ Lays down procedures for registering ownership and obtaining permission for trade or transfer of Schedule IV exotic species. Individuals or entities in possession of CITES-listed (WLP Schedule IV) exotic species are required to report their stock to the authorities and obtain appropriate documentation. To support compliance, the government launched an online registration system via the PARIVESH 2.0 portal, to ease the registration, breeding, and transfer of Schedule IV exotic pets and enhance transparency and compliance in the management of those exotic species within the country.

Table 3: Key rules and notifications regulating exotic species introduced through the WLP (Amendment) Act, 2022

Sl.No	Rule/Notification	Key Features
1	Living Animal Species (Reporting & Registration) Rules, 2024.	<ul style="list-style-type: none"> - Ensures mandatory registration of CITES-listed live species (including numbers, gender, identifier) on PARIVESH 2.0. - Provided preliminary 6-month window for existing owners (till 28th August 2024). - Notes 30 days registration for new acquisitions. - Notes reporting of births within 7 days, transfers within 15 days, and deaths. - Stipulates inspection to ensure compliance.
2	Breeders of Species Licence Rules, 2023.	<ul style="list-style-type: none"> - Specifies protocols and paperwork for breeding of Schedule IV Appendix I species. - Requires licence application (₹25,000 licence fee) within 90 days.
3	Wild Life (Protection) International Trade in Specimens Rules, 2023	<ul style="list-style-type: none"> - Regulates import/export of exotic species listed under CITES. - Mandates prior permissions requirement from designated Management and Scientific authorities. - Enables monitoring of cross-border movement of exotic fauna.
4	Scheduled Specimen (Conditions and Procedure for exemption), Rules, 2024. ⁸⁸ (Read with sub-section (2) of Section 49 H)	<ul style="list-style-type: none"> - Provides framework for exemptions under Section 49H, including for possession, transport, or trade of scheduled specimens. - Specifies that Appendix I species bred in captivity for commercial purposes are to be treated as Appendix II specimens.
5	Notification of Ports of Entry and Exit for Chapter VB. ⁸⁹	<ul style="list-style-type: none"> - Designates 12 ports including Chennai, Delhi, Mumbai, Kolkata, Kochi, among for legal import/export of scheduled specimens.

3.2. Regulation of trade in non-CITES-listed exotic species

For exotic species not listed under CITES, import and export is primarily governed through the Foreign Trade (Development and Regulation) Act, 1992 (FTDRA), implemented through the national Foreign Trade Policy (FTP). Under this regime, live mammals, birds, and reptiles are classified as restricted items. Importers must obtain a licence from the DGFT supported by a No Objection Certificate (NOC) from the Chief Wildlife Warden (CWLW) of the state of import. Importers must also be registered and have an Importer-Exporter Code (IEC)

issued by the DGFT.

While the DGFT sets the licencing conditions, enforcement at ports is carried out under the Customs Act, 1962. Customs authorities are empowered to inspect shipments, verify documentation, and seize wildlife specimens who do not comply with licence or permit requirements, even in the absence of CITES protection. Together, the FTDRA and Customs Act form a legal regime that controls the cross-border movement of non-CITES-listed exotic species.

Domestic trade in non-CITES-listed exotic pets may be regulated under the Pet Shop Rules, 2018,⁹⁰ issued under the Prevention of Cruelty to Animals Act, 1960 (PCA).

While these rules prescribe basic standards for housing, health, and documentation in the operation of pet shops, beyond these provisions, there is no comprehensive regulatory framework to monitor the origins, supply chains, or broader impacts of non-CITES exotic species in India.

3.3 Regulation on disease management associated with exotic pets

While India has some legislative quarantine and screening frameworks in the import and sale of exotic wildlife, these measures may be insufficient in practice. Trafficking, by its very nature, seeks to circumvent the usual regulatory processes and operates outside formal biosecurity systems.

This section of the report will elaborate further on the current import regulations and post-import surveillance mechanisms with respect to exotic pets and explore the interconnectedness with One Health systems.

3.3.1. Import regulations

The Livestock Importation Act, 1898, allows the Central Government to classify livestock and restrict their entry, based on the risk to introduce infectious diseases. During importation, few exotic wildlife species, including some birds, qualify for classification as “livestock” under this regime, and those that do are subject to stringent health protocols.

Operationally, the **Animal Quarantine & Certification Service (ACQS)** under the **Department of Animal Husbandry and Dairying (DAHD)** aims to prevent the ingress of exotic diseases through the import of live animals and animal products. It mandates quarantine and screening procedures for live animals, including exotic species, at ports of entry. Currently, under ACQS protocol, live animals are allowed to be imported only through seaports or airports at Delhi, Mumbai, Chennai, Kolkata, Hyderabad, Bengaluru, and Kochi.⁹¹

In 2020, **DAHD issued Standard Operating Procedures (SOP) for Import of Live Animals into India** to improve regulatory clarity and streamline the import process. ⁹² Importers must:

- a. Provide advance notice (typically seven days) to facilitate quarantine arrangements.
- b. Submit all required documents including valid license and authenticated veterinary certificate issued by the veterinarian of the exporting country.
- c. Obtain an NOC from ACQS or the regional officer before transporting animals. Airlines are prohibited from transporting them without this clearance. While AQCS focuses solely on veterinary health compliance, customs and wildlife authorities must also be notified in advance, and any non-compliant or undocumented animals are liable for immediate deportation without being allowed to leave the port.

On arrival, animals undergo physical inspection, quarantine for 30 days, and disease testing through government-approved laboratories. Special care is taken during the quarantine period, including daily monitoring and sample collection according to disease-specific protocols. Animals are released only after all tests return negative and a final NOC certificate is issued by the designated veterinarian. During quarantine, if the animals are found positive for infectious diseases, they must be deported or destroyed, with the recipient bearing costs. Table 4 illustrates the quarantine protocols for species, as detailed by the SOP.

Table 4: Quarantine protocols for live imported exotic animals

Animal Category	Quarantine Duration	Location	Diseases Screened	Additional Requirements
Non-Human Primates	30 days	Central Zoo Authority approved zoos or pre-approved in-house quarantine	Testing for polio, simian immunodeficiency virus, and rabies, along with clinical observation of infectious disease emergence.	Daily veterinary monitoring; animal must have been in continuous captivity for a year prior to import.
Captive Birds	30 days	AQCS quarantine stations	Laboratory testing and clinical observation for avian influenza, Newcastle disease, psittacosis-ornithosis, mycoplasmosis, among others.	Country of export is free from Avian influenza; hatchery has not reported specified disease outbreaks in a year.
Reptiles (Crocodiles, Gavials, Monitor Lizards, Snakes, Turtles, & Tortoises)	30 days	AQCS quarantine stations	Laboratory testing and clinical observation for salmonellosis, rhinitis, pneumonia, egg binding, metabolic bone disease, among others.	NOC is issued if pet is found free from infectious diseases

The DADH-issued Sanitary Protocol for Import of Ornamental Fishes into India prescribes biosecurity requirements for the import of live aquarium species.

⁹³ The protocol restricts imports to approved species lists, mandates health certification from the competent authority of the exporting country confirming disease-free status and requires quarantine at designated facilities upon arrival for species-specific durations prior to release. It also specifies packaging and documentation requirements for exotic ornamental fish and identifies penalties in cases of non-compliance or ecological risks arising from accidental or intentional release.

Notwithstanding these procedural safeguards, their effectiveness is contingent upon formal import declaration and inter-agency coordination. They do not extend to species falling outside the statutory definition of “livestock”, or passenger baggage trafficking, leaving these regulatory pathways unaddressed.

3.3.2. Post-import health surveillance

While ACQS enforces quarantine and health screening protocols at the time of import, a significant surveillance vacuum remains once exotic species are cleared for release. The Living Scheduled Animal Specimens (Reporting and Registration) Rules, 2023, attempts to address this by requiring health checks for registered Schedule IV species. Owners of Schedule IV exotic animals are mandated to conduct a veterinary check-up with the veterinarian certified under the Veterinary Council of India (VCI) for their animal(s) at least once every six months. Records are to be maintained, detailing disease history, immunisation, anti-parasitic treatment if any, and findings from physical examination.

In practice, implementation is a challenge. The rules do not prescribe species-specific standards for health checks, mandatory immunizations, or routine screening of zoonotic pathogens. Equally, there is no mandatory reporting framework for veterinarians to flag suspected zoonotic outbreaks.

The **Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009**, empowers the government to prevent, control and eradicate infectious or contagious diseases affecting animals, to prevent spread across states, and to meet India’s international obligations for import/export of animals and animal products.⁹⁴ It mandates reporting of scheduled diseases by owners or persons in charge of animals and authorises veterinary officers to isolate or destroy animals infected with notifiable diseases, which include leptospirosis and avian chlamydiosis, which are carried by exotic pet species. However, the Act primarily focuses on livestock and poultry and can only be extended to exotic wildlife if animal or bird species are officially notified.

The PCA, 1960, offers provisions such as Section 11(1)(h) that penalise owners who “wilfully permit any animal, to go at large in any street while the animal is affected with contagious or infectious disease”. Yet, these provisions were drafted with domestic species in mind and are outdated. Penalties remain nominal, failing to serve as a deterrent to responsible exotic wildlife ownership.

3.3.3. One health and zoonotic risk governance

Recognizing the global threat of zoonotic diseases at the wildlife-livestock-human interface, the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the World Organisation for Animal Health (WOAH) have collectively endorsed the One Health approach as central for pandemic prevention. In alignment, India launched the **National One Health Mission (NOHM)**, led by the **National Centre for Disease Control (NCDC)**, to foster convergence across human, animal, and environmental health. The mission aims to strengthen disease surveillance, early warning, outbreak response, and research capacity, while promoting inter-sectoral coordination between the Ministry of Health & Family Welfare (MoHFW), the DAHD, the MoEFCC, District Authorities, and others.

While the NOHM is a significant step towards integrated surveillance, its focus remains largely on livestock and domesticated animals, with limited attention to wildlife. Crucially, risks from wildlife trade — particularly the exotic pet trade, which operates directly at the human-animal-wildlife interface — are not adequately addressed.

New developments indicate a shift. The draft **National Wildlife Health Policy (NWHP), anchored by the CZA**, proposes integrated disease surveillance across terrestrial, marine, and avian ecosystems; satellite diagnostic laboratories near wildlife-rich regions; and a centralized National Wildlife Health Database and Wildlife Health Information System for real-time outbreak detection, data-sharing, and cross-sectoral coordination.⁹⁵

In parallel, NCDC, with WHO-India, has published **Technical Guidelines on Zoonotic Disease Prevention, Preparedness and Response**,⁹⁶ which acknowledge the role of wildlife trade in disease emergence and spillover. The guidelines also promote sentinel surveillance, integrated diagnostics, cross-sector data sharing, and joint capacity-building. For exotic pet ownership, this translates to equipping private veterinarians and wildlife authorities with clear protocols for notifying and investigating suspected zoonotic infections, ensuring rapid response and containment.



3.4. Regulations on invasive alien species

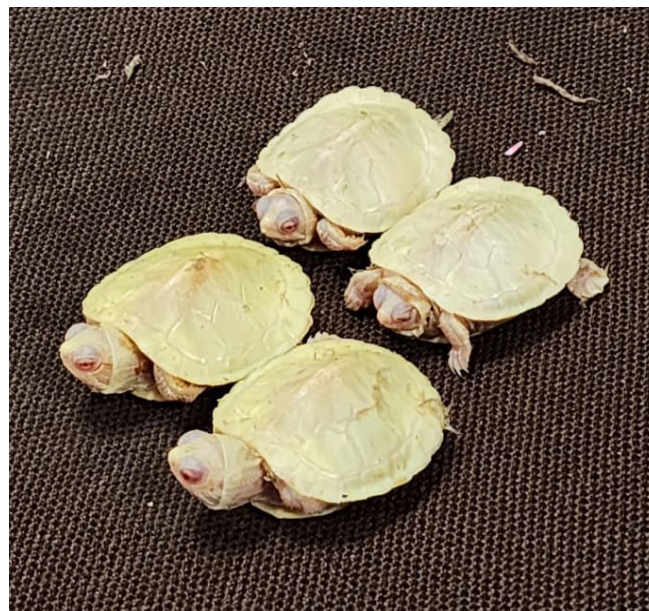
While India does have some legislative measures relevant to manage IAS, the provisions are ill-defined, fragmented, and often outdated. The WLPA, designed to protect India's native flora and fauna, traditionally did not cover exotic species. The Amendments, while having aligned the law with CITES, do not include measures and enforcement protocols to effectively manage species that have already entered the wild and pose an invasive threat.

The Biological Diversity Act, 2002 (BDA), stands central to biodiversity governance; however, its direct provisions concerning IAS are limited and ambiguous. The Act alludes to invasive species within the context of Access and Benefit Sharing (ABS) from biological resources, implying a focus on their commercial utilization rather than their ecological threat. Section 38 of the Act empowers the Central Government to notify species threatened with extinction, which could include native species imperilled by invasives, but the Act is not explicitly designed for direct IAS management. Similarly, Section 24 gives power to the State Biodiversity Board to restrict or prohibit any such activity which is detrimental to the objectives of conservation and sustainable use of biodiversity or equitable sharing of benefits arising out of such activity. It can be interpreted that introducing invasives to the environment would fall under the category of prohibited activity. The Act establishes crucial institutional bodies such as NBA and State Biodiversity Boards (SBBs). These bodies are instrumental in biodiversity governance; however, their core mandate is largely centred on conservation, sustainable use, and ABS. Managing IAS is not explicitly defined as a primary function.

The WLPA under Section 62-A states for "Regulation or prohibition of import, etc., of invasive alien species. (1) The Central Government may, by notification, regulate or prohibit the import, trade, possession or proliferation of invasive alien species which pose a threat to the wildlife or habitat in India. (2) The Central Government may authorize the Director or any other officer to seize and dispose of, including through destruction, the species referred to in the notification issued under sub-section (1)." This means invasive fauna fall under the broad concern of the WLPA, although the Act contains no detailed control measures for invasives. The provision allows room for the central government to legislate on the regulation, prohibition of import, trade, possession or proliferation of an invasive alien species and can be used to further a legislative action to fill the gap in regulation. There is scope for authorities to also operationalise Section 62 of the Act (Declaration of certain wild animals to be vermin) to manage invasive species. However, the WLPA has no targeted removal or management protocol yet.

The National Biodiversity Action Plan (NBAP),⁹⁷ drafted in 2008 and amended in 2014, a critical policy document, acknowledges IAS as a significant threat to biodiversity. It calls for measures for their prevention, control, and management, outlining strategic actions for various biodiversity challenges.

The Aquatic Exotics and Quarantine Guidelines prepared by the National Bureau of Fish Genetic Resources (NBFGR) provide a technical framework for evaluating the introduction of aquatic exotic organisms, incorporating invasive and disease risk



assessment, species categorisation, and post-entry surveillance standards.⁹⁸ Although primarily situated within fisheries governance, these guidelines are equally relevant to the import and trade of ornamental and other exotic aquatic pets. While not legally binding, they reflect expert consensus on the risks evidenced by ornamental fish trade and underscore the need for robust health protocols and structured IAS management mechanisms.

The Livestock Importation Act, 1898, allows the government to order destruction or return of imports that pose health risks. While it targets animal health and not ecosystems, exotic animals brought as livestock are subject to these rules, which helps control accidental introduction of invasive species.

The Customs Act, 1962, governs the import and export of goods and empowers customs officials to inspect, detain, and seize prohibited items. Customs authorities are capable of enforcing prohibitions on IAS if such species are declared "prohibited" under other specific laws or notifications.

Beyond fauna, India's IAS framework also addresses plant and pest invasions, though these provisions have limited applicability to the exotic pet trade itself. They may, however, be relevant to exotic invertebrates imported as live feed, including crickets, mealworms, and roaches, which pose their own critical invasion risks if released or escaped. The **Plant Quarantine (Regulation of Import into India) Order, 2003 (PQO)**, governs import of plants, seeds and related materials.⁹⁹ It requires import permits for all plant materials and designates specific quarantine stations for entry. It explicitly bans any live insects, microbial cultures, or biocontrol agents without a permit from the Plant Protection Adviser. In practice, all shipments of seeds, saplings or soil must be cleared through registered quarantine centres, and insect pests are treated as regulated articles. This prevents invasive insects or nematodes from entering unless authorized. The **Destructive Insects and Pests Act, 1914**, empowers the Centre to prohibit or regulate the import (or even interstate transport) of any insect, fungus or other pest injurious to crops. Section 3 allows notifications to ban specified insects or articles carrying them. Although primarily aimed at plant protection, its scope covers insect pests as well.

While the current national legislative framework acknowledges IAS as a biodiversity threat, it remains ill-equipped to address the pathways through which exotic pets enter and establish in Indian ecosystems. It is worthwhile to note that some states have also taken policy measures to consider the threat of invasive species, particularly exotic fish. Kerala amended its Inland Fisheries and Aquaculture Act in 2010 (subsequently amended in 2021) to subject aquaculture of non-domestic fish species to mandatory quarantine proceedings and quality checks under Section 8(3)(e).¹⁰⁰ More recently, the Khasi Hills Autonomous District Council in Meghalaya enacted the Khasi Hills District Fishery (Amendment) Act, 2023, with Section 13 empowering the Executive Committee to declare exotic fish as invasive species, and prohibit their culture, to protect endemic fish.¹⁰¹ In February 2026, the District Magistrate of East Khasi Hills issued a prohibitory order under Section 163 of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023, banning the transportation, storage, sale and distribution of fish illegally transported from Bangladesh, citing biosecurity and public health concerns.¹⁰²

However, critical gaps persist in managing invasive populations post-establishment and in holding pet owners liable for releases.



3.5 Regulations on post-seizure management

The post-seizure management of exotic wildlife presents challenges distinct from those associated with native species. To guide member states, **CITES outlines three management options for confiscated live specimens:** repatriation, long-term captivity, and euthanasia, to the source country/country of export.¹⁰³ The **IUCN Guidelines for the Placement of Confiscated Animals** also provides a framework and decision tree for these conditions.¹⁰⁴

3.5.1 Repatriation

While repatriation of confiscated CITES-listed animals to the country of export is to be considered, the return of the animal to the wild is not obligatory and is recommended only under certain conditions, with reference to IUCN guidelines.

In India, the import of exotic wildlife is strictly regulated through the WLPA, DGFT, and NOCs from ACQS. Since 2016, the Directorate General of Civil Aviation (DGCA) has prohibited airlines from transporting live animals into India without advance AQCS clearance. Non-compliant consignments are to be **immediately deported** back to their country of origin as a biosecurity measure.

In July 2025, the DGCA issued fresh guidelines on the **Deportation of Live Animals of Unbeknownst Imports**.¹⁰⁵ Airlines are now directly responsible for repatriation costs, including handling, documentation and in-transit welfare. They must obtain formal deportation instructions from AQCS, Customs, and other relevant authorities, to ensure compliance with International Air Transport Association (IATA) Live Animal Regulations (LAR) and submit a detailed deportation report within seven working days.¹⁰⁶ The CITES Guidelines for the Non-Air Transport of Live Specimens and the IATA LAR, which sets standards for containment, temperature control, documentation, and trained handlers, are critical for minimising stress and mortality during deportation.¹⁰⁷

Recent enforcement reflects these provisions. In May 2025, 37 exotic reptiles, including red-tailed bamboo pit vipers and spider-tailed horned vipers, were deported from Hyderabad Airport to Thailand after they were found without valid permits.¹⁰⁸ In March 2025, customs officials at Chennai Airport intercepted a consignment from Malaysia containing Eastern Grey Gibbons, marbled polecats, and a Sumatran civet — dead animals were incinerated and live ones deported.¹⁰⁹

Globally, the CITES Resolution Conf. 10.7 (Rev. CoP15) on the Disposal of Confiscated Live Specimens of Species Included in the Appendices provide the decision-making framework for repatriation, factoring in the conservation status of the species, the individual animal's health and welfare, disease transmission risks, and ecological consequences of reintroduction.¹⁰³



3.5.2 Long-term captivity

Seized consignments who cannot be repatriated are typically sent to temporary holding facilities or designated zoos for immediate care, under the aegis of the CZA, which derives its mandate from Section 38-C of the WLPA.

In line with the **National Zoo Policy, 1998**, Indian zoos are required to serve, among other functions, as rescue centres for orphaned and displaced wild animals, subject to the available housing and infrastructure. **The Placement and Management of Rescued Animals in Indian Zoos, 2025**, guidelines further clarify that “rescued animals” includes orphaned, seized, injured, and otherwise displaced wild fauna.¹¹⁰ As such, the policy extends to exotic pet animals, seized from illegal trade, abandoned by private owners, or recovered from unsuitable captive conditions. While these protocols address immediate medical needs of seized or rescued exotic pets, there is an absence of systemic framework to address long-term care of these animals.

With zoos and designated off-display rescue facilities coming under increased strain, due to the rising number of seizures and species that have long lifespans, it is acute to highlight the limitations of India’s current approach. There is also need for a more coherent strategy to address the long-term captive management of exotic pets, which often fall outside the scope of traditional zoo management systems.

3.5.3 Euthanasia

Euthanasia, specifically by government agencies for confiscated wild animals, is not generally used as a routine measure for humanitarian reasons. However, ethical, humane euthanasia practices may be considered the most humane option in cases where the animal’s health and welfare are severely compromised or continued captivity would cause prolonged suffering or pose biosecurity risks and release into their native habitats is not an option.

The IUCN Guidelines for the Placement of Confiscated Animals and the CITES Resolution Conf. 10.7 stress that humane killing must only be considered when all other options have been thoroughly assessed and deemed unviable.^{103,104} Euthanasia must be carried out in a manner that minimises pain, distress and suffering, following the best available veterinary practices, such as those outlined in the **American Veterinary Medical Association (AVMA) Guidelines on Euthanasia**.¹¹¹ The method used must ensure rapid loss of consciousness and death, and must be performed by a licensed veterinarian or trained professional.

In India, the Handbook for Veterinary Officers on Animal Welfare Laws recognises euthanasia as a humane option for relieving severe suffering, and these principles can be extended to exotic pet species, provided procedures are performed by qualified veterinarians.¹¹² However, no single legislation explicitly outlines euthanasia procedures, and the practice currently appears to depend on state rules, institutional protocols, or ad hoc decisions. Where euthanasia of seized or rescued exotic wildlife is deemed necessary, the decision should require written authorisation by the CWLW or equivalent senior wildlife authority, in consultation with veterinary and legal experts, with full documentation of the justification, method, personnel, and post-mortem examination.

Global standards such as the IATA LAR and AVMA guidelines also offer operational guidance on safe handling and disposal of euthanised animals. These are particularly important when dealing with species carrying zoonotic potential or subject to international disease reporting obligations. **In the national context, the Wild Life Disposal of Wild Animal Article Rules, 2023**, framed under the WLPA, apply primarily to the **disposal of trophies, meat, and other derivatives of wild animals that are government property under Section 39**.¹¹³ These Rules are intended for Schedule I and II native species but do not explicitly cover live exotic scheduled specimens.



3.6. Regulation on animal welfare

The welfare of exotic pets in private ownership remains severely under-regulated in India. There are no enforceable care standards or species-specific husbandry guidelines, creating a legal vacuum in which neglect, improper housing, and unqualified care are common. While a few provisions of laws may apply to exotic species, jurisdiction and enforcement remain minimal and fragmented, without accounting for the specific needs or vulnerabilities of exotic pets.

The PCA Act remains the central animal welfare legislation, which prohibits unnecessary pain and suffering to animals. Animals as defined under the Act are any living creature other than a human being, which includes exotic pet species. Section 11 penalises cruelty, including failure to provide sufficient food, water, and shelter, or confining an animal in an insufficient space. However, the PCA and subsequent rules were drafted with domestic and farm animals in mind and lack any species-specific standards for exotic pets. Moreover, penalties under the Act offer little deterrence.

The Supreme Court’s judgment in *Animal Welfare Board of India vs. A. Nagaraja & Ors.* marks a watershed moment in the legal recognition of animal rights and the Five Freedoms. In its ruling, the Court affirmed that Article 21 of the Constitution — guaranteeing the right to life — extends not only to humans but to all sentient beings, rejecting speciesism and affirming animals’ intrinsic right to a life of dignity and well-being.¹¹⁴ This expanded interpretation reaffirms the constitutional and statutory responsibilities of State authorities under the PCA Act, to prevent cruelty and ensure the humane treatment of all animals, including exotic species.

The WLPA, which lists exotic species under Schedule IV, provides protocols and provisions for legal possession, rather than husbandry, living conditions, or health of species. The Living Animal Specimen (Reporting and Registration) Rules, 2023, while regulating registration and health checks for exotic pets, do not prescribe any standards for care, housing, or enrichment. Further, a large number of exotic animals not listed in Schedule IV remain outside the purview of even basic regulatory monitoring under the WLPA.

Following the Recognition of Zoo Rules, 2009, which prescribed minimum standards for the housing, upkeep, and healthcare of Indian species in zoos, the CZA developed **Guidelines on Minimum Dimension of Enclosures for Housing Animals of Different Species in Zoos.**^{115,116} While these guidelines outline enclosure specifications and basic safeguards, they are primarily designed for display and public viewability. As such, they fall short of addressing the long-term welfare, behavioural needs, and species-specific care requirements of exotic animals held in permanent captivity following seizures or transferred to off-display rescue facilities.

3.7. Regulations on petting zoos and aviaries

Privately owned petting zoos and aviaries are a growing sector within the wildlife exhibition and exotic animal trade, often falsely marketed as education or conservation-oriented spaces. They pose serious concerns to animal welfare, zoonotic disease transmission, and regulatory oversight.

Under Section 2(39) of the WLPA, a “zoo” is defined as any establishment, stationary or mobile, where captive animals are exhibited to the public or maintained for ex-situ conservation. This includes circuses and off-exhibit facilities such as rescue or breeding centres. Crucially, this excludes licensed dealers in captive animals, creating a significant legal loophole. Facilities engaged in trade can therefore avoid WLPA registration while operating as de facto zoos or exhibition spaces.

The Performing Animals (Registration) Rules, 2001, under the PCA, require registration of animals used for public entertainment, conditional on standards of prescribed veterinary care and housing as per the Recognition of Zoo Rules, 1992.^{115,117} However, Section 27 (b) of the PCA exempts societies whose principal object is education or for scientific purposes, enabling operators to bypass registration even while offering public petting. This overlap between wildlife protection and animal cruelty statutes, each marked by their own gaps, create fragmented oversight and no accountability.

Many facilities exploit this grey area by registering with the Performing Animals Committee under AWBI, sidestepping the more rigorous zoo regulations. A recent case illustrates this challenge. Chennai’s Junglii facility housed Schedule IV exotic species such as ball pythons and iguanas under poor conditions, while claiming to charge a ‘consultancy fee’ instead of an entry fee.¹¹⁸ Similarly, Mumbai’s Marine Aqua Zoo was found permitting ticketed interaction and petting of their exotic species, while claiming recognition under the CZA.¹¹⁹ Both facilities continue to operate despite clear welfare and compliance issues.

The absence of a unified regulatory regime has left critical

gaps in operational guidelines on species-appropriate housing, sanitation, exhibition, and interaction standards. The intermixing of multiple species, exotic and domestic, in contact with the public, increases the potential for disease transmission. Yet, there are no standardized requirements for hygiene, biosecurity, or routine veterinary oversight. In response to these incidents, the Tamil Nadu Forest Department in 2022 has taken a proactive step by prohibiting the exhibition of exotic animals in private aviaries and petting zoos across the state pending valid permits.¹²⁰ Such measures highlight growing institutional recognition of the need for more stringent governance.

However, it is pertinent to provide clear guidelines and enhance coordination among wildlife authorities, veterinary bodies, and public health agencies to ensure effective oversight, safeguarding animal welfare, and mitigating public health risks in this rapidly expanding area.



3.8. Regulations on display and sale of animals on social networking services

Social networking services, including social media and messaging platforms, play a significant role in enabling exotic pet trade in the country. Digital spaces normalize wild animals as household pets and serve as informal marketplaces that transcend geographic boundaries. YouTube hosts a wide range of exotic-pet-related content, from care tutorials to influencers showcasing their pet collections. Such content normalizes exotic animal ownership, while lacking veterinary or legal legitimacy. The shift from physical pet shops to closed platforms such as Facebook, Instagram, WhatsApp, Signal, and Telegram has allowed trade to bypass traditional points of surveillance. On platforms such as Facebook and WhatsApp, hobbyist pages and groups directly facilitate trade and connections

for breeding species, enabling buyers and sellers to connect across states and sometimes countries.^{121,122} Private groups and encrypted messages further obscure transactions, placing them beyond formal oversight.

Sellers of species listed under Schedule IV of WLPA may claim to hold valid permits, but they are rarely verifiable in real time. Mislabelling of species, use of code words, and deliberately duplicitous images, all coupled with the temporary nature of social media content, make it difficult to distinguish between legal and illegal trade.

Information Technology Act, 2000 (IT Act), and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, impose obligations on digital intermediaries to remove illegal content on notification.¹²³ However, they do not explicitly address wildlife trade. Platforms are not mandated to proactively monitor, detect, or restrict posts involving the advertisement or sale of protected exotic species, leaving enforcement largely reactive to notifications from public. In India, WCCB and several State Forest Departments have established dedicated cyber cells to monitor and investigate cyber-enabled wildlife crimes.^{124,125} While promising developments, their reach and effectiveness remain limited without broader legal reform and platform accountability.

Global initiatives such as the Global Coalition to End Wildlife Trafficking Online (GCETWO) signed by Meta, Google, Microsoft and others, promote the development of content moderation tools, deployment of Artificial Intelligence (AI) based-detection systems, and periodic transparency in reporting.¹²⁶ Yet, participation remains non-binding, and the platforms maintain discretion over how these commitments are implemented. In the absence of statutory obligations or regulatory oversight, enforcement is uneven, especially on encrypted or closed platforms.

To be more effective, statutory obligations should require digital platforms to implement improved detection systems that automatically identify, and notify to government agencies, posts advertising the sale of 'flagged' species. Various solutions have been proposed to help protect consumers and sellers, including mandating that posts involving wild animals display warning labels, similar to those used for tobacco products, and mandating that users advertising the sale of wild animals as pets online be registered under the Pet Shop Rules and disclose a valid Goods and Services Tax (GST) identification number in all advertisements. Measures like these could enhance traceability and create a basic threshold of accountability for online trade.

Sellers of species listed under Schedule IV of WLPA may claim to hold valid permits, but this are rarely verifiable in real time. Mislabelling of species, use of code words, deliberately duplicitous images, all coupled with temporary nature of social media content, make it difficult to distinguish between legal and illegal trade.



3.9. Summary Of gaps

As presented above, there is a notable oversight in domestic regulation of CITES-listed and non-CITES-listed exotic wildlife. The table below provides a summary of key

gaps in the domains of disease management and zoonotic threat, invasive species control, post-seizure management, and animal welfare.

Table 5: Summary of gaps in disease management and zoonotic threats, invasive species control, post-seizure management, and animal welfare.

Gap	Limitation	Consequence
Disease Management and Zoonotic Threats		
No centralized post-import health surveillance.	Living Animal Specimen Rules, 2023, mandate health checks but lack standards for vaccination, testing, or quarantine. Private facilities operate with minimal oversight.	High-risk environments (petting zoos, breeders, owners) remain unchecked, raising pathogen spillover risks.
Misalignment of disease surveillance systems.	Databases for imports, registration, and veterinary logs of exotic pets remain siloed. Systems such as the National Animal Disease Reporting System (NADRS) and the Integrated Disease Surveillance Programme (IDSP) monitor livestock and livestock-related zoonotic diseases, but do not cover exotic wildlife or the zoonoses they may carry.	Inadequate early warning and poor cross-sector coordination increase risk of undetected outbreaks.
Limited quarantine infrastructure.	Quarantine exists at major ports but not at trafficking hot spots such as Indo-Myanmar and Indo-Bangladesh, or airports such as Visakhapatnam.	Exotic wildlife may enter without screening, heightening risks of disease spread and invasive species establishment.
High exposure risk for frontline staff.	Forest, customs, paramilitary, and police staff often seize or rescue animals without PPE, biosecurity protocols, or training.	High risk of zoonotic infection and occupational exposure during seizures and rescues.
Lack of veterinary capacity for specialised species.	Expertise is concentrated in a few urban centres and private clinics. Most government vets lack training and infrastructure. Knowledge is species-specific and fragmented.	Delayed diagnosis, poor treatment outcomes, and weak early detection hinder coordinated response to exotic pet health and zoonotic risks.
Unregulated online trade and informal markets.	Transactions via social media, messaging apps, and informal breeder networks bypass formal import channels, health checks, and documentation.	Undocumented species and falsified papers hinder enforcement, obscure zoonotic risks, and prevent tracing of infected animals.
Legal ambiguity around private aviaries and petting zoos.	Facilities avoid registration under CZA and AWBI by posing as educational or trade-based.	Petting zoos become high-risk zones for cross-species disease transmission and circumvent minimum standard of housing and welfare

Invasive Species Control		
Lack of IAS focus in Biological Diversity Act, 2002.	The Act does not define invasive alien species or provide a framework for prevention/eradication; it frames “alien species” mainly through commercial utilization and ABS.	Treats alien species as resources rather than ecological threats, leaving India without a flagship biodiversity law that addresses IAS directly.
No unified statutory list of invasive fauna.	Multiple agencies (ZSI, NBA) publish invasive species lists, but none are consolidated into a single, Gazette-notified national list with legal authority. State biodiversity boards, Forest Departments, and research bodies, including the Kerala State Government, the Indian Council of Forestry Research and Education (ICFRE), also publish inventories, but these remain advisory rather than statutory.	Lack of a binding reference list creates confusion, weakens enforcement, and hinders coordinated national action on invasive fauna. Creates uneven, non-binding guidance across states, leading to fragmented management and weak enforceability of IAS control at subnational levels.
Limited operational framework under WLPA for invasive exotic species	Section 62-A allows the Central Government to regulate, prohibit, or seize invasive alien species, including exotic pets, but this provision has not been operationalised and lacks detailed protocols for removal, management, or monitoring.	IAS threats from released or escaped exotic species remains largely unregulated, creating risks of ecological establishment, habitat disruption, and zoonotic spillover.
Narrow focus of Livestock Importation Act, 1898.	The Act prevents entry of diseased animals but does not account for invasive risks from healthy exotics with ecological impacts.	Legally imported animals may still establish as invasives, threatening native biodiversity and ecosystems despite passing health checks.
Limited role of Customs Act, 1962.	Customs can only act if IAS are explicitly listed as “prohibited” under other laws; it provides enforcement power but not policy direction.	Without clear legal definitions or prohibitions elsewhere, Customs cannot effectively block IAS at entry points.
Non-binding nature of NBAP.	Recognizes IAS as a threat but is only a policy document without legal force; implementation depends on fragmented, outdated laws.	Results in weak, inconsistent action on IAS, with no binding obligations or accountability mechanisms.
Limited scope of Plant Quarantine Order, 2003 and Destructive Insects and Pests Act, 1914.	The PQO and Destructive Insects and Pests Act focus on agricultural pests and crop protection, but ignore IAS that affect ecosystems or enter via diverse trade pathways.	Ecological invasives outside agriculture remain unchecked at borders, leaving ecosystems vulnerable to species introductions beyond crop pests.
Post-Seizure Management		
Lack of clarity on inter-agency and diplomatic protocols for repatriation.	No standardized procedures, bilateral agreements, or clear funding mechanisms exist for returning high-risk or endangered species when origin is unknown or source countries refuse return.	Prolonged captivity, ad hoc decisions, or euthanasia become default outcomes, undermining welfare and conservation goals for CITES Appendix I species.
Lack of oversight on post-return outcomes for seized exotic species.	Repatriation often relies on informal coordination with foreign agencies or NGOs, without standardized protocols or accountability.	Outcomes vary widely, with no assurance of proper care, disease screening, or reintegration, undermining welfare and biosecurity.

Lack of national framework for lifetime care/management of unrepatriated exotics.	CZA guidelines focus on display and viewability rather than care. Rescue facilities are overstretched and underfunded.	Seized species face indefinite captivity, overcrowding, or neglect due to institutional overload.
No euthanasia and carcass disposal protocol specific for exotic wildlife when deemed necessary.	Need for adoption of global guidelines around humane euthanasia, as a minimum standard, for suffering or invasive seized exotic animals, Wild Life Disposal of Wild Animal Article Rules, 2023, does not cover exotic (Schedule IV) specimens.	Euthanasia decisions are ad hoc, risk of animal welfare violations, and non-transparent. Improper disposal of carcasses may allow for disease spread.
Animal Welfare		
Absence of species-specific care standards for exotic pets.	PCA and WLPA lack enforceable husbandry or welfare norms tailored to exotic pets; current rules target domestic or farm species	Exotic pets are often kept in inappropriate, unsafe, or psychologically stressful conditions, leading to poor welfare and biosecurity risk through disease and invasion.
No ban or restriction on keeping high-risk dangerous/ill-suited exotic species (primates, venomous snakes, big cats) in private ownership.	The country lacks a risk-based framework for prohibited species that have been adopted in other jurisdictions.	Dangerous, venomous, or ecologically inappropriate species are kept in private homes, posing serious harm to owners and increasing the likelihood of zoonotic spillover.



4. Recommendations and future pathways

Summary: This chapter translates the analysis into a clear action plan across five themes—legal reform, capacity building, disease surveillance and biosecurity, public awareness, and research. It prioritizes tools to close legal loopholes, expand veterinary and quarantine capacity, integrate exotic-species data into One Health systems, curb online and informal trade, and reduce demand through responsible ownership. A consolidated recommendations table pairs each action with its intended impact and concrete success metrics to guide rapid, accountable implementation.

India's exotic pet trade has evolved from a niche activity into a significant industry that sits at the crossroads of biodiversity loss, unbridled community demand, and organized criminal activity.

The preceding chapters examined the wide-ranging implications of India's exotic pet trade, highlighting legislative gaps and the complex ecological and public health dimensions that necessitate a multipronged reform strategy. Several priorities warrant immediate attention. The regulatory vacuum surrounding non-CITES exotic species must be closed through extension of the WLPA framework or development of complementary legislation. The lack of effective invasive species management protocols enables continued establishment of exotic species in native ecosystems, threatening biodiversity and ecological integrity. The absence of standardized disease surveillance and biosecurity protocols for exotic species represents a significant public health vulnerability that demands integration into existing One Health infrastructure. The lack of specialized veterinary capacity and post-seizure infrastructure in high-volume states creates bottlenecks

that compromise both enforcement effectiveness and animal welfare outcomes. The lack of specialized veterinary capacity and post-seizure infrastructure in high-volume states creates bottlenecks that compromise both enforcement effectiveness and animal welfare outcomes.

This chapter outlines a structured set of actionable recommendations, organised across five thematic areas and corresponding sub-themes, to address gaps identified in previous chapters. These are:

- Legislative and regulatory measures
- Capability and capacity building
- Disease surveillance and biosecurity integration
- Public awareness and responsible ownership
- Research

Together, these measures aim to build a resilient and ethically grounded governance framework rooted in legal reforms, strengthened institutional capacity, robust disease surveillance systems, public awareness, and cross-sectoral collaboration.



4.1. Framework for strengthening governance

The recommendations presented below provide a roadmap to strengthening regulatory capacity to address exotic pet trade challenges effectively. They are organised into a table

with sub-categories under each theme, their intended impact, and measurable success metrics, to ensure effective implementation and achievable outcomes.

Recommendation	Intended Impact	Success Metric
Legislative and Regulatory Measures		
<p>Enact a comprehensive standalone Invasive Alien Species (IAS) Act that:</p> <ul style="list-style-type: none"> • Defines IAS and introduction pathways. • Assigns institutional responsibilities. • Mandates science-based pre-import risk assessments. • Enables early detection/rapid response and non-lethal methods of control. • Empowers seizure/quarantine and safe disposal of deceased animals. • Establishes a dynamic national prohibited high-risk species list. • Prescribes civil and criminal penalties for unauthorized import, possession, trade, or release. 	<p>Provides a single, binding legal framework to prevent and manage biological invasions; clarifies roles and authorities; strengthens prevention, enforcement and remediation tools; and improves deterrence through clear penalties.</p>	<ol style="list-style-type: none"> 1) IAS Act drafted, passed and gazetted. 2) National prohibited high-risk species list published and updated annually. 3) Rapid-response teams operational and % of responses meeting target containment timelines (e.g., 72 hrs). 4) Number of successful prosecutions/penalties under new law tracked annually.
<p>Assess and operationalise a nationally recognised framework regulating the ownership of exotic species that offers additional safeguards for biodiversity and public health.</p> <ul style="list-style-type: none"> • Conduct science-based risk assessments evaluating factors including zoonotic potential, ecological invasiveness, and suitability for captivity, reviewed periodically by an expert committee. • Assess adopting existing approaches or standards such as positive/whitelist or prohibited/blacklist to curtail private ownership, breeding, sale and transfer of species deemed high-risk. 	<p>Prevents high-risk species from entering the private market; reduces public-health, welfare and invasion risks by limiting ownership to species demonstrably safe and manageable in domestic settings; simplifies enforcement by making high-risk species illegal by default.</p>	<ol style="list-style-type: none"> 1) Feasibility assessment of risk-based approach/lists is conducted and published. 2) Based on assessment, national risk-based (prohibited) list is developed. 3) Annual review and update of framework with documented risk assessments for any change.
<p>Expand WLPAs/rules to bring high-risk non-CITES and otherwise unlisted exotic species under regulatory oversight through a national framework (Schedule/Rules).</p> <ul style="list-style-type: none"> • Require registration, health checks, and invasive-risk assessments for those taxa. 	<p>Closes the legal loophole that leaves heavily traded exotics unregulated; enables registration, health monitoring, and invasive-species management for all high-risk taxa regardless of CITES status.</p>	<ol style="list-style-type: none"> 1) Gazette notification of a national high-risk list. 2) At least 50% of identified owners registered within 12 months. 3) Number of unlisted species detected in illegal trade reduced year-on-year.

<p>Develop species-specific immunization and health check standards (by extending quarantine standards).</p> <ul style="list-style-type: none"> • Require unique microchipping/ tagging of individual all exotic animals, and real-time digital traceability (integrated with PARIVESH or a national registry). • Include periodic audits and mandatory disclosure of provenance documents for every sale/transfer. 	<p>Closes provenance and laundering loopholes, improves health oversight across the supply chain, enables rapid traceback during disease events or illegal seizures, and raises accountability of commercial operators.</p>	<ol style="list-style-type: none"> 1) Health check and vaccination standards developed for key exotic pet groups 2) 20% of traded animals microchipped/uniquely tagged within 18 months. 3) ≥90% of commercial transactions logged in the traceability system within 12 months of launch. 4) Number of provenance-related enforcement actions and successful tracebacks increase year-on-year.
<p>Create a dedicated regulatory framework for petting zoos and aviaries, including formal cross-sector coordination (forest, public health, veterinary authorities).</p> <ul style="list-style-type: none"> • Mandatory registration for all facilities • Enforceable, species-specific standards for housing, hygiene, welfare and veterinary care • Mandatory biosecurity, zoonotic-reporting and quarantine protocols. • Periodic audits and licensing renewals. • Clear restrictions on high-risk exotic species in these settings. 	<p>Standardises oversight, closes loopholes that allow trade/ exhibition without scrutiny, improves animal welfare, reduces zoonotic and biosecurity risks, and makes facilities accountable through regular inspection and inter-agency governance.</p>	<ol style="list-style-type: none"> 1) 100% of operating petting zoos/aviaries registered within 12 months. 2) ≥80% compliance rate on first full audit cycle (housing, hygiene, vet care, biosecurity) within 18 months. 3) % of facilities with a certified veterinary-care plan and biosecurity SOPs (target: ≥90%). 4) Reduction in reported zoonotic incidents/complaints tied to facilities.
<p>Standardise repatriation efforts across jurisdictions.</p> <ul style="list-style-type: none"> • Agree funding/timelines and establish joint rapid-response protocols with local partners. • Set species specific health/welfare/ biosecurity standards. • Negotiate and conclude MOU agreements with high-risk source countries (e.g., Thailand, Malaysia) • Pre-identify recipient facilities. • Assign cross-border enforcement and veterinary responsibilities. 	<p>Creates predictable and standardized repatriation pathways that reduce ad-hoc outcomes, improve welfare and biosafety of returned animals, and prevent deported specimens from re-entering illegal trade networks.</p>	<ol style="list-style-type: none"> 1) ≥2 MOUs signed with priority source countries within 12 months. 2) National repatriation SOP published and agreed operationally with signatories within 9 months of each MOU. 3) At least one pilot repatriation completed per MOU under the SOP within 12 months. 4) ≥90% of deported animals have a verified post-return care plan and receipt confirmation from the receiving facility.
<p>Operationalise Section 62A of the WLPA to regulate or prohibit the import, possession, trade, and proliferation of invasive alien species (e.g., red-eared sliders), with clear Gazette notifications for listed taxa.</p>	<p>Provides a direct legal instrument to restrict high-risk invasives; enables proactive enforcement and management before establishment; aligns national law with ecological protection needs.</p>	<ol style="list-style-type: none"> 1) Gazette notification of first batch of invasive alien species under Section 62A within 12 months. 2) % reduction in availability of red-eared sliders in markets/pet shops within 18 months. 3) Number of seizures/prosecutions under Section 62A tracked annually. 4) Documented decline in wild records of released invasives in monitored sites.

<p>Establish a National Surrender Policy for exotic animals that owners can no longer care for.</p> <ul style="list-style-type: none"> • Provide a 24/7 helpline and intake mechanisms via PARIVESH. • Develop triage and quarantine protocols, and placement with approved facilities (no private rehoming). • Pair with limited-time amnesty to surface hidden ownership. 	<p>Prevents abandonment and releases (invasion/zoonotic risk), protects animal welfare, and brings unregistered animals into the legal system for safe disposition.</p>	<ol style="list-style-type: none"> 1) Policy notified and helpline/portal live within 6–9 months. 2) Number animals surrendered and processed through quarantine in year 1. 3) \geqY% reduction in reported abandonment/escape incidents in pilot states. 4) \geq90% of surrenders placed only in approved facilities with full chain-of-custody records.
<p>With Ministry of Electronics and Information Technology (MEITY) and Consumer Affairs, mandate that digital platforms and marketplaces display WLPAs registration status of listed animals and verified seller licences (GST/IEC/Pet Shop registration).</p> <ul style="list-style-type: none"> • Require platform-level Know Your Customer (KYC), listing disclosures, and takedown/flagging of non-compliant ads. • Establish public-private partnership agreements between platforms and law enforcement officials for the purpose of reporting illegal activity. 	<p>Brings online and informal markets into the regulatory net; improves traceability and buyer awareness; reduces illegal listings and laundering via anonymous sellers.</p>	<ol style="list-style-type: none"> 1) Platform policy notified and implemented within 12 months. 2) \geq80% of animal listings show WLPAs registration and verified seller ID within 3 years. 3) 10% reduction in flagged/takedown-worthy listings within 6–12 months. 4) Increase in actionable referrals from platforms to WCCB/State Forest Depts year-on-year.
<p>Capacity and Capability Building</p>		
<ul style="list-style-type: none"> • Reform veterinary curricula to include exotic/wildlife medicine at undergraduate level. • Fund postgraduate specialist tracks, fellowships, and international exchange programmes (VCI to mandate curriculum changes and support scholarships). 	<p>Builds a larger, geographically distributed pool of vets competent in diagnosis, treatment and husbandry of exotic species, improving clinical outcomes, surveillance, and emergency response capacity.</p>	<ol style="list-style-type: none"> 1) VCI issues revised curriculum guidelines within 12 months. 2) \geq50% of veterinary colleges adopt updated modules within 18 months. 3) Number of certified exotic-species specialists increased by 20% (target) within 3 years.
<p>Facilitate the development and upgrading of treatment facilities and diagnostic laboratories across regions with dedicated resources for exotic species, prioritising states with high ownership and trafficking volumes</p> <ul style="list-style-type: none"> • Integrate these into existing veterinary infrastructure and staff them with trained specialists. 	<p>Expands access to appropriate health services for exotic species, enables early detection of zoonoses, improves survival and welfare outcomes, and strengthens regional enforcement and surveillance networks.</p>	<ol style="list-style-type: none"> 1) \geq1 specialised clinic/lab operational in each high-priority state within 24 months. 2) Government order of seized exotics receiving species-specific diagnostic screening within 30 days of arrival (target \geq80%). 3) At least 50 zoonotic screenings conducted annually across facilities; annual reporting to MoEFCC/DAHD.

<p>Develop and institutionalise standardised training modules for Customs, Forest Department, and local law enforcement staff on exotic animal handling, zoonotic risk mitigation, and Personal Protective Equipment use.</p> <ul style="list-style-type: none"> Mandate SOPs on biosecurity, decontamination, and secure transport. 	<p>Protects frontline personnel from zoonotic exposure, improves welfare and survival of seized animals, and ensures uniform national standards in handling and transport.</p>	<ol style="list-style-type: none"> 1) National SOP on exotic animal handling and biosecurity issued within 12 months. 2) ≥80% of frontline staff in priority states trained within 18 months. 3) % of seizures where PPE and SOP-compliant transport used (target ≥90%). 4) Reduction in occupational exposure incidents among staff (tracked annually).
<p>Expand quarantine infrastructure at land borders (Indo-Myanmar, Indo-Bangladesh) and secondary international airports.</p> <ul style="list-style-type: none"> Recruit and deploy veterinary staff and establish species-appropriate holding facilities. 	<p>Strengthens frontline interception of trafficked wildlife, improves early detection and containment of zoonotic and invasive risks, and reduces reliance on already overburdened metropolitan quarantine stations.</p>	<ol style="list-style-type: none"> 1) ≥3 new quarantine stations operational at key land/air entry points within 24 months. 2) 10% additional veterinary staff deployed and trained in quarantine protocols. 3) % of seizures at border points processed through quarantine facilities (target ≥80%). 4) Documented reduction in unquarantined exotic species entries within 2 years.
<p>Establish an interoperable data-sharing system linking Customs, Forest Departments, Veterinary Services, and Public Health Authorities for real-time exchange of import data, species health records, and emerging threat alerts.</p>	<p>Breaks down silos between enforcement, veterinary, and public health sectors; enables faster detection of risks, coordinated responses, and better tracking of exotic species movement and health.</p>	<ol style="list-style-type: none"> 1) National data-sharing platform established within 12 months. 2) ≥80% of new imports and seizures logged in system within 6 months of launch. 3) Reduction in response time to exotic disease incidents.
<p>Disease Surveillance and Biosecurity Integration</p>		
<p>Expand the mandate of the National One Health Mission (NOHM) to formally include risks from exotic wildlife trade.</p> <ul style="list-style-type: none"> Integrate exotic species health data (imports, seizures, registries, veterinary records) into national public health surveillance systems. 	<p>Aligns India's disease preparedness with global One Health standards, ensures zoonotic threats from exotic trade are systematically monitored, and strengthens early warning and coordinated response capacity.</p>	<ol style="list-style-type: none"> 1) NOHM mandate revised within 12 months to include exotic wildlife. 2) Exotic species health module integrated into national surveillance database within 18 months. 3) ≥80% of seizures/registrations logged into NOHM-linked system. 4) At least 10 exotic-species-related alerts shared annually with public health authorities.

<p>Extend the NADRS and IDSP coverage to priority infectious diseases carried by exotic species.</p> <ul style="list-style-type: none"> linking data from import documentation, registration databases, and veterinary health records. Create formal mechanisms for cross-departmental data sharing and flagging of unusual or high-risk cases. 	<p>Expands national zoonotic surveillance beyond livestock and companion animals; enables systematic monitoring of exotic species as reservoirs of emerging diseases; ensures early detection and faster containment of outbreaks</p>	<ol style="list-style-type: none"> 1) Protocols for exotic species reporting integrated into NADRS/IDSP within 12 months. 2) ≥70% of registered exotic species health checks logged into systems within 18 months. 3) Documented reduction in time-to-response for exotic zoonotic incidents.
<p>Develop and institutionalise Emergency Outbreak SOPs for exotic pets.</p> <ul style="list-style-type: none"> Detail detection, quarantine, testing, inter-agency coordination, and legally compliant interventions (movement restrictions, temporary seizure, or culling where required). Integrate these into existing public health and One Health frameworks. 	<p>Ensures rapid, standardised, and legally backed responses to zoonotic outbreaks involving exotic pets; protects human and animal populations while reducing delays caused by jurisdictional confusion.</p>	<ol style="list-style-type: none"> 1) National Exotic Outbreak SOP published and adopted by MoEFCC, DAHD, and MoHFW within 12 months. 2) ≥80% of state forest/veterinary departments trained in SOP implementation within 18 months. 3) Average outbreak detection-to-response time reduced by Y%.
<p>Public Awareness and Responsible Ownership</p>		
<p>Publish legally endorsed National Exotic Pet Ownership Guidelines, developed by AWBI with VCI and MoEFCC.</p> <ul style="list-style-type: none"> Establish scientific species-specific care, enclosure, and enrichment standards, along with owner responsibilities and ethical obligations. Pair guidelines with awareness campaigns (public health agencies, veterinary associations, wildlife departments) on zoonotic risks, hygiene, and responsible ownership. Mandate health & safety protocols, including vaccinations for breeders, traders, enforcement staff, and transporters. 	<p>Improves welfare and survival of exotic pets, reduces abandonment, mitigates zoonotic risks to owners and handlers, and builds public awareness of responsible ownership practices.</p>	<ol style="list-style-type: none"> 1) Guidelines published and gazetted within 12 months. 2) ≥70% of registered owners receive and acknowledge guidelines at point of registration/transfer. 3) At least 5 national/state awareness campaigns delivered annually. 4) Reduction in zoonotic exposure incidents among high-risk personnel within 2 years.
<p>Mandate risk disclosure at point of sale/registration.</p> <ul style="list-style-type: none"> Retailers, breeders, and online platforms must provide standardised information on zoonotic, welfare, and ecological risks to prospective buyers. Enforce through consumer protection and/or animal welfare law. 	<p>Ensures informed decision-making by buyers, reduces impulse purchases, and increases accountability of sellers; strengthens responsible ownership and public safety.</p>	<ol style="list-style-type: none"> 1) Standard disclosure template developed and notified within 12 months. 2) ≥80% of registered sales/registrations accompanied by documented disclosure forms. 3) Consumer surveys show ≥15% increase in buyer awareness of risks. 4) Documented decline in reported abandonment of high-risk species within 2 years.

Research		
<p>Expand and prioritise research on exotic pet trade and zoonotic risks.</p> <ul style="list-style-type: none"> Targeted funding for studies on pathogen spillover, disease transmission dynamics, ecological impacts, and trade chain analysis. Encourage interdisciplinary collaborations across veterinary science, epidemiology, ecology, and enforcement. Government funding bodies such as Indian Council of Medical Research (ICMR), Department of Biotechnology (DBT), MoEFCC, to issue priority calls for proposals and cross-sector partnerships 	<p>Fills critical evidence gaps to guide policy and enforcement; supports risk-based regulation; builds a scientific foundation for disease prevention, welfare standards, and ecological safeguards.</p>	<ol style="list-style-type: none"> At least 1 dedicated grant calls issued within 12 months. ≥5 interdisciplinary projects funded within 2 years. Research outputs cited in at least 1 policy/regulatory decisions within 3 years.
<p>Expand research on invasive alien species, their pathways, impacts, and management strategies linked to exotic pet trade.</p> <ul style="list-style-type: none"> Targeted funding for studies on invasion risk assessments for commonly traded exotic species, population dynamics and spread patterns of established invasives (e.g., red-eared sliders, African catfish), trade regulations and climate modelling to predict and mitigate invasive spread. Pilot innovative and humane control and eradication techniques (biological control agents for aquatic invasives) adapted to Indian contexts. Establish partnerships between academic institutions, research organizations (ZSI, NBA), citizen scientists, and international bodies for long-term monitoring of invasive species, knowledge exchange, and capacity building. 	<p>Provides longitudinal data on invasion dynamics essential for adaptive management; identifies high-risk species before importation; tests scalability and cost-effectiveness of interventions; builds national expertise in IAS control; facilitates rapid response before populations become unmanageable.</p>	<ol style="list-style-type: none"> ≥3 long-term monitoring projects 1) on established invasive populations (e.g., red-eared sliders, exotic fish) funded within 18 months. National vulnerability mapping published for priority regions within 2 years. At least 1 pilot management/eradication protocol tested in field conditions within 3 years.

4.2. Conclusion

India's constitutional and international commitments to wildlife protection and public health security demand a governance framework adequate to the challenges posed by globalised wildlife commerce. As the exotic pet trade sector rapidly evolves in the country, so must our policy framework adapt to govern it. The evidence presented in this report demonstrates that while legislative frameworks have expanded, implementation remains fragmented, coordination across agencies requires strengthening, and large segments of the trade operate outside regulatory oversight.

The four impact domains examined in this report, zoonotic disease risk, threat of ecological invasion, institutional strain, and animal welfare, are not isolated concerns. They are interconnected consequences of the same governance failure: a trade that has outpaced the legal and institutional systems meant to contain it. Addressing them requires more than piecemeal reform. It requires a coherent, anticipatory

framework that treats the exotic pet trade as the complex, cross-sectoral challenge it is.

The recommendations in this report are designed to meet that challenge collectively. Closing the legal vacuum around non-CITES and unlisted exotic species directly reduces the pathways through which zoonotic pathogens enter homes, markets, and public spaces undetected. A standalone Invasive Alien Species Act, paired with the operationalisation of Section 62A of the WLPA, provides the binding framework that currently does not exist to prevent ecological establishment before it becomes irreversible. Investing in quarantine infrastructure, veterinary capacity, and standardised post-seizure protocols relieves the compounding burden on zoos and enforcement agencies that are presently absorbing the costs of a trade they were never designed to manage. And enforceable, species-specific welfare standards, grounded in the constitutional

recognition of animal sentience affirmed in *Animal Welfare Board of India v. A. Nagaraja*, extend meaningful protection to the millions of animals who suffer across every stage of this trade.

What is required now is the recognition that exotic pet trade regulation demands specialised legal frameworks, effective control measures, and sustained cross-sectoral coordination. More imperatively, it requires a shift from reactive enforcement to preventive regulation — from mitigating the consequences of trade to managing its pathways and parameters. India has previously demonstrated the institutional capacity to

implement complex wildlife governance reforms. The successful operationalisation of the 2022 WLPA amendments is proof of that. The recommendations outlined in this report build on that foundation, and on the political will it represents. Implementing them would mark a significant advancement in India's capacity to navigate the complexities of wildlife trade in an interconnected world, and set a precedent for comprehensive, science-based regulation that other nations may follow.



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Image Captions and Credits:

- **Cover page:** An orangutan (*Pongo sp.*) rescued from the exotic pet trade, facing an uncertain future.
- **Page 8:** A white-lipped island pit viper (*Trimeresurus insularis*), native to parts of Southeast Asia and traded as a pet in India, a cautionary case, given the public health risks venomous snakes in the trade pose. Photo credit: Kritika Balaji
- **Page 9:** Juvenile two-toed sloth (*Choloepus sp.*) rescued from the illegal pet trade at a wildlife rescue centre. Photo credit: Meredith Lee
- **Page 10:** A scarlet macaw (*Ara macao*) in the wild, a species frequently traded as a pet in India. Photo credit: Grettel Delgadillo
- **Page 15:** A budgerigar (*Melopsittacus undulatus*), among the most commonly kept exotic birds, sold widely online and offline across India. Photo credit: Humane World for Animals
- **Page 16:** A red-eared slider (*Trachemys scripta elegans*), a freshwater semi-aquatic turtle prominent in India's pet trade. Photo credit: Sherry Reina Hochbaum
- **Page 17:** Parrot chicks of Central and South American species, packed at high densities for transport- a common feature of the trade in India. Photo credit: Fernando Martinez
- **Page 18:** A green iguana (*Iguana iguana*), native to Central and South America and heavily traded in India, with the potential to become invasive in the absence of adequate regulation. Photo credit: Christine Capozziello
- **Page 19 (bottom-right):** A Humane World for Animals India staff member training law enforcement agencies on legislation to safeguard native wildlife and on rules governing the exotic pet trade. Photo credit: Humane World for Animals India
- **Page 19 (bottom-left):** An alligator gar (*Atractosteus spatula*), native to the southern United States and parts of Mexico, imported for the aquarium trade and now recorded in natural water bodies including Dal Lake in Kashmir. Photo credit: Jayanth Muppaneni
- **Page 20:** A raccoon (*Procyon lotor*), native to North America, gaining popularity as an exotic pet in India for its appearance and size. Photo credit: Frank Loftus
- **Page 21 (top-right):** A rescued animal being treated by a qualified veterinarian. Medical care for rescued exotic wildlife in India remains at a nascent stage and in urgent need of advancement. Photo credit: Frank Loftus
- **Page 21 (mid-left):** A yellow-bellied slider (*Trachemys scripta scripta*), native to the southeastern United States, increasingly kept as a pet in India and capable of establishing as an invasive in natural water bodies. Photo credit: Manuel Mazzanti
- **Page 22 (top-left):** Wild-sourced parrots crowded together during transport, illustrating the cramped conditions endured by birds moved through the trade. Photo credit: Fernando Martinez
- **Page 22 (mid-right):** A cockatoo (*Cacatua sp.*), a CITES-listed and heavily traded group in India. Long-lived and highly intelligent, these birds require extraordinary social and cognitive enrichment that captive settings rarely provide. Photo credit: Kritika Balaji
- **Page 23:** A pet shop in Hyderabad displaying various exotic bird species for sale. Photo credit: Mishi Aggarwal
- **Page 24:** Rock hyraxes (*Procavia capensis*), native to sub-Saharan Africa, North Africa, and the Arabian Peninsula. Their absence from the CITES appendices presents a distinct regulatory challenge. Photo credit: Pawan Sharma
- **Page 29:** A storefront selling mixed finch species. Such mixed-species displays are a frequent sight and raise both zoonotic and welfare concerns. Photo credit: Kritika Balaji
- **Page 30:** Albino Chinese softshell turtle (*Pelodiscus sinensis*) hatchlings - a species mass-bred commercially and routinely sold in Indian aquarium shops despite the ecological risk it poses. Photo credit: Pawan Sharma
- **Page 31 (bottom-right):** Leopard tortoises (*Stigmochelys pardalis*) of varying sizes in India's pet trade. Decisions on repatriation, rehoming, or euthanasia of CITES-listed specimens follow CITES resolutions weighing conservation status, animal welfare, disease-transmission risk, and ecological consequences, decisions that demand species-level expertise rarely available in India. Photo credit: Pawan Sharma
- **Page 31 (mid-left):** A black spiny-tailed iguana (*Ctenosaura similis*), native to Mexico and Central America, increasingly sought after among India's growing community of iguana keepers and breeders. Photo credit: Gabriella Krevat
- **Page 32:** Confiscated squirrel monkeys (*Saimiri sp.*), a highly social Amazonian primate trafficked into India, often as infants, with many dying in transit. Photo credit: Pawan Sharma
- **Page 33:** A ball python (*Python regius*), also known as the royal python, native to West and Central Africa and widely traded in India, with numerous colour morphs available online and offline. Photo credit: Anton Aguilar
- **Page 34:** A marmoset (*Callithrix sp.*), prized for its small size and appearance and sold both online and offline across India. Photo credit: Christi Gilbert
- **Page 37:** A red-lored Amazon parrot (*Amazona autumnalis*), rare in the trade and therefore commanding a high price in India. Photo credit: Mauricio Mota
- **Page 38:** A scarlet macaw (*Ara macao*) within its native range. Photo credit: Grettel Delgadillo
- **Page 45:** A hyacinth macaw (*Anodorhynchus hyacinthinus*), native to South America and prized in India's pet trade for its cobalt-blue plumage. Photo credit: Vanessa Mignon



Our mission

Together, we tackle the root causes of animal cruelty and suffering to create permanent change.

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