



# Politics of Vermin:

## The Need for Evidence-based Human-Wildlife Conflict Mitigation

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Issue Brief

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ISSUE BRIEF

# Politics of Vermin: The Need for Evidence- based Human-Wildlife Conflict Mitigation

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## ABSTRACT

The new Wild Life (Protection) Amendment Bill, 2021 seeks to reduce the number of schedules in the Wild Life (Protection) Act, 1972 from six to four. The Schedules in the act provide varying degrees of protection to animals and plants. The new amendment bill also proposes to remove Schedule V, which gives the Centre direct power to declare any species 'vermin' and allow them to be freely hunted. In this context, this paper analyses the category of vermin, its problematic nomenclature, and colonial origins. Further, it examines the implications of labelling an animal 'vermin' and the resulting ramifications of the animals undergoing mass culling. Finally, the paper seeks to explore the effectiveness of mass culling as a measure to mitigate Human-wildlife conflict [HWC] in India and highlights other potential methods to address the complex issue.

**Keywords:** Human-wildlife conflict, Wild Life Protection Act, vermin, mass culling

## INTRODUCTION:

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In December 2021, The Wild Life (Protection) Amendment Bill, 2021 was introduced in the Parliament proposing changes to the Wild Life (Protection) Act, 1972 [WLPA]. WLPA is a critical law that provides protection to and conservation of wild animals, birds, and plants in India. The WLPA, 1972 currently has six schedules that assign varying degrees of protection to animals and plants. For instance, under Schedule I and II of the Act, animals and birds such as tigers and elephants are offered the highest protection. Thus, offences against them have the highest penalties. Species under Schedule III and Schedule IV are less protected. Schedule V lists species classified as 'vermin', such as common crows, fruit bats, rats, and mice, which may be hunted freely.

Though the act does not define the word 'vermin', WLPA's 62nd section grants the Central government the power to declare any wild animal, other than those specified in Schedule I and Schedule II, as vermin for any area and a specified period. Being in this category deprives said animal of protection, thereby allowing for its hunting without any consequences (WLPA, 1972). Vermin are usually considered problem or nuisance animals that attack humans, crops, livestock, or property. In order to prevent aforementioned human-wildlife conflicts [HWC], several states in the past have petitioned to declare various animals to be 'vermin', including elephants, Indian porcupine, bonnet macaque, common langur, barking deer (Chakravarty et al., 2016). In 2016, the Centre declared rhesus monkeys in Himachal Pradesh, wild boar in Uttarakhand and Nilgai in Bihar to be 'vermin' (The Hindu, 2016a). Maharashtra and Telangana, too, have given orders to kill wild boars (Sinha, 2016). The states of Maharashtra and Goa have also filed complaints regarding peacocks, India's National Bird, and West Bengal allegedly requested that the elephant, Schedule I animal, be declared 'vermin' to reduce crop damages (The Hindu, 2016b).

The new Wild Life (Protection) Amendment Bill, 2021 brings in a major change by reducing the number of Schedules from six to four. It proposes to remove Schedule V completely. This gives the Centre direct power to declare any species to be 'vermin' and make way for them to be freely hunted. Some of these species include erstwhile threatened species under Schedule II such as jungle cats (Sinha, 2022). Hence, the procedure to declare animals to be 'vermin' becomes easier and the number of species labelled 'vermin' also increases. According to Sinha and Padmar (2022), this change could potentially impact 41 species of mammals, 864 birds, 17 reptiles and amphibians, and 58 insects.

Growing human-wildlife conflicts poses a threat to both animals and people, given their increased interaction and competition for natural resources and space. A recent report by the World Wide Fund for Nature and United Nations Environment Programme (2021) stated that HWC is one of the greatest threats to the long-term survival of several wildlife species. Moreover, incidences of HWC in the form of crop/livestock damage are widely reported from different parts of the country. For instance, in 2016, the Himachal Pradesh Department of Agriculture reported a crop loss of ₹184.28 crore due to wild animals, particularly monkeys (Bisht, 2021). Similarly, 7,562 cases of crop-raiding by wild animals have been reported across Tamil Nadu since 2017 (Chaitanya, 2020). On the other hand, no official data on the culling of animals exists. Reportedly, the Bihar government declared nilgai to be 'vermin' in 2016 to deal with crop damage. Between 2016 and 2019, some 4,729 nilgais were culled (Khan, 2021).

With the new Amendment Bill, the label 'vermin' becomes even more alarming. This paper begins by analysing the category of 'vermin', its problematic nomenclature, and the colonial roots of the term.



Further, it examines the implications of labelling an animal ‘vermin’ and consequently, how ‘vermin’ are dealt with, i.e., by mass culling. Lastly, the paper seeks to explore the effectiveness of mass culling as a measure to mitigate HWC in India and highlights other potential methods to deal with the complex issue.

## HISTORY OF ‘VERMIN’ AND ECOLOGICAL IMBALANCE

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The category of ‘vermin’ in the WLPA has distinct colonial origins and little scientific basis. Broadly speaking, vermin are animals that cause problems to human society; be it as pests carrying disease or - more relevant to this paper - those causing damage to crops. This section tries to answer whether a mediaeval term like ‘vermin’ should dictate national or state level policy decisions or legislations and how the State chooses to govern the country’s wildlife. It begins by tracing the etymology of the term ‘vermin’ and how it shaped discourse around law and order in England and subsequently in colonial India.

The word ‘vermin’ literally means ‘noxious animals’. It has been in use in the English language since c. 1300. It has its roots in Latin where ‘vermis’ meant ‘worm’ or in Old French where it meant a ‘moth, worm, or mite’ (Harper, n.d.). Ontological exercises have found ‘vermin’ being defined as animals that are permitted to be killed because they caused damage to, devoured, or destroyed the fruits of human labour and means of subsistence in ways that “confounded human efforts to control them” in early modern Europe (Lynteris, 2019). Discourse in 17th-century England characterised vermin as threats to ‘human civility’, who were greedy, cunning, and “overall tricksters” (ibid.). This perception was further compounded by the perception of vermin as bearers of disease, particularly the plague. Hence, the extermination of vermin became a public health measure to mitigate disease.

British legislation was the first to mandate vermin extermination as seen in India under the WLPA, 1972. These were the Tudor Vermin Acts that “allowed officials to hinder the growth of vermin by placing a bounty on nuisance animals, creating an incentive for private citizens to take it upon themselves to eradicate what were believed to be agricultural pests” (Brammer, 2012). The Vermin Acts included The Preservation of Grain Act, 1532. The Act was further strengthened in 1566 by making it “compulsory for every man, woman, and child to kill as many creatures as possible that appeared on an official list of ‘vermin’”. These included owls, otters, foxes, hedgehogs, and others that were seen as bad omens or competitors of food with humans (Bingham, 2021).

The British Raj brought to India the ideas of desirable animals, i.e. suitable for hunting and subsequent consumption being considered game, and problematic animals being considered vermin. These very ideas were then used to establish British colonial control over the ecology of India and its people. Coming from a place where the native wolf population - also considered vermin - was systematically exterminated, the complete eradication of any vermin made good sense to the coloniser. This was done by setting bounties on the animals caught. Local hunters, called shikaris to distinguish them from English sport hunters, actively took part in these vermin eradication campaigns as a way of earning good money (Rashkow, 2014). Historian Om Prakash (2006) documents the killing of 80,000 tigers, 150,000 leopards, and 200,000 wolves in the British Raj. Mahesh Rangarajan (2001), a pioneer in environmental history, also notes that “about 1500 to 2000 elephants were captured from the wild every year around the late 19th century”. The elephant was also a victim of bounty

hunting until the Rebellion of 1857, after which their extinction became of concern (Rangarajan, 2001).

Interestingly, it was when sport hunting dwindled that the colonists created game preserves out of the fear that soon no animals would be left to hunt (Prakash, 2006). Thus, the policy-making rhetoric shifted from protecting the locals from wild predators to protecting “wildlife from the callousness of the average native” (Shresth, 2009). The pioneers of conservation in India such as Corbett and Champion, carried the mantle of the paternalistic protector who did not trust the locals’ ability to protect nature (Rangarajan, 2001).

Rangarajan (1998) noted that the extension of cultivation, hunting for sport, and bounty hunting of tigers went hand in hand to drastically reduce their numbers by the early twentieth century. This process did not result in a corresponding decline in conflict with humans. Loss of forested hunting grounds to the spread of agriculture and prey to game hunting made tigers turn to livestock and sometimes even humans for survival. By inference, one can argue that the widespread hunting of large predators in India was directly responsible for the menace created by herbivorous vermin like rhesus macaques, nilgai, boars, etc. in contemporary times. Research by the Royal Society in 2014 showed that “lethal control of an apex predator has cascading effects on forest mammal assemblages”. This means that the reduced population of apex predators makes for an increase in the disruptive activity and number of prey and smaller predators. The increase in herbivore numbers thus results in decreased flora cover and their disruptive activity leads to increased chances of venturing into human habitation for food (Colman et al., 2014).

Similar to the colonial period, the Indian government has given blanket permissions to eradicate the vermin population by providing financial incentives. For instance, the Himachal Pradesh state government offered between Rs 5,000 and 7,000 for every monkey killed as vermin (Sharma, 2016). However, the targeting of a certain species causes serious ecological imbalance. Habitation of an area by a certain species meant that the region was conducive to them. Mass culling would create a vacuum in the food chain, thereby negatively affecting the ecology. This is seen in how wild boars help plough forest lands and aid the creation of various habitat conditions, the spreading of plant seeds, and providing a long-term increase in biodiversity (Chandran, 2021).

## MASS CULLING

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Hunting for sport was a way for the British to maintain their masculine prestige and aura as capable controllers of the wild. However, this cost India significantly in terms of biodiversity and wildlife. Hence, the question remains: can mass killings intended to exterminate an entire species, or at least a significant portion of it, prevent human-wildlife conflict?

Experience in other countries has shown that mass culling or lethal control of problem animals is not necessarily an effective means of preventing human-wildlife conflict (Nyhus, 2016). Nevertheless, it is widely practised to prevent infectious diseases. On the contrary, it has been argued by wildlife scientists that culling through capture and/or killing is not an effective way to manage conflicts or prevent their recurrence. In fact, culling may even exacerbate conflicts (Volski et al., 2021). While methods of lethal control of human-wildlife conflict endanger the targeted species, traps and snares more often than not prove fatal for non-targeted animals (Treves and Treves, 2005; Ranjan, 2021).

The Nagarhole National Park in Karnataka saw an increased number of snares after the Karnataka government legalised the culling of wild boars in 2016 in the name of crop damage (Gupta, 2017). However, animals like tigers, leopards, and bears were getting caught in these traps as well. All three are Schedule I animals in the WLPA, 1972 and have the highest protection under Indian law against their killing (ibid.).

Data from the Karnataka state government, Mysore University, and the Salim Ali Centre for Ornithology and Natural History showed that the population of these ‘problem’ species were in an overall decline (Raman, 2016). Nonetheless, conflicts continued to rise despite widespread vermin extermination. A 2020 census by the same organisations showed that the rhesus macaque population in Himachal Pradesh has reduced by 33.5% (Sharma, 2020). Since 2016, the animal has been declared ‘vermin’ four times. Despite a reduction in the rhesus population, conflicts have been increasing. A reason for the increase in conflicts is that often unscientific killings of rhesus monkeys disrupts power hierarchy amongst them. When the alpha of a rhesus pack is killed or removed, the pack loses its integrity. The babies or sub-adults might not know how to behave and, thus, might cause havoc and create even more conflicts with humans (ibid.).

Research carried out in other countries has shown that non-lethal means of human-wildlife conflict management is more effective than lethal ones (Treves et al., 2016). A review of existing literature from the US, Slovenia, France, and other northern European countries reveals that not only were lethal methods such as poisoning and trapping less effective, but they tended to increase attacks on livestock (ibid.). Non-lethal methods were also tested for effectiveness and evidence before deployment more often than lethal methods (Gaworecki, 2016). The non-lethal methods included livestock guarding animals, deterrents and repellents, diversionary feeding, and sterilisation.

More importantly, mass culling as a means of HWC mitigation does not address the real reason why human-wildlife conflicts are rising. Habitat destruction and encroachment are the biggest cause for the increase in HWC incidents. Developmental projects, industrialisation, and agricultural expansion have drastically reduced forest cover, thereby bringing wild animals near agricultural settlements. Nilgai and wild boars have adapted to this human alteration of the landscape and have multiplied, while also being ecologically displaced (Economic and Political Weekly, 2016).

## POLICY RECOMMENDATIONS

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With the rapid expansion of the human population and development activities and shrinking wildlife habitat, HWC has increased in severity, frequency, and complexity in several parts of India. However, as noted above, declaring an animal a ‘vermin’ is neither a sustainable nor an effective solution towards mitigating HWC. It instead leads to unscientific killings and exacerbates the risk of HWC. The new amendment bill widens the scope of declaring animals as vermin and may lead to unfettered exercise of the powers by the Central government. Consequently, there is an urgent need to maintain a database on the extent of crop damage and conduct scientific surveys or censuses on problem-causing animals and conflict patterns. Unscientific and abrupt decisions made without data will have a long-lasting impact on the ecosystem and biodiversity.

To mitigate HWC, a more biosocial approach is needed that combines scientific management, the study of animal behaviour, landscape, and socio-economic context (Raman, 2016). Precautionary measures such as deploying animal warning systems, monitoring, and providing public information on the movement of animals to people, and active involvement of local communities and bodies would help reduce HWC (ibid.). For instance, Delhi-based mechanical engineering student Abhay Sharma invented the Animal Intrusion Detection and Repellent System [ANIDERS] device, which uses a combination of light and sound to scare animals away and triggers only when intrusion is detected (Chakravartty et al., 2016).

Moreover, there is a need to adopt science-based interventions to dissuade wild animals from damaging crops and property. For instance, a 2016 study by Urvashi Nandal highlighted how nilgais are scared of shiny reflective materials and farmers could thus use CDs tied on sticks around the crop fields to keep the nilgais from destroying the crops (ibid.). Another study in 2015, found that spreading human hair collected from barber shops around crops controlled the damage from wild pigs in farms up to 40-50%, as the pigs did not like the minute hair sticking to their nostrils (Rao et al., 2015). Additionally, providing bio-fencing and power fencing around vulnerable areas can help keep animals away.

Recently, the government announced that crop depredation or damage caused by wildlife will be covered under the Pradhan Mantri Fasal Bima Yojana (Pinjekar, 2020). This is a positive step. However, there remains a need to enhance local amenities such as lighting, indoor toilets, and rural public bus services to reduce human casualties caused by HWC. Additionally, devising better garbage disposal mechanisms and avoiding intentional or accidental feeding of animals, like monkeys, will be beneficial (Raman, 2016). The most suitable approach to mitigate HWC is to reduce the risk of humans encountering wild animals.

Mass culling is not a solution to this issue, as it only feeds into the vicious cycle of ecological imbalance and degradation that it sets into motion. A scientific study of vermin populations and behaviours and measures to control them is the best way forward to reduce loss of both animal and human life, minimise crop damage, and understand HWC better.

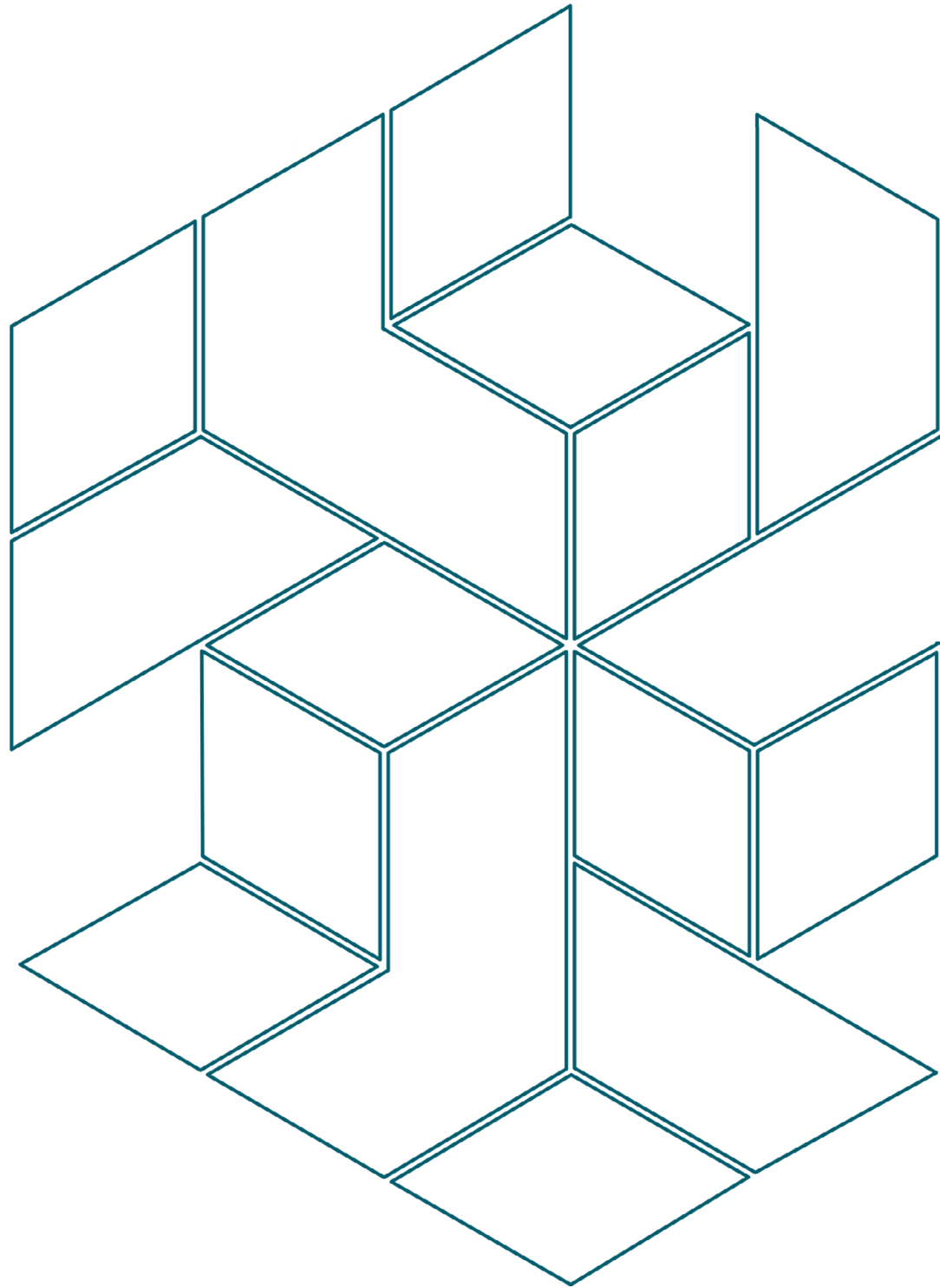


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