



Protected in Law, Vulnerable in Reality: A Critical Study of Enforcement Deficits in Conservation Frameworks

Manvendra Singh¹ and *Kushagra Kulshrestha²

¹ Sharda University, Greater Noida, India.

² Raja Mahendra Pratap University, Aligarh, India
kushagrakulshrestha@gmail.com

Abstract. The most evident element of legal undertaking of the state in the respect of conservation of wildlife is protected areas, which represent the guarantee to the safety of species and habitats given to them by their statement and due regulation. Conservation regimes lead to the creation of national parks, wildlife sanctuaries, and conservation reserves under the hope that conservation will be legally safeguarded which will translate into effective biodiversity protection. Nevertheless, poaching, illicit animal trade, encroachment, and organized crime of animal's remains widespread in the areas, are resulting in a serious lack of environment qualification between the conservation law and the conservation reality. The current study is grounded on the fundamental issue that species are still threatened in an area that is supposedly covered by a legislative jurisdiction to be protected. The paper is an inquiry into why and how enforcement systems of conservation regimes do not translate into substantial protection of the wildlife. It questions the legal framework that regulates the process relating to the protection areas to know whether there are loopholes in the design of the enforcement procedures, the severity of the punishment, the procedures by which they should be investigated and prosecute, or how these laws are interpreted and adjudicated in court.

Keywords: Protected Areas, Wildlife Conservation, Enforcement Gap, Poaching; Wildlife Crime, SDG 15

1 Introduction

The core of contemporary conservation policy is placed on the enclosed areas, which reflect the most evident legislative interest of the state to guarantee the biodiversity. National parks, wildlife reserves, conservation parks and marine parks are created by statute and are billed as zones of ecological safety where animal and plant species are assumed to be granted increased legal protection. These special areas represent a promise of control: that wildlife will not be exploited, degraded or exterminated within these special areas under institutional control and judicial supervision.

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However, even with the innumerable growth of conservation laws and the heightening coverage of conservation areas around the world, species have remained under constant assault even within their very areas. Poaching networks infiltrate national parks, transnational trading in wildlife thrives and habitat encroachment disturbs ecological values and organized environmental crime keeps up with the changing pace of enforcement efforts. [1]

This contradiction shows an inherent enforcement disconnect between conservation law and conservation results. The presence of elaborate legal frameworks has not necessarily resulted in good protection. Rather, flaws in level with statutory formulation, administrative discretion, institutional capacity constraints, and ineffective coordination in the enforcement capacity, and non-consistent judicial reactions all reduce the purpose of conservation regimes. Meanwhile, the wildlife crime has become a large-scale and international business venture that does not fit the old prototypical regulatory and prosecution patterns. This paper challenges the laws and institutional premises of the existence of the protected areas so as to understand why species are still exposed to predation within the boundaries of areas that should be meant to protect them. [2]

2 Legal Architecture of Protected Area

The number of protected areas worldwide now exceeds 200,000 with almost 14.5 million hectares covered in nearly 200,000 areas worldwide representing about 1.5 per cent of the world surface and 2.8 per cent of the oceans respectively. In India, there are 981 sites under protection including 104 National Parks (43,716 km²; 1.33% of the geographical area), 566 Wildlife Sanctuaries (1,22,420 km²; 3.72%), 97 Conservation Reserves (4,483 km²), 214 Community Reserves (1,302 km²), respectively, covering 1,71,921 km² or 5.03 of the geographical In 2000, there were 574 (1,46,665.60 km²) covered areas, whereas, as of 2020, there are 981 (1,71,921 km²) of them. In 1973, India had 9 Tiger Reserves, but today the country has 50 Tiger Reserves summing 71, 027.10km². UNESCO Man and Biosphere Programme network consists of 631 biosphere reserves distributed over 119 countries with 15 found in India. Over 85% of one-horned rhinoceroses in the world and more than 70-percent of tigers are found in India. The annual rate of forest cover decrease is about 0.2% in India and over 90 percent of forest fragments are of less than 1km² areas. After the 97 percent decrease in population as a result of the use of diclofenac, there are three species of Gyps vultures that are currently mainly restricted to regions in or near national parks. [3]

The specified protective zones in India are also regulated mostly in accordance with the Wildlife (Protection) Act, 1972, which offers the legal framework of the proclamation and management of National Parks, Wildlife Sanctuaries, Conservation Reserves and Community Reserves. The Act also gives the State Governments the power to identify the area as a protected area and also gives the authorities to search, seize, arrest and prosecute all those found violating the rules and regulations of the law to the officials who have the mandate to undertake the above functions that is the

Chief Wildlife Warden. Later amendments especially in 2002 and 2006 reinforced clauses concerning penalties, added a new classification of the areas to be under protection and also set up mechanisms like National Tiger Conservation Authority and Wildlife Crime Control Bureau to handle the organized wildlife crimes. The legal system of India is further underpinned by the Forest (Conservation) Act, 1980, Environment (Protection) Act, 1986 and adherence to the international standards under conventions like the Convention on Biological Diversity (CBD) and CITES. Neither this intensive legal framework nor processes, nor the prosecutorial capacity and burden of evidence can solve this issue of enforcement despite evidentiary burdens, procedural latitude, and discretionary administrative authority that underscores the discrepancy between the legal protection of statutory protection and its practical implementation. [4]

3 Pradeep Krishen v. Union of India & Others (AIR 1996 SUPREME COURT 2040)

In this case, the Supreme Court had problems with the diversion of conserved forest land and the ecological effects of the development processes in or around the protected lands. This case focused on the precautionary principle and how close care needs to be taken before any non-forest activities can be undertaken in ecological sensitive areas. The Court emphasized the fact that the issue of environmental protection and conservation of bio-diversity are included in the constitutional requirement articulated in Articles 21, 48A, and 51A (g) of the Constitution. It solidified the point that the diversion of the protected areas cannot be arbitrary and that conservation aspects should override the short-term economic interests, hence the jurisprudential principle of protecting the biodiversity.

4 S. Jagannath v. Union of India & Others (1997) (AIR 1997 SUPREME COURT 811)

The Supreme Court in this historic ruling that shrimp farm industry in coastal regions would adversely affect the environment dealt with massive environmental destruction by large-scale aquaculture farms. The Court was using the precautionary principle and the policy of polluter pays in its decision to close down some units involved in the harmful aquaculture which were operating inside the Coastal Regulation Zones (CRZ). It realized the ecological significance of coastal ecosystems such as mangroves and wetlands that are the essential ones in protecting biodiversity. The ruling reinforced considerably the environmental regulation, as it provided that economic endeavors do not take precedence over the ecological sustainability and that the State has the responsibility to conserve delicate ecosystems.

5 Vellore Citizens Welfare Forum v. Union of India & Others (1996) (AIR 1996 SUPREME COURT 2715)

The case is a landmark decision in the Indian environmental law. Supreme Court also dealt with the pollution caused by tanneries in Tamil Nadu and introduced precautionary principle and polluter pays principle in the Indian jurisprudence formally. The Court decided that sustainable development belonged to the domestic law and that the cost of avoiding and correcting the environmental harm should be borne by industries. Granting doctrinal principles of biodiversity conservation and access and benefit-sharing regimes, but not entirely concerned with biodiversity, the court judgment strengthens the idea that safeguarding the environment is a part and parcel of the right to life in Article 21.

Protected areas are the most official manifestation of the adoptability of a state about conserving biodiversity. They have legal basis of being placed in statutory provisions that place certain landscapes and seascapes under the maximum protection zone. Nationally protected areas National parks, wildlife sanctuaries, conservation reserves, community reserves, and marine protected areas are most often set up through broad scope legislation that established the boundaries, governance frameworks, and activities that can be conducted. The legislative framework of these places is supposed to establish a legal wall to the destruction of habitats, poaching, mining, and other activities of an anthropogenic origin. Nonetheless, the efficient nature of such legal structures is not based solely on their declaration nature but on the specifics, consistency, and binding quality of the terms within such legal systems. [5]

Laws on conservation inside a country and their agreement with international commitments provide even further detail to the legal framework. Such strategies as the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), define international standards of protection of the habitat and regulation of the trade of wild fauna and flora. The in-situ conservation focus of the CBD is a factor that stimulates states to increase and to efficiently administer those areas which are under the protection whereas CITES is a strict measure applied to the international exchange of wildlife. These commitments are often made in the domestic legislation by use of species protection schedules, trade restrictions, and habitat conservation mandates. Nonetheless, the international principles should be incorporated and not just the presence of international principles does not ensure their enforcement. Lacuna might occur in situations when local sanctions fail to deter the breaking of protection of the CITES-listed species, or when there are breaches of procedures used to prevent swift prosecution. [6]

Moreover, the global regulations are putting more focus on qualitative performance as opposed to quantitative growth of the nature reserves. Global 30x30 aims at conserving 30 percent of land and sea by 2030, yet, it also implies good governance and good management. Domestic laws which rely more on designation of areas without the incorporation of quantifiable criteria relating to the level of ecological performance threaten to be failures to this larger goal. The lack of legal standards

regarding the biodiversity results, the adaptive management, or the regular, ecological evaluation can undermine the functional soundness of the protected lands. [7]

The other structural issue is the relation between conservation laws with other regimes. Environmental impact assessment policies, mining rules, infrastructure policies, and regulations of coastal development frequently overlap with the policies of protected areas. In conservation statutes that incorporate a diversion exception of the form of "public purpose" or "strategic interest" taking place of otherwise protected land, the very purpose of the legislation protecting it can be undermined. These override clauses especially those that are ambiguously stated bring about uncertainty and undermine predictability of conservation protections. [8]

6 The Enforcement Deficit: Institutional Weaknesses and Implementation Failures

Although conservation laws are usually seen as strong during formulation, their success or failure will remain on the institutional machinery that implements them. The lack of enforcement in the areas of protection is thus not a matter of law instituting will, but an indication of structural lack of effectiveness in administration. The continued poaching, encroachment, illegal grazing, trafficking of smuggled timber, and organized trade in wildlife in the specified conservation areas demonstrate a strong institutional gap between the law and the capacity of the institutions. This is a structural loophole in forest and wild life departments, lack of proper infrastructure, lack of coordination among various enforcers, chronic under-funding and lack of sustainability at various government levels. [9]

Forest and wildlife departments assume the leading role in enforcement and can be said to have the most responsibility of monitoring, patrolling, investigation and prosecution of wildlife crimes. These departments are however often severely constrained in capacity. Protected areas can be in expansive remote and ecologically sensitive areas that demand constant monitoring. However staffing rates are not adequately high in comparison to the degree of responsibility. The number of rangers to areas in most jurisdictions is insufficient, which translates to a low frequency of patrolling as well as too much land area to be covered. Lack of adequate frontline officers incurs exposed deterrence, emboldens the offenders and the chances of early detection of the wildlife crimes are diminished. [10]

Other than quantitative lack, a qualitative lack of training and professionalization exists. Crime related to wildlife is becoming more and more organized with advanced and complex networks using advanced weapons, modern technology, and secret communication channels. In many cases, the traditional training models which are based on forest management are not good enough to deal with organized environmental crime. Specific skills needed in investigative work, including digital evidence acquisition, money trail, intelligence, cross-border coordination, and investigative work. In the absence of sustained capacity-building efforts, the enforcement agencies are reactive and not proactive. Lack of specialized wildlife crime units in most areas also serves to further weaken investigative action. [11]

Another limitation that is critical is surveillance infrastructure. Some of the tools used in enforcing the protected areas include, camera traps, drones, satellite monitors, radio communication systems and geographic information systems (GIS). Again, in the case of marine protected areas, the problem of enforcement is more extreme given the extent of such territories in terms of size of the territorial waters and the ability to perform such procedures by sea. Illegal fishing, dredging and illegal trafficking are normally done outside the eye sight of the enforcing officers. The absence of solid technological integration makes the governance of the protected areas extremely reliant on manual patrols, which are ineffective in combating organized networks. [12]

The forensic capacity is another important aspect that is of paramount importance but is often overlooked. The effective prosecution of wildlife crimes would involve sound evidence, which would lead to the seizure of the contraband to identify the particular species or geography of origin. The DNA analysis, species identification, and ballistic analysis of wildlife are pertinent in gaining convictions. There is, however, sluggish laboratory infrastructure, delays in the processes and absence of trained forensic specialists that prohibit evidentiary strength. Incompetent forensic systems detract the success of prosecution that leads to fewer convictions and weakens the framework of deterrence of conservation law. [13]

Inter-agency coordination failures also add to the enforcement deficit. Wildlife crime overlaps with several areas of regulation, such as criminal law, customs control, border security, and financial regulation. Forest departments can arrest the culprits; however, successful prosecution can only be done on a joint effort with police authority and the public prosecutor. Trans boundary trafficking requires the cooperation of the customs and the international enforcement agencies. Nevertheless, cooperation between institutions is frequently hindered by institutional silos. There can be insufficiently developed mechanisms of information-sharing, ambiguity of jurisdiction and inconsistency of priorities. Cases of wildlife crimes are reported to have a lapse in procedure through a lack of coordination and the result is a case being acquitted or taking a long time to take to court.[14]

The structural obstacles are still present in the form of budgetary constraints. The administration of the protected areas is a financial investment that needs to be continued through the payment of salaries, maintenance of infrastructure, surveillance devices, training, community outreach, and court cases. When the money is allocated to certain projects and not focusing on the routine needs of the operations also leads to allotment inefficiencies. Poor financial planning compromises institutional stability and responsiveness in the long-term. [15]

Besides lack of resources, certain governance problems at local and regional level make the process of enforcement more complicated. Corruption becomes a serious challenge to conservation integrity. Cases of collusion between the enforcement staff and those who violate the law, bribery or selective enforcement undermine the credibility of the institutions. In situations where economic incentive through illegal business of wildlife is high, frontline employees who are underpaid can be susceptible to extraneous influence. The process of allowing development projects, extraction of resources or expansion of infrastructure in or around the protected areas could water

down the enforcement priorities. [16] On the contrary, participatory strategies that incorporate the stakeholders locally into the enforcement mechanisms are likely to reinforce compliance and surveillance. Therefore, the enforcement deficit is objecting not only a factor of institutional weakness but also governance legitimacy. [17]

7 Legal Reform, Accountability, and Governance Transformation

One of the first measures of reform is the strengthening of statutory provisions of enforcement. The laws protecting conservation should be written with accuracy to avoid too much administrative discretion and also specifying the behaviour that should not be made against the unprotected lands. General exemption provisions and the vaguely defined licensing authority must be reduced to avoid watering down of conservation intent. Laws should also have clear criteria of ecological performance, regular assessment of the covered zones and a compulsory reporting on compliance. The jurisdictional ambiguity can be lowered by clear allocation of enforcement roles among the agencies. Also, the model should include provisions that tackle new threats like cyber wildlife trade and money laundering of tainted profits to keep abreast with the modern world. The clarity of legislation supports its enforceability, as well as reduces interpretative gaps and contradictions, which weaken the intent of conservation. [18]

Another necessary reform is improving the deterrent penalties. The punishments should be relative to the ecological losses and economic gains that are linked to wildlife crime. In the cases where trafficking is making large illegal income, the fines and the few sentences should not produce any significant deterrent effect. Graduated systems of sentencing, which would differentiate between subsistence offences and organized criminal activities, can guarantee equality and increase the sternness against high-rank offenders. Enforcement can also be reinforced by the creation of specialized environmental courts or special wildlife benches within the current systems of justice. The specialization of the judiciary assists in the predictability of the conservation law, better interpretation of ecological degradation, and the quick disposal of cases. Special prosecutors with training in the environmental movement can ensure that the cases are better presented and the failures in the process that lead to acquittals are minimized. [19]

The incorporation of wildlife offence in the organized crime systems is important in addressing the dynamic nature of the vice. Wildlife trafficking is rather a regulatory crime that must not be considered as a simple regulatory infraction, but it should be viewed as a serious type of environmental crime that is embedded in a transnational network. [20] Restructuring money transfer regulations to include wildlife crimes, introduce asset forfeiture policies and organizing crime laws will help law enforcement bodies focus on the money flows, not just physical contraband. Financial investigations are able to eliminate criminal businesses by freezing financial

resources, tracking profits and convicting the heads of the networks. Urgent measures on intercepting trafficking routes through the use of intelligence-led enforcement tactics together with other national and international agencies working to combat crime can help in the thwarting of trafficking operations better than separate patrol-led actions in the safe haven. [21]

Enhancement of monitoring and accounting systems is also critical. To enforce effectively, good data should be in place on the trend of biodiversity, poaching, and results of the prosecution and the performance of the management. Institutional accountability can be enhanced by transparency in reporting systems and independent audits of controlled area management and computer-aided control of enforcement. Satellite surveillance, drone surveillance, and electronic permit systems will increase transparency and limit the chances of corruption through the use of technological resources. Frequent public release of the enforcement data, such as the effectiveness of the conviction rates and the outcomes of sentencing, can promote the institutional credibility and stimulate the improvement of the policy. The accountability structures have to stay not just on frontline enforcers, but also on administrative decision-makers, i.e. those who may give licenses and forbearance of places of interest. [22]

The community-based enforcement and the right based conservation models provide a game changing aspect towards closing the enforcement gap. Local populations residing around the boundaries of the areas under protection are most likely to notice that something wrong is going on first, but in the past, they have not been involved in the official enforcement of law. [23] Tele-detecting indicators through community members can enhance surveillance and help promote collective stewardship by incorporating community members into participatory monitoring programmes, co-management arrangements and conservation benefit-sharing schemes. Realization of land and resource ownership of Indigenous Peoples and local communities helps not only to embrace social justice but to achieve successful conservation outcomes because empirical data show that where territories are managed by communities, they often prove to be successful in protecting biodiversity. [24]

The institutional reforms also need to deal with weaknesses of governance corruption and political interference. Openness in hiring, good payment of the frontline personnel, and good disciplinary tools can reduce the vulnerability to bribery. Institutional integrity can be improved by creating separate monitoring institutions or environmental ombudsman. Professionalization of enforcement structure requires capacity-building programmes on investigative skills, cybercrime detection, forensic techniques, and inter-agency coordination. Training is a continuous process that makes the enforcement agencies relevant to current criminal tactics. [25]

Transformation in Governance is inseparable to international cooperation. A global problem is that wildlife crime is not limited to a particular country, and requires standards of uniformity in the law and mutual implementation. Tran's boundary enforcement can be strengthened through bilateral and multilateral arrangements that promote intelligence exchange, collective operations, as well as legal assistance. International instruments like the CITES should be maintained with strong domestic

measures of implementation. International databases, integrated customs check as well as cross-border surveillance of finances improve the overall ability to break up trafficking rings. Moreover, mechanisms of international funding should be able to focus not only on increase of the territory covered by the protection, but also on enhancement of the control systems in the existing ones. [26]

8 Conclusion

In areas that display a strong legislative foundation, there are institutional weaknesses and failures such as staffing (poor staffing and insufficient staffing), technological (poor technological inadequacy and technological deficiency), and coordination failures (poor coordination and inadequate coordination), and limitations on finances which hinder enforcement. This administrative reality is caught by the fact that the transformation of wildlife crime into an organized, transnational enterprise that applies the loopholes in the legal frameworks as well as procedures also exerts pressure on these administrative realities. The required intercession of this divide is beyond the expression of the span of guarded lands. It needs to be statutorily exact, institutionally professionalized, have specialized adjudicatory systems, to have been integrated into organized crime, and participatory forms of governance that enable local communities. It is only through concerted legislative change and governance metamorphosis that the operation of layers as true asylum and not proclaiming hoards, which the poem of the step-brothers creates. Finally, the legal process is not valuable alone as an effective conservatory measure, it must be followed by competent and consistent use of the law as a method of protecting ecological integrity.

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