# MANAGEMENT OF FREE-RANGING DOGS (FRD) IN AND AROUND WILDLIFE PROTECTED AREAS IN INDIA

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FRD hunting Kiang/Tibetan Wild Ass (Schedule I species), Ladakh. Photo: Saurabh Sawant

### **ABSTRACT**

### This paper

- Reviews and examines the illegality, ineffectiveness and limitations of the National Tiger Conservation Authority's Standard Operating Procedures regarding management of free-ranging dogs (FRD) in Protected Areas in India.
- Examines existing ineffective legislation and the interference and influence of animal
  rights activism (ARA) agendas, funding and philosophy in the formulation of relevant
  policy regarding management of FRD.
- Reviews relevant Indian laws and Acts, international agreements regarding
  conservation, internationally acknowledged and practiced conservation protocols and
  wildlife management principles, scientific papers, genuine data and Indian
  philosophical contexts to put forth both preventive and active measures, including
  lethal control, as humane and effective solutions for the management of FRD in India.

### INTRODUCTION



An animal rights activist feeds dogs on Morjim beach (Goa), a designated turtle nesting site, while a municipal worker rakes up dog faeces. Photo: Ryan Lobo

In Asia, wild dogs or dholes ( $Cuon\ alpinus$ ) were regarded as a pest species during much of the  $20^{th}$  century in India. The domesticated dog ( $Canis\ lupus\ familiaris$ ) has descended from the wolf ( $Canis\ lupus$ ) and has little to do with wild dogs like the Dhole. The present paper does not deal with dholes but with domesticated dogs.

There are an estimated 1 billion dogs in the world today and consequently, dogs are the world's most abundant carnivore (Ritchie *et al.*, 2013). Domestic dogs are believed to have first diverged from wolves around 100,000 years ago. Around 15,000 years ago dogs started diverging into the multitude of breeds known today (Anonymous, 2010). This divergence was possibly triggered by humans changing from a nomadic, hunting-based lifestyle to a more settled, agriculture-based way of life (Vilà *et al.*, 1997). Dogs were reared to be companion and working animals, developing and exhibiting qualities of faithfulness and loyalty. Today, these very qualities make them one of the most popular pets around the world and their taxonomic Latin name *Canis lupus familiaris* means 'dog or wolf of the household'.

Having descended from wolves, dogs are also born predators, regardless of breed. The dog's similarity to the extant grey wolf is the result of substantial dog-into-wolf gene flow with the modern grey wolf being the domesticated dog's nearest living relative. Being predators, they have evolved to chase, kill and eat prey. The prey can comprise both domestic animals and wildlife and a predatory instinct remains regardless of a dog being 'feral', 'domestic', 'owned', 'free-ranging', 'purebred', or 'stray'. All types of domestic dogs can interact with wildlife and have severe negative impacts on biodiversity. (Doherty *et al.*, 2017)

A *feral animal* is one that has escaped/been abandoned from a domestic or captive status and has returned, partly or wholly, to its wild state.

Feral animals disrupt and destroy ecosystems and have contributed extensively to depredation and the extinction of indigenous species. The most famous example of this is the dodo (*Raphus cucullatus*), a ground nesting, flightless bird that was driven to extinction by humans and feral animals released from European ships, notably pigs and monkeys. Other examples are the pressure on marsupials by the introduction of placental mammals in Australia, including dogs.

Free-ranging dog (FRD) is defined by Beck (1973) as "Any dog observed without human supervision on public property or on private property with immediate unrestrained access to public property".

Thus a 'stray dog' or free roaming dog (FRD) can be defined as any dog in a public place not under direct human control or confinement. Therefore, this term encompasses unowned dogs as well as owned dogs, but does not include dogs on leashes or under any form of direct human control. Free-ranging dogs can be feral but can also belong to other categories i.e., they can be owned or unowned, etc.

Regarding categorizing India's free-ranging dogs, scientists agree that "owned", "stray" and "feral" dogs are not closed categories and that dogs may change their status throughout their life (Scott & Causey, 1973; Nesbitt, 1975)supporting Daniels & Bekoff's (1989) view of feralization as a behavioral ontogenetic process, sometimes occurring within an individual lifetime i.e. an owned, unowned or 'stray dog' can go feral and the opposite may also occur.

In India there were approximately 59 million unowned/free-ranging dogs in 2014 (Gompper, 2014), with the number having likely increased significantly since 2014 as stray dog numbers are related to urbanization and human population.

"Free-ranging urban dog populations can cause serious social and public health and safety problems for the community by their biting of people and other animals, causing automobile accidents, frightening the public and fecal and urine waste contamination. In addition, they disrupt containerized trash. This disruption adds to the cost of trash collection and encourages the proliferation of pest insects and rodents" (Beck, 1973;1974;1979; Rubin & Beck, 1982)

Since without human supervision, dogs are exclusively carnivores, any dog not contained and/or controlled by human beings within a private property is likely to hunt, kill and eat wildlife or

livestock, cause disturbance and stress to wildlife or livestock, compete with wild predators for prey, hybridize with other species and spread diseases to wildlife and livestock.

Sprake (1932) advised that healthy dogs of retriever or similar size should get 170 -226 gm of meat and 510 gm of bread per day. Since FRD do not have access to bread or other cooked cereals, it is safe to assume that the actual daily requirement meat for FRD is around 250 gm or more, even if this amount is obtained in larger quantities erratically. For example, carnivores are not usually able to kill prey every day, but whenever they do, they eat large quantities so that they can survive for some days without food. In human-populated landscapes worldwide, domestic dogs (*Canis lupus familiaris*) are the most abundant terrestrial carnivore. (Home *et al.*, 2017) and all dogs eat meat.

Dogs are generalist and opportunistic predators andare able to capitalize on different food sources. Some categories of dogs (such as feral, wild dog, and rural free-ranging) can potentially have greater impacts on wildlife than others (such as urban dogs). The relationship between ranging behavior, location, and diet was explored and it was found that urban dogs had a limited range and diets that were more human-dependent. However, as ranging behavior increased and the location of dogs became more rural, their diets become more opportunistic and less human-dependent. For example, five of eight (~63%) feral dog populations were almost entirely dependent on wild-caught food. (Ritchie *et al.*, 2013).

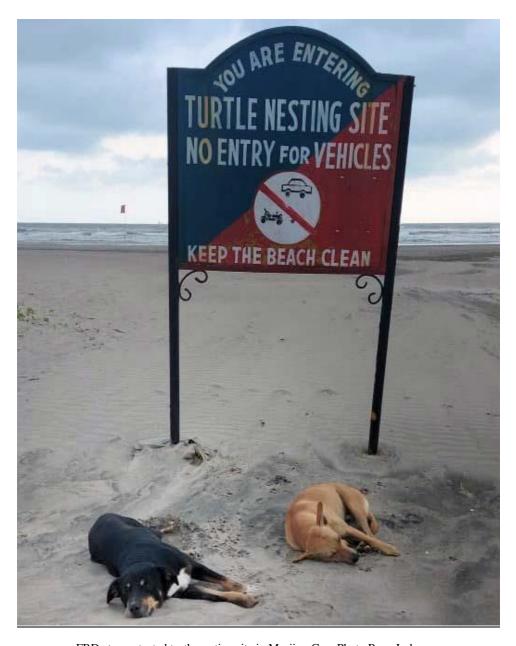
If one were to hypothesize on the ideal requirements for a medium sized dog, it could work out to about 70 kg of meat per year per dog; for the estimated 59 million Indian FRD (Gompper, 2014), this would hypothetically work out to 4,130,000 tons of meat per year or about 413 million goat sized animals @ 10 kgs of meat per animal. One can hypothesize that Indian FRD could kill and consume about one million animals, every day. In a fragmented landscape supporting over a billion humans, no wildlife population cannot be expected to thrive or in some cases survive under such rates of attrition.

The interests of humans, wildlife and dogs are therefore best served when dogs are under the supervision and control of human owners.



 $Blackbuck\ (Schedule\ I\ species)\ killed\ by\ FRD,\ Tal\ Chhappar\ Blackbuck\ Sanctuary,\ Rajasthan.$ 

Photo: Sumit Dookia



FRD at a protected turtle nesting site in Morjim, Goa. Photo Ryan Lobo



Blackbuck (Schedule I species killed by FRD, Jayamangali Blackbuck Conservation Reserve, Karnataka. Photo: Sandeep Das

### **INVASIVE ALIEN SPECIES (IAS)**

As per the IUCN Issues Brief, "Invasive alien species (IAS) are animals, plants or other organisms that are introduced into places outside their natural range, negatively impacting native biodiversity, ecosystem services or human well-being." IAS are one of the biggest causes of biodiversity loss and species extinctions, and are also **a** global threat to food security and livelihoods."

Invasive Alien species include Free Ranging Dogs (FRD). Domestic dogs (*Canis lupus familiaris*) in Protected Areas in India can be considered a 'biological invasion', which occurs when a species expands into an area it hasn't previously occupied. Domestic dogs are clearly not

wildlife, are not designated as wildlife as per the Indian Wildlife Protection Act, 1972 and are an Invasive Alien Species (IAS) within any wildlife environment.

IAS are the most common threat to amphibians, reptiles and mammals on The IUCN Red List; they may lead to changes in the structure and composition of ecosystems, detrimentally affecting ecosystem services, human economy and wellbeing. IAS are considered such a serious problem that Aichi Biodiversity Target 9 and one clause of UN Sustainable Development Goal 15 – Life on Land specifically address the issue. It is imperative to note that IAS are considered by the IUCN to be the second largest threat to biodiversity after habitat loss and IAS includes free ranging dogs.

According to The IUCN Red List of Threatened Species, IAS are one of the top causes of biodiversity loss and the second most common cause of species extinctions. IAS impacts go beyond biodiversity and also seriously affect economic activities, livelihoods, food security, and human health and well-being. Overall, IAS risk undermining progress towards achieving 10 of the 17 UN Sustainable Development Goals (SDGs).

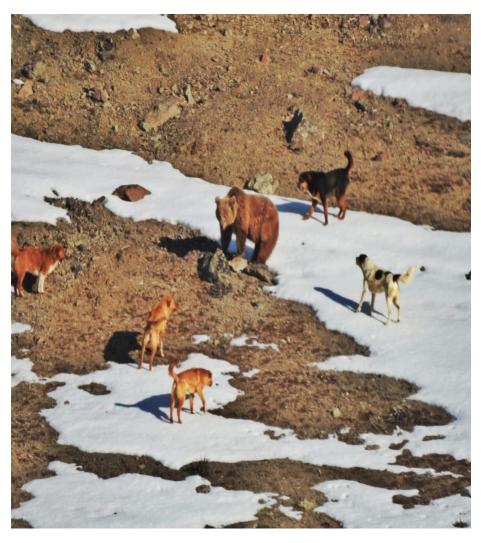
Notable extracts from the IUCN Issues Brief.

- "The impacts of alien invasive species are immense, insidious, and usually irreversible.
   They may be as damaging to native species and ecosystems on a global scale as the loss and degradation of habitats.
- "Feral animals can be some of the most aggressive and damaging alien species to the natural environment, especially on islands. Despite any economic or genetic value they may have, the conservation of native flora and fauna should always take precedence where it is threatened by feral species.
- "Where it is achievable, promote eradication as the best management option for dealing
  with alien invasive species where prevention has failed. It is much more cost effective
  financially than ongoing control, and better for the environment.
- "Where relevant, achieve significant benefits for biological diversity by eradicating key alien mammalian predators (e.g., rats, cats, mustelids, dogs) from islands and other isolated areas with important native species."

### PROTECTION OF WILDLIFE IN INDIA AS DEFINED BY WLPA 1972

As per the Indian Wild Life Protection Act (WLPA), the government is to afford protection to all wild animals (the species specified in Schedule I to IV of the Act) wherever they may exist. Even on private property and public lands, not just notified protected areas(PAs) such as wild life sanctuaries and national parks.

Article 51-A (g) of the Indian Constitution says that, "It shall be duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures."



FRD harass a Himalayan Brown Bear (Schedule I species) in Kargil, Ladakh. Photo: Niyaz Khan

Thus, the government and citizens are bound to afford protection to wildlife as defined by WLPA wherever that wildlife (mentioned as "wild life" in laws) may occur. Domestic dogs are not defined or designated as wildlife as per the WLPA (Anonymous, 1972).

### IMPACT OF FERAL/FREE-RANGING DOGS (FRD) ON WILDLIFE



Tibetan Lynx (Schedule I) species killed by feral dogs In Hanle, Ladakh

"Domestic dogs have contributed to 11 vertebrate extinctions. Domestic dogs pose a risk to nearly 200 threatened vertebrate species worldwide, and this estimate is likely conservative owing to reporting biases (Doherty *et al.*, 2017). This includes 96 mammal (33 families), 78 bird (25 families), 22 reptile (10 families), and three amphibian (three families) species (Fig. 1a; Table A1). Of these threatened species, 30 are classed as Critically Endangered (two of which are classed 'possibly extinct'), 71 Endangered, and 87 Vulnerable (Table A1). Predation is the most frequently reported impact, followed by disturbance, disease transmission, competition, and hybridization" (Doherty *et al.*, 2017).

With regard to effects on wildlife in India, predation is the most frequently reported impact, followed by disturbance, disease transmission, competition for prey and hybridization with wild species like wolves and other species. Conservation scientist Abi T. Vanak of ATREE, Bangalore, who has studied the impact of free-ranging dogs says, "Because of their instinctive nature, dogs will still form packs, and chase animals, either for food, or for fun. Such encounters can have potentially deadly effects on wildlife, either through direct killing, or by constant harassment and stress."

A 2017 research project conducted by the Ashoka Trust for Ecology and Environment titled 'Canine Conundrum: Domestic dogs as an invasive species and their impacts on wildlife in India', was the first ever sub-continent scale assessment of the impacts of dogs on native species in India and looked at newspaper reported cases of dog attacks on wildlife.

The research revealed that 80 species of wildlife have been attacked by dogs in India, out of which 31 are listed as Threatened on the IUCN Red List, including four Critically Endangered species. Most of the attacks were carried out by packs of dogs with 45% of these attacks leading to the death of the prey. Nearly 48% of the incidents were reported in and around wildlife protected areas, suggesting that dogs are an important large-scale edge effect around protected areas in India. The study recommended 'strong population control measures', especially around conservation areas.

According to the Status of Tigers Co-predators and Prey in India 2018 <u>report</u> that was unveiled by the Indian government in 2020, feral dogs were detected in camera traps in most of India's 50 tiger reserves. Camera traps captured more dogs than tigers in 17 Tiger Reserves in India. The report stated "dogs are a threat to both ungulates (which they hunt) and to carnivores, since they carry infectious diseases like rabies, parvovirus, and distemper." (Jhala et al., 2019)

In a study conducted at Panna Tiger Reserve of Madhya Pradesh for sero-surveillance for canine parvovirus (CPV), canine distemper virus (CDV) and canine adenovirus (CAV) infections in feral dogs, serological and genomic evidence of pathogens in dogs(and domestic cats) of buffer villages and wild carnivores of Panna tiger reserve indicated that the viruses may pose a high risk of spillover to wild carnivores. Study also indicated that dog population is immune to major infectious diseases but can be a threat to the compromised wild carnivore species including tigers." (Nayak *et al.*, 2020)

It is assumed, given the high numbers of dogs both near and outside PAs, that the true damage inflicted by dogs on wildlife is exponentially higher than what is recorded. The real damage an estimated 59 million free ranging dogs do (Gompper, 2014), to India's wildlife, both within and outside of protected areas, is mostly undocumented and would occur beyond the scope of human observation.



Chinkara (Schedule I species) attacked by FRD and rescued by the Forest Department and local people in a Protected Area in Rajasthan

### DOCUMENTED NEGATIVE IMPACT OF FRD ON WILDLIFE IN INDIA

1. Direct predation of species listed as Schedule I under the Wildlife (Protection) Act, 1972, such as, Blackbuck (*Antilope cervicapra*), Chinkara (*Gazella bennettii*), Lynx (*Lynx lynx*), Tibetan Wild Ass (*Equus kiang*), Black-necked Crane (*Grus nigricollis*), etc.



".... the sheer speed, agility and stamina (of FRD) on display was beyond belief. The older bucks managed to outrun the dog a few times but this fawn which was only a few weeks old had no chance" - Vikas Patil, Dandeli, Karnataka.

2. Direct predation of species protected under other Schedules of the Wildlife Protection Act, 1972, and which constitute important prey species for protected predators such as the Tiger (*Panthera tigris*). Some examples of these predations, many with photographic evidence include Chital (*Axis axis*), Nilgai (*Boselaphus tragocamelus*), Sambhar (*Rusa unicolor*), Wild boar (*Sus scrofa*), Four horned antelope (*Tetracerus quadricornis*), Barking deer (*Muntiacus muntjak*), Blackbuck (*Antilope cervicapra*) and foxes, various birds, hares, small predators like jungle cats and leopard cats etc.



Leopard Cat (Schedule I species) killed by FRD, Coorg, Karnataka. Photo: Hrishikesh Sagar

3. Direct predation and/or harassment to species listed under the 'Species Recovery Programme for 'Critically Endangered Species', e.g. the Great Indian Bustard (*Ardeotis nigriceps*), Snow Leopard (*Panthera uncia*) and Himalayan Brown Bear (*Ursus arctos isabellinus*). Dogs compete with snow leopards and many other predators for prey and carrion. In 2011 The Himachal Pradeshforestdepartment, in coordination with Mysore-based non-governmental organization Nature Conservation Foundation set up camera traps in Spiti Valley and captured shots of a pack of dogs attacking a snow leopard.



A snow leopard cub (Schedule I species) seeks refuge in an army camp after being attacked by a pack of FRD. The cub died of its injuries shortly thereafter. Photo: Prasenjeet Yadav



Snow Leopard (Schedule I species) harassed by FRD, Ladakh, 17th April, 2019. Photo: Narendra Patil.

In 2018, the Wildlife Department in Ladakh documented the first ever case of an adult Snow Leopard killed by FRD.

4. Plundering of nests, depredation of eggs, and predation of juveniles, hence interfering with the breeding biology of Schedule-I species such as the Black-necked Crane (*Grus nigricollis*), Great Indian Bustard (*Ardeotis nigriceps*), Olive Ridley Turtles (*Lepidochelys olivacea*) and Ghariyal (*Gavialis gangeticus*). Leatherback turtle (*Dermochelys coriacea*) nests in Andaman and Nicobar Islands have also been destroyed by dogs and is a regular and ongoing crisis.



Olive Ridley Turtle (Schedule I), that visits beaches to lay eggs, being eaten by FRD. Photo: Arnab Chattopadhyay



Bar-headed Goose chick killed by FRD in Tsomoriri, Ladakh - Photo Neeraj Mahar

5. Threats of hybridization: of dogs with wild canids such as Jackals (*Canis aureus*) and Wolves (*Canis lupus*). The National Wildlife Action Plan 2017-2031 (Anonymous, 2017a) has identified safeguarding genetically pure populations from contamination as priority action.



Wolf-Dog hybrid, Nainital. Photo: Saurabh Sawant

6. Competition for food: Dogs have been recorded on numerous occasions preying on tiger and leopard prey bases like chital, sambhar, chinkara, blackbuck and nilgai and compete with wild canid species such as wolves, jackals and fox. In Ladakh they are a direct threat to snow leopards and wild ungulates (Sharma & Singh, 2021). In January 2021, the Himachal Pradesh government described the density of feral dogs as an "imminent threat" to the state's ecosystem after the Wildlife Wing of the H.P Forest Department conducted a first of its kind study on feral dogs via the Zoological Survey of India (ZSI), on feral dogs in the Lahaul and Pangi landscape. Stray dogs in the trans Himalayan region threaten and kill on a regular basis various wildlife species including snow leopards and lynx and hunt both smaller and prey species like marmots, ibex and blue sheep, as has been documented by photographers and researchers. (Kumar & Paliwal, 2015).



Nilgai (Schedule III species) being eaten alive by FRD in Sultanpur. Photo: Nikhil Devasar

7. Transmission of diseases such as Canine distemper virus (CDV), which can ravage big cat populations as has happened in Africa. CDV can ravage the feline population in the wild. In Africa the Serengeti lion population was hit by an epidemic in early 1994, caused by a morbillivirus which is closely related to CDV. Later that year the epidemic had spread north to lions, hyenas, bat-eared foxes and leopards in the Maasai Mara National Reserve. This epidemic killed at least 30% of the lion population estimated atabout 3,000 in Serengeti at that time (Anonymous,2022).

In India, the lion census of 2015 had put the total population of Asiatic lions in Junagadh, Gir-Somnath, Amreli and Bhavnagar districts at 523. 11 lions had died between September 2012 and September 2019, in the Dalkhaniya and Jasadhar ranges of Gir (east) forest division in Amreli district in a CDV outbreak. The dead included six cubs, three adult lionesses and two adult males. 20 lions (Schedule 1) were infected with canine distemper virus.

In September 2018, an epizootic infection caused by canine distemper virus emerged in an Asiatic lion population from Gir Wildlife Sanctuary. During 2 weeks, the unusual death of 28 lions of all age groups was reported. A detailed investigation revealed 18 additional lions exhibited dullness, dehydration, lacrimation, cough, diarrhea, and seizures. The CDV virus was detected in samples from 68 lions and 6 leopards by reverse transcription PCR. Before 2019, few instances of CDV were reported in lions, tigers, red pandas, and leopards from zoos and forests in India. (Mourya *et al.*, 2018). In the first five months of 2020, 92 Gir lions have died, with 60 deaths in just April and May, many attributed to CDV.

A threat of CDV also looms over the tiger population of India. A recent study noted that 86% of the tested feral and free ranging dogs around the Ranthambhore National Park carried CDV antibodies in their bloodstream. "The fact that a high percentage of dogs had been exposed to CDV could mean that they could potentially be a reservoir of the virus and that the dogs in these areas were exposed to the virus through another infected animal or host." (Sidhu *et al.*, 2019). Another study states high population of FRD in and around Kanha Tiger Reserve, with high levels of seroprevalence to pathogens with broad host ranges. Viral pathogens detected showed higher percentage of dogs infected in summer compared to winter) included canine parvovirus (83.6% to 68.4%), canine distemper virus (50.7% to 30.4%) and canine adenovirus (41.8% to 30.9%). These dogs interact with wild carnivores, therefore posing a high risk of disease spillover to wild carnivores. (Chaudhary *et al.*, 2018)

- Spread of other diseases like Rabies virus, Mange, etc. from dogs to wild carnivores like 8. tigers, wolves, leopards, wild cat species, hyenas, palm civets and jackals also occur. The 13 main neglected tropical diseases can all be suffered and/or transmitted by FRD i.e., ascariasis, Buruli ulcer, Chagas disease, dracunculiasis, hookworm, human African trypanosomiasis, Leishmaniasis, leprosy, lymphatic filariasis, schistosomiasis, trachoma and trichiniasis. Free ranging dogs serve as vectors for diseases that can affect wildlife, humans, and livestock (Daszak et al., 2000). Dogs can carry and transmit over 40 zoonotic diseases. Infected wounds due to dog bites are polymicrobial in nature; common microorganisms that can be transmitted are Pasteurella. streptococci, staphylococci, and Fusobacterium, Bacteroides, and Porphyromonas species (Talan et al., 1999, Abrahamian, 2000). Other diseases FRD carry that can affect wildlife include but are not limited to leptospirosis, toxoplasmosis, rat bite fever, tularaemia, roundworm, distemper, rabies, flea and tick transmitted diseasestapeworm, canine hepatitis, parvo, corona virus enteritis, parainfluenza, among others. Vectorborne diseases of dogs include Borrelia burgdorferi sensu lato (the agent of Lyme disease) are a zoonotic risk to humans and animals. The tickborne B burgdorferi sensu lato, Erlichia canis, Anaplasma platys and the mosquito-borne Dirofilaria immitis, are regarded as endemic in dog populations in warm climate zones, worldwide(Wise &Tarlington, 2012).
- 9. A 1973 study conducted in Baltimore discovered that free-ranging dogs provided numerous benefits to other zoonotic disease vector species like rats, with rats eating dog feces, dogs providing easily accessible food for rats by rummaging through garbage, and dogs chasing away cats that were stalking rats. (Beck, 1973) thus increasing the presence of other potential disease vector species like rats.



Indian Fox (Schedule II species) with mange spread by FRD, Rajasthan

9. Retaliation against other species: often FRD kill livestock like goats, calves, chickens and sheep, sometimes indiscriminately and 'for fun', but villagers blame other species including leopards, snow leopards, hyenas, jackals, wolves and jungle cats, leading to retaliatory poisonings and killing of wildlife. This happens across the country. In the upper Spiti Landscape of Himachal Pradesh FRD were responsible for the majority of livestock losses i.e. more than snow leopards and wolves and this leads to a disruptive effect on existing conservation efforts, primarily the livestock insurance program for losses due to wildlife (Home *et al.*, 2017).



Farmer's goats killed by FRD in Vizianagaram, Andhra Pradesh as reported by the Hans News Service on Nov 22. 2019



Domestic goat killed by FRD, Ladakh

### FRD AND THE IMMINENT THREAT OF EXTINCTION OF CRITICALLY ENDANGERED SPECIES IN INDIA

• The Great Indian Bustard (GIB), a Schedule I species, is a critically 'endangered' species with only about 150 individuals left in the entire country. Loss of habitat and the presence of power lines are two reasons for a rapid decline in its population. Freeranging dogs are also one of the biggest threats to the GIB. Predation of eggs, chicks and nesting females by dogs is a potentially serious unquantified threat in all areas (Collar *et al.*, 2017). The inherent defenselessness against natural predators of bustards, which have relatively small bills and can neither perch in trees nor take refuge in water at night, renders them warier than other large-bodied birds. They are therefore dependent on large areas of little-disturbed, little-developed open country within which they can see and keep danger at a good distance (Collar *et al.*, 2017). Today these territories are overrun with FRD.



A critically endangered Great Indian Bustard (Schedule I species) is stalked by an FRD

Photo: Devesh Gadhvi

• The Changthang Wildlife Sanctuary in Ladakh is home to one of the rarest and most endangered bird species in the region - the Black-necked Crane (*Grus nigricollis*). The species is heavily harassed and preyed upon by FRD. There are a total of about 112 cranes including 17 breeding pairs in the Changthang region. As per a survey conducted by the Forest Department in collaboration with Snow Leopard Conservancy India Trust, Wildlife Conservation, Bird Club of Ladakh and the Nature Conservation Foundation, it was estimated that the population of dogs in Changthang is approximately 3,500. Out of these, the survey says, a total of 1,200 dogs were estimated within a 10 km radius buffer of 13 black-necked crane breeding sites. The breeding rate of BNC has dropped from 60% in 1995 to 29% in 2016. A serious threat to BNC in Ladakh is the damage that feral dogs cause to the eggs and chicks of the bird(Chandan *et al.*, 2014)



FRD hunting Black-necked Cranes in Ladakh. Photo: Neeraj Mahar.

There are approximately 350 Himalayan Wolves (Canis lupus chanco or Canis lupus laniger) in Himachal Pradesh and Ladakh. The Himalayan wolf forms a monophyletic wolf lineage basal to the Holarctic grey wolf complex (Sharma et al., 2004; Aggarwal et al., 2007; Shrotryia et al., 2012; Werhahn et al., 2017a,b) which means that they are a genetically unique wolf population. In the Changthang valley, they compete for prey and survival with FRD who spread disease and cross breed with them. Localized extinction is highly likely if FRD are not removed from the Changthang area. In Spiti Valley, wolves occur in low densities and this unique wolf population may be at risk of hybridization with feral dogs (Hennelly & Lyngdoh, 2015).



FRD mating with Himalayan Wolf, Spiti, Himachal Pradesh. The hybridsareknown locally as "Khibshang". Photos: Lauren Hennelly

## ANIMAL RIGHTS ACTIVISM (ARA) VS ANIMAL WELFARE APPROACH TO FRD MANAGEMENT



FRD chasing Blackbuck (Schedule I) in Bhetnai Sanctuary, Orissa. Photo: Pitam Chattopadhyay

The animal rights ideology is based on 'equal value' of life or 'equity' of treatment and this is designed to signal "equality", a term designed to appeal to the natural human tendency of fairness and empathy. Animal rights is the philosophy according to which many or all sentient animals have moral worth that is independent of their utility for humans, and that their most basic interests such as in avoiding suffering should be afforded the same consideration as similar interests of human beings (Taylor, 2009). Animal rights activism believes in total "liberation" of all animals without interference by man. Peter Singer, an influential animal rights activist, defines speciesism as "a prejudice or attitude of bias in favor of the interests of members of one's own species and against those of members of other species." (Singer, 1975). The animal rights ideology thus argues that animal life can be equal in value to human life and should be considered so.

Logically, the ideology of animal rights does not necessarily seek to only elevate the consideration of animal life, but results in a devaluation of human life, *i.e.* humans can now be considered at the level of animals or like animals. This can be seen in various interventions where animal rights activists and organizations, in court cases, attempt to equate animals and humans and allow for their "equal" consideration (Lobo & Uniyal, 2021). The rights of individual animals are attempted to be elevated to being equivalent to 'human rights', regardless of the cost to both human and wildlife.

The animal rights philosophy is most often against lethal control of any animal in any way, including that of man-eating big cats or rabid dogs. Animal rights organizations also strive to abolish all animal uses by man and any activity that involves the taking of any animal life, no matter the reason, as can be seen by litigations and interferences by the same animal rights and so-called animal welfare or rights organizations in various forest department implementations or the handling of various species killing human beings like dogs, elephants, tigers and leopards.

The animal rights ideology exists in direct contravention to the principles and definitions of the World Conservation Strategy protocols, to which India is a signatory and upon which principles India is supposed to model its wildlife conservation laws. It is also intrinsically against Article 21 of the Constitution, that ensures the Fundamental Right to Life, Freedom of Movement and the Right to Livelihood to Indian citizens. In contrast, the Animal Rights philosophy believes in total animal liberation, regardless of ecological consequences, and is thus against the idea of protected spaces and species.

It is important to note that animal rights agendas and activism cannot be conservation oriented by their very definition and are incompatible with science-based wildlife management. Conservation works at the population, species and ecosystem levels. Animal rights work at the individual animal level. What might be good for an individual or a collection of individuals might not be good for the long-term survival of populations, species and biodiversity.

Today, animal rights NGOs, sometimes masquerading as Wildlife NGOs or 'Conservation' NGOs, are a great threat both to India's wildlife, Indian culture and its indigenous people who

live off, and profit from, animal life. They have become well versed in judicial activism, often using the Indian judicial system to delay projects, attack cultural festivals involving animals, destroy indigenous livestock and dog breeds, ensure release of predatory dogs into protected areas and attack religious rituals and traditions. Many in the wildlife community either remain silent out of ignorance or fear, or might choose to not rock the boat and embrace some aspects of animal rights philosophy in a bid to further personal advancement or funding.

In contrast, "Animal Welfare" philosophy accepts that animals provide many useful benefits to humankind and that civilization would be seriously diminished if society was denied the right to avail themselves of those uses. Animal welfare oversees man's standards in his treatment and usage of animals.

Animal welfare and animal rights can be considered as two opposing positions (Francione, 2005).

### INTERNATIONAL FUNDING FOR ANIMAL RIGHTS ACTIVISM AND ORGANISATIONS IN INDIA

India is the focus of massive funding of ARA ventures by organizations from all over the world and especially from the United States via organizations like People for Ethical Treatment of Animals (PETA) and Humane Society International (HSI), who might see India as a soft target in terms of spreading ideology and the takeover of management of natural resources.

It needs to be put on record that despite India being a signatory to international treaties to protect its people and biodiversity, policies involving maintaining and protection of stray and feral animals in cities/towns as well as Protected Areas to the detriment of both human and animal life, are being pushed and promoted in India by foreign animal rights organizations like PETA and HSI, with massive funding of hundreds of millions of rupees annually flowing to animal rights NGOs as revealed *via* Foreign Contribution Regulation Act 2010 (FCRA) documents.

- 1. HSI (Humane Society International) is carrying out a Neuter-Release program along with the Wildlife Institute of India (WII) in Rajasthan. Replies under the Right to Information Act reveal over 800 feral dogs have been released back into forest areas, including within territory occupied by the critically endangered Great Indian Bustard, already under immense threat from feral dogs. This endangering of the GIB and leading it to extinction is being done with the expertise of the Wildlife Institute of India, one of India's premier wildlife institutes.
- 2. Given the unavoidable fact that even neutered FRD need to eat and neutered FRD would and do eat wild meat, it is not far-fetched to make a direct correlation between the release of FRD(albeit neutered) in Jaisalmer, under the WII funded Neuter-release program, and the killing of chinkara and other wildlife in and around Jaisalmer.

- 3. Animal Rights organizations like PETA have legally stopped i.e. forced the stoppage of the breeding of indigenous, Indian dog breeds like Rajapalayams, Chippiparais and Kombais in India, alleging, among other things, that the Tamil Nadu State government "is involved in selling of native and other breeds known for their aggression" and that "the DBU (dog breeding unit) breeds dogs to sell to the public." These allegations are bizarre to say the least because (a) the DBU is being responsible by selling dogs to the public rather than keep them homeless and free roaming, (b) they are saying indigenous. Indian breeds by breeding them and (c) these breeds have caused no harm or loss of life of humans, livestock or wildlife. Paradoxically, PETA and other international ARA groups directly fund organizations that ensure the release of free-ranging, unowned dogs which bite up to 17.4 million people, kill about 20,000 human beings annually, predate on countless livestock and decimate wildlife across the country. The reason seems to be simply that FRD are seen as stock-in-trade for certain organizations obtaining funds and the more FRD there are in India, the greater the funds the NGOs will be able to obtain in their name. Taken together, the money being paid by state governments to NGOs to sterilize FRD is well over a thousand million rupees annually.
- 4. It is pertinent to note that neither organization (PETA or HSI) promotes the same policies and principles in the USA or other western countries, (PETA pursues a kill policy in the USA and euthanizes about 97% of the dogs it captures) thereby revealing that both human and animal life is treated as cheaper in India and that the agenda is likely ideological and has less to do with 'animals' and more to do with politics, funding and ideological colonization.

This amounts to the direct funding of activities that lead to the killing of Indian citizens, indigenous breeds and wildlife by foreign NGOs. This complete lack of concern for India and its biodiversity is entirely unacceptable and these illegal and dangerous policies must not be accepted by either the government or the people of India.

(i). Number : 231650850 (ii). Name : People for Animals

2. Details of receipt and utilisation of foreign contribution :

### i. Foreign Contribution received in cash/kind(value):

a) Brought forward foreign contribution at the beginning of the year(Rs.)	67978626.38
b) Interest or other receipt during the year*	6467059.69
c) Foreign Contribution received during the financial year	
i) Directly from a foreign source	7848930.00
ii) as transfer from a local source	0.00
d) Total Foreign Contribution (a+b+c) (Rs.)	82294616.07

<sup>\*</sup>i.e. interest accured on foreign contribution, or any other income derived from foreign contribution, e.g. sale proceeds from assets created from contribution, or interest thereon during the year

#### ii (a). Donor wise detail of foreign contribution received in excess of rupees 20,000:

Sl.No	Name of donors	Institutional/Individu al	Detail of the donor: official Address; Email address; website address:	Purposes for which received	Amount (Rs.)
1	SAROS COWASJEE	Individual	3520 HILSDALE ST APT 308 REGINA SASKATCHEWAN CANADA S45 5Z5 , Canada, Email Id: , Website Address :	Social	1169500.00
2	KALI RAY	Individual	P.O BOX 6367 MALIBU CA 90264, United States of America, Email Id:, Website Address:	Social	184000.00
3	SOKHRATES SRL SOCIETA BENEFIT	Institutional	MOLINO DELLE ARMI II 20122 MILANO, Italy, Email Id: , Website Address:	Social	302848.00
4	NEREIDES DISTRIBUTION	Institutional	5 RUE DU BOURG I ABBE 75003 PARIS , France, Email Id: , Website Address :	Social	155180.00
5	Humane Society International Incorporation	Institutional	I1/27, Old Barrenjoey Road, Avalon NSW 2107, Australia, Email Id: , Website Address:	Social	242006.00
6	HARNEET KARAN	Individual	22 WINONA CRT TARNEIT 3029 VIC , Australia, Email Id: , Website Address :	Social	33037.00
7	Humane Society International	Institutional	700 Professional Drive, Gaithersburg, MD 20879 , United States of America, Email Id: , Website Address:	Social	3858600.00

FCRA Annual Returns for the financial year 2017-2018 has been Submitted on 27/12/2018

Page 1 of 3

Humane Society International funding to India's largest animal rights NGO, People for Animals (PFA) in 5 years (2014-2019)

PETA funding into India in 5 years alone (2014-2019) – close to 10 million US dollars,to be used as per stated purpose, for "social" causes. Below – funding for one year.

Sl.No	Name of donors	Institutional/Individ ual	Detail of the donor: official Address; Email address; website address:	Purposes for which received (Social,Cultural,Edu cational,Economic, Religious)	Specific Activity / project	Amount Rs
2	People for the Ethical Treatment of Animals	Ethical Treatment Str		Social	To prevent cruelty and educate the people and promote animal welfare	66128940.00

### (b) Cumulative purpose-wise amount of all foreign contribution donation received :

Sl.No	Purpose	Amount
1	Social	66728942.00

### 3. Details of Utilization of foreign contribution:

(a) Details of activities/projects for which foreign contribution has been received and utilised (in rupees)

Sl. No.	Name of project/acti vity		Previous Balance		Receipt during the year		Utilised		Balance	
			In cash	In Kind	In cash	In Kind	In cash	In Kind	In cash	In Kind
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	To prevent cruelty and educate the people and promote animal welfare	Delhi, Mumbai Delhi Delhi1100 01	1542869.0 0	0.00	66728942.	0.00	67440861. 00	0.00	830950.00	0.00
Total			1542869.0 0	0.00	66728942. 00	0.00	67440861. 00	0.00	830950.00	0.00

### THE ANIMAL BIRTH CONTROL (ABC) RULES IN INDIA AND THEIR EFFICACY



Dogs chasing a cyclist in India. Most Indian cities are inundated with exploding stray dog populations.

For decades India followed a policy similar to most nations that had successfully handled their stray dog problems in that strays were periodically rounded up and euthanized as part of measures to control the dog population for human health and safety. All that changed in 2001 with the Animal Birth Control (ABC) rules that has been promoted and funded by the Animal Welfare Board of India (AWBI) and was notified in 2001 by the Union Ministry of Culture, a ministry that has nothing to do with public health and safety, disease control, wildlife or animal issues and was then under animal rights activist and Member of Parliament Maneka Sanjay Gandhi. The ABC rules became subordinate policy to the Prevention of Cruelty to Animals Act and have been followed since. In short, they prohibit the removal or euthanasia of stray dogs, unless under particular and often unenforceable conditions, and insist on their release back to where they were captured from even if they attacked people.

Only "Incurably ill and mortally wounded dogs" are to be euthanized as per the act and only after being diagnosed by a qualified veterinarian appointed by the committee and contrarily "suspected" rabid dogs are not to be euthanized but "isolated till it dies a natural death". Death normally occurs within 10 days of contracting rabies." (Anonymous, 2001).

The policy has been implemented with disastrous results over the last two decades, with the country seeing an increase in stray dog populations, a rise in dog attacks on people, livestock and wildlife and retaliatory attacks on the dogs themselves. Two internal reviews of the ABC program by the Ministry of Environment, Forests and Climate Change (1999 and 2008) have documented the abysmal failure of the same, as well as noting the gross misappropriation and mismanagement of taxpayer funds.

It may be noted that the AWBI which has promoted and funded the ABC policy- is meant to implement and enforce the PCA Act only as per its mandate and not decide on management of wildlife in any way or to make any rules or come up with guidelines for any wildlife management for Tiger Reserves. The official mandate of the Animal Welfare Board of India is "To prevent the infliction of unnecessary pain or suffering on animals, in terms of the provision of the Prevention of Cruelty to Animals (PCA) Act, 1960." The PCA Act, meant to be implemented and enforced by the AWBI clearly states that stray dogs are to be destroyed.

The AWBI is only meant to advise the government on implementation of the PCA Act. The ABC rules are for neuter and release specifically for "street dog population control by municipalities," and have nothing to do with Tiger Reserve management.

The National Tiger Conservation Authority (NTCA) is a statutory body under the Ministry of Environment, Forests and Climate Change constituted under enabling provisions of the Wildlife (Protection) Act, 1972, as amended in 2006. The NTCA is responsible for the management of Tiger Reserves. There is no law or section where the NTCA needs to get any approval for the management of stray dogs in Tiger Reserves from the AWBI.

The PCAA and WLPA are both Central Statutes. One mandates the destruction of stray dogs the other is meant to manage Tiger Reserves. Both seem to have been subjugated in favour of the ABC rules. What the implications of this foisting of ABC rules has on wildlife conservation has been examined in two internal reviews of the ABC program by the Ministry of Environment, Forests and Climate Change (1999 and 2008) which particularly noted the gross misappropriation and mismanagement of taxpayer funds.

It must be noted that ABC rules, inexplicably written by an unrelated ministry with no mandate in the field, is a subordinate legislation that cannot override central and Constitutional Acts and Statutes. However, the Rules, which require maintaining stray and free-roaming unowned dogs across the country, in public places, the streets and even areas with wildlife, are in contravention of their own parent Act, the Prevention of Cruelty to Animals Act, that mandates the removal of straying dogs from streets and every public place as well as the Wildlife Protection Act – that seeks to protect wildlife. This has also led to multiple petitions in the Hon'ble Supreme Court of India thatis currently examining the constitutionality and legality of said ABC rules.

In light of the above, it is inexplicable that the same ABC policy – sterilization and release/maintenance of unowned and feral dogs wherever they are found - are being put forward

as a panacea to the problem of free-roaming dogs decimating India's wildlife, completely ignoring the fact that sterilized dogs still hunt, harass, kill and eat protected wildlife.

As per World Health Organization protocols at least 70% of the entire dog population needs to be sterilized within 6 months to see any reduction in dog populations. This target has never been met by the AWBI's own findings and only up to 6 percent of the country's dog population has been sterilized over the last 10 years, as per the AWBI itself. Given the breeding rates of dogs this means that the dog population is growing hugely and additionally, with protections, stray dog feeding at taxpayer expense and new protective policies afforded to dogs pushed and lobbied for by the animal rights NGOs that still support the ABC program, despite its obvious and utter failure.

The agenda for pushing the failed ABC program is that it allows animal rights groups to raise funds and pretend that something useful is being done for animal welfare when the exact opposite result is achieved. This is done solely to prevent lethal control of FRD, at the cost of India's people, children who are killed by FRD at a much higher rate than adults, wildlife, livestock, livelihoods and even FRD themselves, who are forced to live away from human companionship or in wild areas at the mercy of disease, cruelty and predation.



A child killed by FRD in a rural area in India. Identity withheld.

The policy continues to be funded at tax-payers expense despite the fact that 2 internal reviews – 'PERFORMANCE EVALUATION OF ABC PROJECT', published in Animal Citizen, the official mouthpiece of the AWBI in 1999 and 'Consultancy Project on Support to Animal Welfare Schemes of AWBI, MoEF – An Evaluation, Final Report 2008 - of its implementation,

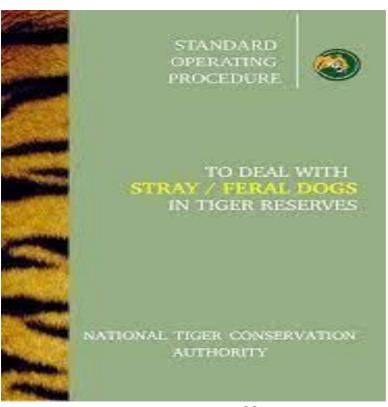
(July-Sept 1999- Pg 48-52, Oct-Dec 1999- Pg 45-47, Jan-Mar 2000- Pg 49-52) and the functioning of animal NGOs reveal the following:

- a. "It is a strange fact that there are no reliable statistics available on the stray dog population with any of the agencies operating for their welfare in all the project operated cities. It also appeared that none of the agencies sought to have at least a rough estimate or simply a 'guestimate' of that in their area of operation. As a result, the figures disclosed by the agencies concerned do not seem to reflect the real population."
- b. The AWO's which are vaccinating at the time of premedication need to be instructed to administer the vaccine at least on the day of release or one day prior to release, since scientific literature have proved that both anesthesia and surgical stress would affect the immune response to vaccines in animals. None of the AWO's attempted to conduct studies for assessing the efficacy of rabies vaccination carried out at the time of the ABC program. Recently, a study conducted on Performance Audit of ABC Program in Bangalore City by the Dept. of Community Medicine, Kempegowda Institute of Medical Sciences, Bangalore, May 2007, revealed that vaccination was effective in only 38% of sterilized dogs, which is to be considered seriously."
- c. "India remains to be one of the most highly endemic areas of the world in respect of rabies, which can be linked to a large number of stray dogs. A considerable number of domestic animals in our country roam around freely in the streets without adequate care. Many of them wander with diseases, injuries, pain and/or suffering, of course with only less than sufficient food."
- d. "It is found that there are no systematic efforts made anywhere in the country till date and as a result there are no valid and reliable estimates of stray dog population in various states where the ABC program has been implemented. It is a serious concern that till date no effort has been made to make such a survey on stray dog population anywhere in the country."
- e. "Many AWO's accepted during the evaluation that they did not have the data on the stray dog population of their operating area and some expressed that they tried, in vain. A few AWO's provided the data of the stray dog population, but it all appears to be an unreliable and imaginary one."
- f. "One of the most important components of the ABC program is vaccination of the sterilized dogs against rabies before their release and to give one booster dose every year at the territory itself. All the AWO's claimed that the sterilized dogs are given a dose of antirabies vaccine. But a lot of variation was observed in the administration of anti-rabies vaccine to the sterilized dogs."

- g. "Only a few well established AWO's claimed they were doing revaccination. However, they too did not produce evidences to support their claims of annual or periodical revaccination of the sterilized dogs released by them."
- h. "The ABC Rules proclaimed that a monitoring committee would conduct a survey of the stray dog population. But till date, no efforts were made anywhere in the country and as a result there are no valid and reliable estimates of stray dog population available in various states/cities where the ABC program is implemented. It needs no emphasis that claims on reduction in dog population would remain unrealistic unless the number of dogs in a given area prior to sterilization is made known."

# STANDARD OPERATING PROCEDURES (SOPS) BY THE NATIONAL TIGER CONSERVATION AUTHORITY (NTCA) AND MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE (MoEFCC) FOR THE CONTROL OF FERAL DOGS IN TIGER RESERVES IN INDIA

The threat of stray/ feral dogs to wildlife was clearly brought out in the report 'Status of Tigers and Co-predators & Prey in India-2018' (Jhala *et al.*, 2019)



December In 2020, in order to contain the threat of dogs on wildlife in Tiger Reserves, the Ministry of Environment. Forests and Climate Change and the National Tiger Conservation Authority, published **SOPs** for removal of dogs from in and around TRs.

The SOP's stated purpose is to "avoid disease spread and physical injury to tigers and other wildlife, besides mortality to young and juvenile wildlife" from dogs. The SOPs are applicable to all Tiger Reserves in India.(Anonymous, 2020)

The SOPs state that the responsibility of implementing the SOPs lies with the Field Director and Chief Wildlife Warden of the State.

Most importantly, the SOPs state that "feral dogs captured from within Tiger Reserves should under no circumstances be released back and a suitable alternate site be selected for their rehabilitation." i.e. that they be released elsewhere.

Ministry of Environment, Forests and Climate Change (MoEFCC) and National Tiger Conservation Authority (NTCA) <a href="https://ntca.gov.in/assets/uploads/sops/Feral">https://ntca.gov.in/assets/uploads/sops/Feral</a> Dog SOP.pdf

Despite admitting that FRD pose a threat to and can spread diseases like Distemper to wild animals, the NTCA SOPs(a) are detrimental for wildlife, including tigers;(b) reveal a lack of study and in-depth understanding regarding FRD and wildlife and are(c) a wasteful expenditure of tax payer monies on illogical, unfeasible and unachievable protocols. Examples: creating "herd immunity for dogs" that can barely be caught once, leave alone every year, and creating "buffer zones of immunized stray animals around Tiger Reserves" despite knowing that immunization does not address in any way the issue of predation by FRD or the transmission of various other diseases not covered by specific immunizations that would often need to be repeated, depending on diseases addressed.

Next Pg.

## Dated the 17th December 2014

To.

ORI

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The Chief Wildlife Warden (s), Madhya Pradesh and Uttarakhand

Sub: Special Drive in respect of Canine Distemper

Ref: This Authority letters of even no. Dated 14.6.14. and 18.6.14

Sir,

COMPENDIUM OF GUIDELINES, ADVISORIES

Reference is invited to the subject and letters cited above. In this context, I am directed to request you to kindly expedite framing a proposal to create immunity buffers around Panna and Corbett Tiger Reserves, in consultation with district veterinary officials, Indian Veterinary Research Institute (IVRI) and the Wildlife Institute of India, for soliciting financial support under the ongoing CSS-Project Tiger. This needs to be launched as a special, time bound drive.

In this context, the following points are suggested for guidance;

The concept of creating immunization buffers around Tiger Reserves should be initiated keeping in mind the principles of herd immunity; the latter is briefly discussed as follows:

- Herd immunity concept proposes that in contagious diseases such as Canine Distemper (CD), the chain
  of infection is likely to be disrupted when large numbers of a population are immune (vaccinated) or
  less susceptible to the disease (due to vaccination).
- ii. The rationale behind this is that the exposure of unvaccinated /susceptible animals (tigers in the case of tiger reserves) to infected animals shall be substantially reduced. Hence, greater the proportions of individuals which are vaccinated/resistant/immune to the disease, lesser are the chances of its transmission. In essence vaccinated animals act as a firewall between tigers and stray animals
- iii. Therefore, a policy of herd immunity can be formulated for stray dogs and cats around Tiger Reserves to prevent the spread of CD and provide a level of protection to a vulnerable, unvaccinated group like tigers



#### F. No. 2-19/DI/NRC/2013-14/CWL

Dated: 17/06/2013

Previous Pg. Next Pg.

Go to Last Pg. Go to First Pg.

To,

Dr. Rajesh Gopal ADG (PT) & Member Secretary National Tiger Conservation Authority Bikaner House, Annexe-V Shahjahan Road, New Delhi-110011 Fax: 011 -23074272

Sub: Threat to Asian Tigers from canine distemper virus

Ref: No. 1-16/93- PT (Vol.II) dated 11th June, 2013.

Sir.

With reference to above mentioned subject and query raised vide your letter referred above, a meeting was held under the Chairmanship of Dr. Rishendra Verma, Joint Director (CADRAD) in his chamber on 14.06.2013 at 11:00 A.M. Dr. A. K. Sharma, Principal Scientist (Pathology) & Incharge, Centre for Wildlife Section and Dr S. Nandi, Principal Scientist (Virology), CADRAD were present. The matter was discussed at length in the light of previous publications and the investigation work carried out at IVRI.

The following points emerged out of the discussion.

- The canine distemper virus (CDV) member of morbillivirus of paramyxoviridae family is widely
  prevalent among domestic dog population in our country.
- Chronic encephalomyelitis caused by canine distemper virus has been reported in Bengal tiger in India.
- Seropositivity of CDV was reported in 87.5% Asiatic lions from Western India in 1998-1999.
- Evidence of CDV infection has been reported in all families of terrestrial carnivores: felldae, hyaenidae, mustelidae, procyonidae, ursidae and viveridae including red or lesser panda and giant panda.
- Recently, occurrence of CDV has been detected by PCR in a tigress, two tiger cubs and Red Panda in Virology lab of CADRAD, IVRI.

Thus, it is apparent that canine distemper virus is circulating not only in dog population but also in wild felids in our country.



### LIMITATIONS, WEAKNESSES AND DRAWBACKS OF THE SOPS

The said ABC rules, under whose framework the NTCA has allowed their guidelines to be formulated, can be postulated to be violative of all relevant and existing laws for the protection of people as well as animals under both Central and State laws and Acts in the Constitution. It is unfortunate that the NTCA has allowed the involvement of the Animal Welfare Board of India (AWBI) and Animal Rights agendas in the management of India's precious wildlife and biodiversity for the following reasons:

- The biological invasion of dogs into protected areas is a direct result of the AWBI's own failed Animal Birth Control program, currently being challenged in the Supreme Court of India.
- At the heart of the failed ABC program is the complete removal of lethal control of free ranging dogs. Lethal control of Invasive Alien Species/Invasive species is essential for effective wildlife management and is an important aspect of dog population control.
- 3. Likewise, lethal control which is often needed in terms of man-eater big cat or rogue elephants so as to protect human life and ensure a good relationship between local communities and stakeholders, government agencies and environment, is also often stymied, litigated upon and prevented at great cost to both human life, tax-payer monies and the reputation of government agencies, by the same Animal Rights oriented groups that are inexplicably invited into wildlife management today by the NTCA and other government agencies.
- 4. The AWBI seems to have been hijacked by animal rights groups. Today, as per AWBI guidelines, it is prohibited to euthanize even rabid dogs and these are left to die an agonizing death, an act of gross animal abuse consistent with animal rights philosophy that gives dogs the same 'rights' as humans and in contravention to the Prevention of Cruelty to Animals Act's mandate, which is to stop the inflicting of 'unnecessary' suffering on animals, in this case dogs, by forcing them to suffer extreme agony before dying of rabies. Rabies once expressed in a host is 100% fatal. The ABC rules follows animal rights ideology that places the consideration of dogs on par with human beings when rabies is contracted. Extract 10.4 from ABC rules: "If the dog is found to have a high probability of having rabies it would be isolated till it dies a natural death. Death normally occurs within 10 days of contracting rabies. Premature killings of suspected rabid dogs therefore prevent the true incidence of rabies from being known and appropriate action being taken."
- 5. Supposedly protecting dogs at the cost of India's natural treasures is one such effect where Adivasis, farmers or tribal peoples are penalized for exactly the same 'crimes' that dogs are vaccinated, fed and released for. A farmer, Adivasi or any other citizen

may be sent to prison for up to 7 years for killing a protected wildlife species. A dog is vaccinated and released, likely in better condition to continue killing/attacking or causing the deaths of wildlife (or people) via disease transmission.

- 6. The ABC Guidelines seem to have created a new class of people, most often from the more affluent sections of society, dedicated to the feeding and maintenance of FRD, at the cost of both the country's wildlife and citizenry. Involving these same activists in sensitive issues regarding wildlife in areas with tribal groups and other groups, would likely be seriously detrimental and counter-productive. With ideological foundations of these groups fundamentally opposed to both the Constitution of India and its laws, these arrangements are likely to yield catastrophic results like further alienation of the rural population from the mainstream in sensitive areas.
- 7. The ABC policy goes against its own parent Act, the Prevention of Cruelty to Animals Act, by creating a new entity called "street dogs" prohibiting their lethal control. The parent PCA act contrarily mandates the destruction of stray dogs.
- The ABC policy requires "street dogs" to be maintained and fed on the streets, public
  places like parks, markets, roads, inside residential colonies and even airport premises
  no matter the disease, attacks, wildlife losses, fecal contamination or noise pollution
  caused.
- 9. The ABC policy is violative of State Municipal Acts that mandate the removal of all stray animals from public places and instead casts a contrary duty on Municipal authorities to leave unowned dogs in public spaces.
- 10. The ABC policy mandates the abandonment of stray dogs on the roads in contradiction to the parent PCA Act which mandates sheltering or euthanizing stray dogs, which is global precedent and the policy existing in all countries that have eliminated or mostly eliminated their stray dog problems, especially in the USA, which is a major source of funding for Indian animal rights groups.



FRD killing Chital (Schedule III) at Bandhavgarh Tiger Reserve, Madhya Pradesh. Photo: Subrat Seet

These SOPs are impractical and unworkable, and if carried out, will likely yield negative and irreparable damage in some contexts due to the following specific protocols from the SOPs.

- 1. The SOPs refer only to Tiger Reserves and not any other Protected Areas.
  - This part of the SOPs make it appear as though the MoEFCC's interest in wildlife conservation is only limited to safeguarding wildlife living in Tiger Reserves. However, wildlife is being decimated by feral dogs across the country. Therefore, it is unclear why the MoEFCC and NTCA have laid down SOPs for feral dog management in Tiger Reserves only, mentioning how dogs kill wildlife and spread diseases to them, and still leaving out other PAs or any habitat occupied by wildlife which as per the WLPA, is to be afforded protection. Adequate documentation and media coverage provides evidence of large-scale decimation of native wildlife and harassment due to free-ranging dogs in areas such as parts of Ladakh, western Rajasthan and western Gujarat among many others areas.
  - It is the mandate of the MoEFCC to protect wildlife in every part of the country and not just in Tiger Reserves.
- 2. Inexplicably, the SOPs quote the procedure laid down by the Animal Birth Control Rules of the Ministry of Culture for control and elimination of feral dogs from Tiger Reserves.

- The said ABC Rules state, "If the Municipal Corporation or the local authority thinks it expedient to control street dog population, it shall be incumbent upon them to sterilize and immunize street dogs with the participation of animal welfare organizations, private individuals and the local authority." Thus, by their own admission, the ABC rules are meant to be a population control mechanism for dogs in cities and towns. They are not intended in any way to mitigate the devastation caused to wildlife by feral dogs in Protected Areas, agricultural areas, or any wildlife habitat.
- 3. The SOPs attempt to override the Prevention of Cruelty to Animals Act, 1960 as well as the Wildlife Protection Act. 1972.
  - The PCAA allows for the humane killing of animals and the WLPA mandates the
    protection of wildlife wherever it may be found. Being subordinate rules under the
    PCAA, the Animal Birth Control Rules mentioned in the SOPs cannot override central
    statutes like the PCAA and WLPA.
- 4. The SOPs state that "feral dogs = street dogs", and they are to be managed according to the Animal Birth Control Rules.
  - Free-roaming dogs in cities and towns across the country are more familiar with human beings and easier to catch. This is not the case with feral dogs in forest or remote areas, where they are unfamiliar with humans and hunt in packs, often in unforgiving terrain. Many, in terms of their behavior, are unlike dogs in cities and cannot be treated as such. Many dogs in rural India live in close proximity to PAs and frequently move in and out of such wildlife preserves where they intermittently hunt and feed on wildlife.
- 5. The SOPs state that feral dogs must be caught by hand, butterfly nets, sacks and poles.
  - These methods are neither applicable nor practical for catching feral dogs in forest areas/ thick vegetation areas/ wetlands/ mountainous regions/above the snow-line/ deserts/ wetlands / swamps that are also populated with other wildlife. Trap cages are unsuitable for feral dogs as it risks wildlife getting caught.
- 6. The SOPs require a committee to be set up for management of feral dogs. The committee members include representatives of Animal Welfare Organizations, the local Panchayat (village committee) as well as from the Animal Husbandry Department.
  - Management/jurisdiction with regard to wildlife of Tiger Reserves lies only with the Principal Chief Conservator of Forests/Chief Wildlife Warden of the State and their respective departments and not with any NGOs.
  - Representatives of AWOs, so called wildlife organizations, Animal Rights
    Organizations and the Animal Husbandry department have no jurisdiction and often,
    no or limited expertise in dealing with wildlife and/or even feral animals.
  - Emotion led civilians with little or biased knowledge of forest areas, wildlife behavior and/or management techniques, accompanying forest officers, are both unnecessary

and potentially detrimental. The high amount of sentiment and anthropomorphic attitudes attached to dogs and other animals by animal rights or 'animal welfare' organizations and their members would inhibit the Forest Department from its duties under the WLPA to protect wildlife from the depredations of invasive alien species.

- The SOPs recommend that feral dogs be sterilized and then released in accordance with the Revised ABC Module of the Animal Welfare Board of India into "suitable areas". It also encourages feeding of unowned dogs.
  - This is dangerous for both humans and other animals as well as illegal as it amounts to criminal negligence and endangerment. Feral dogs killing animals in one place, or spreading disease, or causing hybridization as admitted to be a problem by the central government, cannot be translocated to another place, where they will go on to do exactly the same thing. The government cannot claim that feral dogs are dangerous to wildlife including large powerful animals like nilgai, sambhar, tigers and wild boar with predation and deadly diseases and then release them somewhere else where they endanger the lives of wildlife and people. This could also lead to livestock depredation for local communities in such areas where dogs are released leading to high economic disadvantage to low-income groups and marginalized communities, including but not limited to SC/ST (Scheduled Castes & Scheduled Tribes) living in and around Protected Areas.
  - Even if a dog is sterilized and vaccinated, it will still prey on and harass wildlife and spread other diseases. A vaccinated dog is possibly in better condition and will live longer, to harass, hunt and kill wildlife than an unvaccinated dog.
  - Homing, broadly defined as the ability to return to a known goal location (e.g. breeding grounds, shelter/food sites) after displacement (Schmidt-Koenig & Keeton, 1978; Papi, 1992; Wiltschko & Wiltschko, 1995) is well known with dogs. Regardless of where they are released, they will attempt to find their way back to 'home' territory, mostly successfully, and dogs even use the earth's magnetic field to enhance their homing efficiency over great distances. Sex and breed did not influence the probability of return strategy used during homing (Benediktova et al., 2020). Despite the existence of an enormous body of knowledge on the biophysical cues involved in animal orientation and 'homing', however, it is still not known exactly how a dog can find its home from an unknown location to which it has been displaced (Nahm, 2019).
  - Additionally, the SOPs prescription about giving booster shots is neither possible nor
    practical as there is no efficient way to catch the same feral dog 11 months later for
    a booster shot.
  - The Revised ABC Module of the Animal Welfare Board of India, the basis of the NTCA's SOPs, has been challenged in the Supreme Court of India and is not considered a legal and acceptable document that has to necessarily be implemented by States.
  - The AWBI is an advisory body only, under the Prevention of Cruelty to Animals Act and has no authority to publish any rules for wildlife management, anywhere.

- The ABC Rules, as part of AWB guidelines, in effect, deal only deal with sterilization of stray dogs, that too with great ineffectiveness. The AWBI programs of sterilization/spaying and vaccination is a failure by its own admission after 20 years of program implementation, only 6% of the stray dog population has been sterilized and the AWBI has no other relevant statistics of the touted efficacy of its ABC program. The dog population has in fact likely increased in this time, posibly due to the immense failure of the AWBI guidelines. Out of control dog populations in Indian cities and towns then spill over into wild areas causing devastation.
- A bitch comes on heat once a year and gives birth to about 6 pups. Since she becomes a mother one year after birth and does not stop ovulation until death, then the average bitch gives birth to about 60 pups in her lifetime of ten years. Of these, roughly half are bitches. The population therefore expands geometrically if left unchecked. In nature, a large number of the young of any species die, and ideally only one bitch of the 60 pups the mother gives birth to, survives to carry on the line.
- Unowned dog populations in urban areas are much higher and can be considered sources of FRD for various wildlife contexts, FRD moving from urban or village environments into forests and wildlife habitats to hunt. In a study, dog population varied from 192 to 1888 per square km across a gradient of housing densities. It was found that garbage, although significant, is a secondary food source to household-maintained FRD. Crucially, it was found in a study that a small number of houses can support a large population of free-ranging dogs with feeding, while trash piles serve a secondary role in comparison regarding food sources. (Bhalla etal., 2021) indicating that feeding unowned dogs contributes to the maintenance and increase in dog populations.
- If one does the math regarding a single bitch and her pups, sterilization of 6 percent of the dog population amounts to no reduction in dog populations, but rather a massive exponential increase, even taking into account mortality rates.
- Worryingly, the SOPs are missing any and every kind of international protocol/advisory/currently used strategies as per IUCN guidelines for the management and control of feral animals/invasive animals/ invasive alien species in Protected Areas and any other areas where wildlife may be found and is deserving of protection, as per the WLPA.
- 8. A proposed alternative would be to move captured feral dogs to shelters. However this is not workable as a sole measure for the following reasons.
  - It is not possible to catch/trap millions of dogs for this purpose. Many, if not most
    feral dogs, are not 'domesticated' enough to be re-homed and would retain their
    predatory and free roaming instincts. The facilities that would need to be built to
    provide homes to about 60 million dogs would be a huge drain on the country's
    resources.
- 9. If kept at government expense, given that dogs are basically carnivorous and also omnivorous, feeding thousands of dogs would be a bloody and expensive affair. An average medium size dog requires about 250 grams of meat a day. This comes to about 70

kg of meat a year or about 7 goats a year if dressed weight of a goat is taken at about 10 kgs/goat).59 million dogs (Gompper, 2014) would hypothetically require about 413 million goats a year to feed or about four billion one hundred and thirty million chickens to feed if dressed weight of 1 broiler chicken is considered at 1 kg. Costs of feeding 59 million dogs mutton would be about Rs 60,000 per dog per year if mutton cost Rs 600/kg, or about three trillion five hundred and forty billion rupees. Feral dogs do not eat a vegetarian diet. Those domesticated dogs that consume a vegetarian diet are forced to do so by their owners. While dogs can survive on a vegetarian diet, it does not mean it is a healthy or humane diet for the animal given its constitution and instincts. Dogs need their essential unsaturated fatty acids and amino acids from animal meat and if provided from vegetarian sources, great care and expense is needed. Either way, housing millions of dogs at taxpayer expense is neither feasible nor economical in any way. Ethically, it is likelyproblematicto kill millions of goats and chicken to feed dogs because killing dogs is considered 'bad', since there is no justification for not applying the 'no kill' policy to goats and chicken too. This is where the logic of Animal Rights breaks down, especially when those 'rights' are guaranteed to FRD and other carnivores such as cats, but not to their prey. Are herbivores somehow less important in terms of guaranteeing rights than carnivores?

- 10. On the other hand, if one considers that FRD are the stock-in-trade of some organizations, there is a great deal of money to be made feeding, sheltering and sterilizing FRD, regardless of the ethical inconsistencies mentioned above.
- 11. Another proposed method (by animal rights and so called animal welfaregroups)would be the use of tranquilizer guns for dog capture.
  - Tranquilizer guns can only be used at close ranges and the high cost of usage, veterinary requirements, expertise etc. make this method impractical and uneconomical.
- 12. The SOPs state that immunized/vaccinated dogs will not spread diseases to wildlife and should therefore be released on the outskirts of Tiger Reserves. They also recommend vaccinating dogs annually.
  - Despite mentioning that dogs kill wildlife, the SOPs go on to suggest maintaining
    packs of dogs in/around PAs simply because a handful of randomly caught dogs may
    be vaccinated against a few diseases leaving them still completely capable of
    predation or transmission of other diseases. After 20 years of ABC program
    implementation the AWBI, by its own admission, has no records regarding revaccination of stray dogs in cities.
  - Despite this, the SOPs mention re-vaccination, disingenuously implying that it has been done/can be done or is even possible in any context, Indian or otherwise and that it will be possible in forested or Protected Areas.
  - The presence of FRD should not be allowed as -

a) as per Article 21 of the Indian Constitution human beings have the Right to Life, livelihood and freedom of movement, which would be curtailed by both FRD and large predators like leopards attracted by FRD and known for preying on livestock and human beings.

- b) the damage dogs do via disease introduction, predation, habitat destruction, depletion of macro biodiversity, depletion of prey bases and genetic pollution of other wild canid species would be against all three protocols of the World Conservation Strategy protocols (1980) to which India is a signatory to and against the WLPA, which ensures protection to all wildlife, dogs not being wildlife.
- c) Both the PCA Act and the Municipal Acts allow for the euthanasia of stray dogs. The subordinate ABC rules, are clearly *ultra vires* to the parent act and violative of various IPC sections including Section 289 of the Indian Penal Code that deals with Negligent Conduct with Respect to Animal, states: "Whoever knowingly or negligently omits to take such order with any animal in his possession as is sufficient to guard against any probable danger to human life, or any probable danger of grievous hurt from such animal, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to onethousand rupees, or with both." (Ratanlal Ranchhoddas, 2007).



Seven dogs maul a Sambar fawn at Siswan dam, with one canine latching onto the deer's ear. (PHOTO: JIWATESHWAR SINGH)

# WHY DOMESTIC DOGS ARE NOT MEANT TO BE FREE-ROAMING OR WHY HUMAN OWNERSHIP IS IMPORTANT FOR DOGS

When it comes to aggression in dogs, genes play a role in the behavior of domestic dogs, but a dog's individual environmental history also plays a major role in shaping its behavior over its

lifetime. A dog under human supervision and dependent on its human caretakers for all of its needs can be prevented from biting and attacking people and other animals by physical restraint, confinement to private property and suppressing aggressive tendencies with care and training.

- Holding a human owner financially responsible and legally culpable for the damage caused by their dog, is an automatic deterrent against irresponsible ownership resulting in attacks on others. This is a policy followed the world over and enforced by law in almost every single country on earth.
- Unowned and FRD suffer greatly from diseases, injuries and cruelty inflicted upon them. This suffering is used by many NGOs to raise funds and use taxpayer money to conduct activities including feeding, to further ensure the homelessness and suffering of these animals. This results in the creation of a vicious self-perpetuating cycle of funding and homelessness of dogs where the suffering of dogs is essential to the existence and funding of the same animal rights organizations and the heroic, virtue-signaling identity that they have developed for themselves and which is crucially important for many of the individuals involved in ARA.
- Animal rights groups with their litigation and policy interference ensurethe homelessness of tens of millions of dogs, whose predatory and aggressive tendencies are not controlled by human owners and care. These homeless dogs sustain numerous NGO's who raise and spend funds to care for injured, diseased or mutilated dogs. Overwhelmed with dogs due to policies pushed and supported by their own ideology, Animal Rights inspired NGOs ensure that there is always a great need for their 'services'.
- This must be considered an act of sustained, prolonged, systemic cruelty upon unowned dogs, wildlife and their human victims.



FRD scavenging for food on the streets in Pune, Maharashtra. Photo: Meghna Uniyal.



The fate of FRD on the streets of India. Photo: Narendra Patil.



FRD run over by a vehicle. Photo: Meghna Uniyal



FRD killedby the Municipality after FRD killed numerous people, including senior citizens in Kerala, India.

#### THE ILLEGALITY OF RELEASING UNOWNED DOGS

Releasing unowned animals after it has been proven and stated by the Central Government that these same animals endanger large wildlife and spread diseases, may be considered an illegal act under various provisions of the Indian Penal Code, the Wild Life (Protection) Act and the Prevention of Cruelty to Animals Act.

1. As per the Wild Life (Protection) Act (1972)

While it is known that illegal hunting or poaching relates to human behavior and not to animals, the specific results of poaching and the depredations of dogs can be considered similar i.e. wildlife is killed by an element invasive to a protected or wildlife inhabited area.

- a. As per the NTCA guidelines/ ABC policy, This release of dogs, which are known predators and threats to wildlife as well as people can be considered an illegal act as per the WLPA, and amounts to the effect of "poaching", given that dogs are natural hunters. *i.e.* poaching is illegal hunting. As per WLPA Section 2(16) "hunting", with its grammatical variations and cognate expressions, includes -
- (i) killing or poisoning of any wild animal or captive animal and every attempt to do so;

- (ii) capturing, coursing, snaring, trapping, driving or baiting any wild or captive animal and every attempt to do so;]
- (iii) injuring or destroying or taking any part of the body of any such animal or, in the case of wild birds or reptiles, damaging the eggs of such birds or reptiles, or disturbing the eggs or nests of such birds or reptiles;
- b. 'Hunting' is illegal in India unless allowed by the government (i.e. Chief Wildlife Warden) In order to protect life and property. Dogs are not wild animals and do not come under the WLPA. Releasing or allowing the existence of millions of natural invasive predators both within and around PAs or wherever wildlife is found can be considered an act of abetment to wildlife destruction by FRD, an invasive species.
- c. In State of Rajasthan v. Salman Khan and Others (2012 INDLAW RAJ 608), the Rajasthan High Court held that "...damage caused to the wild life even if the same cannot be evaluated or calculated in terms of money is definitely a loss to the ecology and as a result thereof, it can be considered to be a loss to the public and society at large..."

Thus, if a gang of poachers is to be arrested for killing a blackbuck, the same principles apply to the owners of dogs involved in wildlife predation or trespass into PAs or to anyone releasing dogs or packs of dogs within reach of any PA or any habitat for wildlife, given that the results of such actions are the same in both the above mentioned incidents.

Since 2002 the Maharashtra State government has allowed forest guards to shoot human poachers on sight. In light of this it is absurd that predatory and invasive dogs are given vaccinations and released outside PAs enabled to continue depredations on wildlife, according to the recent guidelines, when human beings are shot dead for the exact same offense. The Forest Department must be allowed to lethally deal with non-human entities like IAS that cause the same or very likely, far more extensive damage to wildlife.

- 2. As per the Prevention of Cruelty to Animals Act, (1960)
- a. Section 3(f) Owner "used with reference to an animal, includes not only the owner but also any other person for the time being in possession or custody of the animal, whether with or without the consent of the owner;"
- Therefore, any organization that captures FRD are their legal owners and have all responsibilities and culpabilities of an actual owner and cannot release that dog into a public space.
- b. Duties of persons having charge of animal "It shall be the duty of every person having the care or charge of any animal to take all reasonable measures to ensure the well-being

of such animal and to prevent the infliction upon such animal of unnecessary pain or suffering."

- Releasing a dog on the streets or public is tantamount to abandonment of a species dependent on human companionship and care to starvation, disease and attack by other dogs.
- c. Section 9 Functions of the Board (f) to take all such steps as the Board may think fit to ensure that unwanted animals are destroyed by local authorities, whenever it is necessary to do so, either instantaneously or after being rendered insensible to pain or suffering.
- d. Section 11- Cruelty by any person is defined as –
- without reasonable cause, abandons any animal in circumstances which render it likely that it will suffer pain by reason of starvation or thirst;
- willfully permits any animal, of which he is the owner, to go at large in any street while the animal is affected with contagious or infectious disease
- without reasonable excuse permits any diseased or disabled animal, of which he is the owner, to die in any street;

Therefore, the PCAA promotes humane euthanasia of unwanted and problem animals, is against the release of FRD, and against allowing dogs to die on the streets and public places from diseases.

It is pertinent to note that as per the ABC Rules Section 10(4) - "If the dog is found to have a high probability of having rabies it would be isolated till it dies a natural death." Given that the animal suffers terrible agony, as it is infected with a highly contagious and debilitating disease and is severely disabled, it should be humanely euthanized so as to put it out of its misery. The ABC rules here follow animal rights principles and not animal welfare principles and thus make rabid dogs suffer unnecessarily and profoundly. The ABC rules are thus in opposition to the PCAA and practitioners are technically liable for criminal culpability.

- 3. As per the INDIAN PENAL CODE –
- a. Section 268 "Public Nuisance" A person is guilty of a public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance

to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, danger or annoyance to persons who may have occasion to use any public right. A common nuisance is not excused on the ground that it causes some convenience or advantage.

- Releasing of potentially dangerous FRD causes or can lead toattacks on human beings and up to or over 20,000 deaths due to rabies a year. An animal bite survey revealed that majority (75%) of animal bite victims belonged to poor and low-income group. The main biting animal was dog (91.5%) of which 62.9% were strays (Sudarshan M.K, 2005). Not only is this public nuisance, the release of FRD can be considered a crime.
- b. Section 269 Whoever unlawfully or negligently does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine, or with both.
- c. Section 270 Whoever malignantly does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both.
- d. Section 289 Whoever knowingly or negligently omits to take such order with any animal in his possession as is sufficient to guard against any probable danger to human life, or any probable danger of grievous hurt from such animal, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both.
- Inoculating a tiny percentage of FRD and releasing them does not prevent them contracting
  other diseases that are communicable to both humans and wildlife. Animals with full
  blown symptoms of other diseases are regularly captured, inoculated against rabies and
  released.
- This may emphasize that the government (NTCA) itself is undermining WLPA letting FRD live and releasing them in or around any wildlife populated areas.
- e. Section 299 Whoever causes death by doing an act with the intention of causing death, or with the intention of causing such bodily injury as is likely to cause death, or with the knowledge that he is likely by such act to cause death, commits the offence of culpable homicide.

- Direct attacks and predation on human beings or wildlife by inoculated dogs that have been released after inoculation, put culpability of those attacks on the releasing organizations and government agencies, which would be guilty of culpable homicide.
- f. Section 336 whoever does any act so rashly or negligently as to endanger human life or the personal safety of others, shall be punished with imprisonment or a fine or both,
- g. Section 337 Whoever causes hurt to any person by doing any act so rashly or negligently as to endanger human life, or the personal safety of others, shall be punished with imprisonment or a fine or both.
- h. Section 338 Whoever causes grievous hurt to any person by doing any act so rashly or negligently as to endanger human life, or the personal safety of others, shall be punished with imprisonment or a fine or both.
- Section 425 Whoever with intent to cause, or knowing that he is likely to cause, wrongful loss or damage to the public or to any person, causes the destruction of any property, or any such change in any property or in the situation thereof as destroys or diminishes its value or utility, or affects it injuriously, commits "mischief".
- j. Section 441 Whoever enters into or upon property in possession of another with intent to commit an offence or to intimidate, insult or annoy any person in possession of such property, or having lawfully entered and unlawfully remains there. As held by the Hon'ble Supreme Court of India, 'A trespass is an unlawful interference with one's person, property or rights. With reference to property, it is wrongful invasion of another's possession.
- Releasing predatory animals known for both disease transmission, attacks on livestock, wildlife and human beings, into public areas, ensures their 'trespass' onto both PAs, public and private property.
- k. Additionally the following court judgements have relevance to the allowed removal of stray dogs from any wildlife or any human inhabited area.
- 1. In W.P. 4075/2015 the Hon'ble Bombay High Court has held that the
  - "right guaranteed by Article 21 of the Constitution of India is not merely a right to survive but extends to right to live a dignified and meaningful life and as such, there is a corresponding obligation on the State Government and its agencies to ensure that the said rights are not violated."

(Anonymous, 2015)

### 2. The Hon'ble Karnataka High Court in WP No. 110352/2019 has laid down:

- "There is a statutory obligation which has been imposed upon the local municipal authorities to safeguard the human beings cohabitating within their jurisdiction from the danger of any stray dogs and/or any attacks by such stray dogs."
- "Dogs which do not come within the scope of Rule 9 or 10 but which are a menace or
  cause nuisance irrespective of whether there is evidence of such dogs having mauled
  or bitten children or adults could be exterminated... by relevant municipal
  authorities."
- "Municipal authorities are held to be liable under public law for any injury and/or death caused to any citizen on account of attack by street dogs within the jurisdiction of the said municipal authority."
   (Anonymous, 2019)

#### 3. Uttarakhand HC in WPPIL No.84 of 2017 -

- "We direct the Nagarpalika, Nainital to survey the stray dogs within the town and to identify and remove only the aggressive dogs within the pack and remove them and place them in dog pounds."
- "A balance has to be struck between the rights of the stray dogs on the one hand and human beings on the other hand and the life and liberty of thehuman beings cannot be sacrificed while preserving the rights of the stray dogs in the area." (Anonymous, 2017)

In conclusion, under these provisions the release of dogs, which are known predators and threats to wildlife, livestock and human beings, is an illegal act as per the provisions of the laws as stated above, and amounts to "illegal hunting" or abetment to poaching, cruelty against animals including dogs and of willful cruelty, neglect and criminal endangerment to both wildlife, livestock and human beings. Such acts should also be treated as culpable homicide and willfully causing grievous hurt on the part of negligent authorities and NGOs in case the released dogs attack human beings.

In light of the above legal provisions, it is recommended that all FRD in and around PAs be subject to lethal control and any dog not contained within private property be considered a candidate for lethal control.



Sarus Crane (Schedule IV species) chased by FRD, Dhanauri Wetlands, UP. Photo: Vikram Batra

# MANAGEMENT AND CONTROL OF FREE-RANGING/FERAL DOGS AND THE PROTECTION OF WILDLIFE, LIVESTOCK AND HUMAN RIGHTS: THE INDIAN CONTEXT

- Despite India's Prevention of Cruelty to Animals Act, that made it one of the first countries to give legal right of food, water and shelter to domestic animals, India has followed the regressive, unscientific and cruel ABC policy of neutering and releasing unwanted/unowned dogs back on to the streets and public places, including forests and areas with wildlife, for over two decades. This has led to a massive increase in stray/freeroaming dog populations.
- 2. According to national resources and governance expert, CR Bijoy, there are "4,526 forest villages (inside forests) in India and many more that are undemarcated or unsurveyed." Approximately "100 million to as much as 400 million people access these forests." Article 19(5)[13] of the Constitution of India guarantees tribal people right to own property and enjoy it in any part of the country.

The government has acknowledged that free roaming dogs are killing animals and releasing these same dogs in human inhabited areas or forests where livestock is owned and wildlife lives, indicates that these same dogs are a danger to both people and wildlife in those areas. This release can be considered violative of the governments mandate to uphold article 21 or the right to livelihood of livestock farmers. Moving the problem around is likely not a solution. Chandrima Home, a researcher at Bangalore-based Ashoka

Trust for Research in Ecology and the Environment (ATREE), who looked into the patterns of livestock killing by stray dogs in Upper Himalayas as part of the study, says that domestic dogs kill more livestock than snow leopards and wolves. This results in high economic losses. "In the last five years there has been a decline in the population of small bodied livestock within the landscape. Many villages have stopped keeping them due to increased frequency of depredation by dogs," says Home with ensuing loss of income, diet and livelihood (Home *et al.*, 2017).

- Since the government protects cattle from slaughter by humans it should also allow farmers to protect their livestock from slaughter by free-ranging dogs with lethal force given the relentless and repetitive threat FRD pose to both farmers and their livestock.
- 4. In 2018, in the rural town of Sitapur in Uttar Pradesh, 13 children, between the ages of 5 and 12, were killed by stray/free-roaming dogs. These horrific incidents occurred in a span of a month. Animal rights groups immediately blamed "hyenas and other wild animals" for these deaths on the basis of an "anonymous source". Upon further investigation by the Indian Veterinary Research Institute (IVRI) and the WWF, it was conclusively proved that the attacks were in fact from FRD. This illustrated theapathy, manipulation and suppression of facts by AR groups in India, regardless of horrific consequences.



This child (name withheld) was bitten by FRD in Bangalore. Photo BBMP, Bangalore

A majority of India's recorded rabies related deaths (18,000-20,000 recorded annually) are children. According to the World Health Organization (WHO), 30% to 50% of the 55,000

victims estimated each year are individuals under 15 years of age(Knobel *et al.*, 2005). About 17.4 million attacks by animals are reported every year in India and, again, most of the bites are from stray dogs and a significant percentage of victims are children, most often from lower income groups.

- 5. Globally, in almost all countries on earth, natural resources like wildlife and farmers resources are protected from harm from feral dogs and other IAS with lethal force which both the state and citizens are allowed to use. This must be done in India as well as citizens have a constitutional right to protect their livelihoods, lives, natural resources and livestock.
- 6. Under Article 48A "The State shall endeavor to protect and improve the environment and to safeguard the forests and wildlife of the country. While not judicially enforceable, Article 48A becomes enforceable under the ambit of the Fundamental Right to Life under Article 21.
- 7. Enshrined in the Indian Constitution, Article 51-A (g)states the following: "It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures." While these duties are not directly enforceable in Indian courts, they lay down the groundwork for legislation, policies and state directives in furtherance of animal protection at the Central and State levels. Moreover, they may be enforced in courts by taking an expansive judicial interpretation and bringing them within the ambit of the fundamental Right to Life and Liberty under Article 21 which is judicially enforceable. Article 21 ensures the Right to Livelihood and Life and is enforceable and this supersedes the AWBI's guidelines, Article 51A(g) (which is not enforceable) or any other rules or acts.
- It is important to note that 'compassion' means, as per the Oxford dictionary, "sympathetic 8. pity and concern for the sufferings or misfortunes of others" and in the case of Article 51-A (g)specifically includes wildlife. Compassion is important and necessary for dealing with infants and old people who cannot take care of themselves. 'Compassion' is not meant to be a doctrine to build policies on, that over time will lethally affect the lives of millions of India's citizens and hundreds of millions of lives of wild animals. Undifferentiated empathy and reflexive empathy can be destructive and 'compassion' is therefore to be used judiciously and thoughtfully. A predator like a tigress is very compassionate towards its cubs but will attack, maim and kill any threat to the cubs, perceived or real, as the tigress is emotionally and personally invested in the cubs, no matter the context. Reason, logic, and morality play no part in a display of 'compassion'. Complex issues especially those that cause death, mutilation, loss of freedom of movement and loss of livelihood to human citizens, require thought, strategy and action for their solution. In such a context, it is perfectly reasonable to brush aside the avaricious aims of a voluble minority with unjustifiable ethics for the broader benefit of generations of Indian citizens and the sustainable survival of Indian wildlife.
- 9. The Prevention of Cruelty to Animals Act, 1960 has as its objective to prevent the infliction of unnecessary pain or suffering on animals during their usage, killing or

euthanasia. Compassion may thus be exerted in the usage of humane techniques of animal usage and/or euthanasia.



Jackal (Schedule II species) attacked by FRD, Haryana. Photo: Mohammad Yasir Hussain.

**LEGAL PRINCIPLES/PROVISIONS OF THE WILDLIFE PROTECTION ACT** that empower forest officers along with established legal principles to adequately deal with this threat in Protected Areas (PAs):

- Long title "An Act to provide for the protection of wild animals. birds and plants and for matters connected therewith or ancillary thereto..."
- Section 2(36) "wild animal" means any animal specified in Schedules I to IV and found wild in nature;

Thus, feral dogs are not wildlife but IS (Invasive Species) or IAS (Invasive Alien Species).

- Section 4 Appointment of Chief Wild Life Warden (CWLW) who is the Statutory Authority for the purposes of the WLPA.
- Chapter IV "Protected Areas" (National Parks, Sanctuaries...) are constituted and finally notified under Section 26A -Sanctuary and Section 35(4) National Park.
- Section 27(1) Restriction on entry in sanctuary—no person other than.... shall enter or reside in the sanctuary, except under and in accordance with the conditions of a permit granted under Section 28.

- Section 28(1) Grant of permit—The CWLW may, on application, grant to any person a permit to enter or reside in a sanctuary... (2) A permit shall be issued subject to such conditions...as may be prescribed.
- Section 33 Control of Sanctuaries The CWLW shall be the authority who shall
  control, manage and maintain all sanctuaries and for that purpose, within the limits of
  any sanctuary, ... (b) shall take such steps as will ensure the security of wild animals
  in the sanctuary, and preservation of the sanctuary and wild animals therein;
- Section 51(1) Any person who contravenes any provision of this Act...or any rule or order made thereunder... shall be guilty of an offence against this Act, and shall, on conviction, be punishable with imprisonment for a term which may extend to three years or with fine which may extend to twenty-five thousand rupees of with both.

If citizens are penalized for violating of the WLPA, it is wholly illogical, counter-productive and even illegal to provide dogs, who are exclusively carnivorous when feral, with healthcare, protection and release to continue depredations of the exact same sort that human beings are penalized for.

Various existing provisions of the WLPA and established legal principles empower forest officers to adequately deal with this threat. Thus, a conjoint reading of the above provisions of the WLPA, and legal principles clearly establish the following:

- That all wild animals specified in Schedule I-IV are protected irrespective of where they are found;
- b. That all PAs are to be governed and managed under the provisions of the WLPA;
- C. That entry into a PA is restricted and free-ranging/feral dogs in and around PAs endanger the security and lives of wild animals;
- **d.** That the CWLW is the authority that is mandated and empowered to take all necessary steps to ensure the security and preservation of all wildlife inside and outside PAs:
- **e.** That the CWLW is also empowered under Section 33 (b) of WLPA to issue an Order for shooting/capture/removal/translocation of FRD to ensure security to wild animals, which he is duty-bound to perform as mandated by law.

The above facts and legal interpretations establish that State Chief Wild Life Wardens/Authorized Officers are empowered and duty bound to implement the WLPA to robustly tackle the menace of free roaming/feral dogs by doing the following:

a. issue appropriate orders to relevant officers, citing the above legal provisions of the WLPA, to eliminate all free-ranging/feral dogs, from within PAs and from habitats of Scheduled Endangered species beyond PAs, to eliminate the risks posed by them to wildlife both within and outside PAs by any and all means necessary;

b. take all necessary active and preventive measures to stop the entry and/or release of any dogs inside and around PAs (unless the animal is passing through with its owners and confined within a vehicle or contained within private property) and to prosecute and penalize any non-governmental organization doing the same as dogs, (like poachers), present a clear and present threat to wildlife.



Camera trap in a Tiger Reserve shows FRD hunting a Sambar (Schedule III species)

### THE PREVENTION OF CRUELTY TO ANIMALS ACT, INDIA



A Nilgai being eaten aliveby FRD at the National Chambal Wildlife Sanctuary, Madhya Pradesh. Photo: <u>Trikansh Sharma</u>

The Prevention of Cruelty to Animals Act, 1960 recognizes and acknowledges the fact that animals are used in a variety of ways by human beings and focuses on eliminating/reducing "unnecessary pain and suffering" of domestic animals.

It does not prohibit the killing of animals. Rather, itemphasizes on, amongst other things, "design of slaughter-houses or in the maintenance of slaughter-houses or in connection with slaughter of animals so that unnecessary pain or suffering, whether physical or mental, is eliminated in the pre-slaughter stages as far as possible".

It can thus be inferred that animals when killed, wherever or whenever necessary, are to be killed in as humane a manner as reasonably possibleso as to avoid them experiencing 'unnecessary' suffering. It is also included that methods used are to ensure that "unwanted animals are destroyed by local authorities, whenever it is necessary to do so, either instantaneously or after being rendered insensible to pain or suffering."

The PCAA also does not prevent the killing of domestic animals and specifically mentions "the destruction of stray dogs in lethal chambers or by such other methods as may be prescribed" and "the extermination or destruction of any animal under the authority of any law for the time being in force."

In light of this, when animals can be killed for various reasons including consumption or threats posed, albeit as humanelyas reasonably possible to avoid unnecessary suffering (and not necessary suffering), there is nothing to prevent feral dogs from being eliminated humanely.



Mahatma Gandhi on Dogs, Non-violence and Animal Welfare

Known as the apostle of 'ahimsa' (non-violence), Mahatma Gandhi's teachings on the management of stray and feral dogs mirror in many regards the teachings of the Buddha on non-violence, allowing the usage of lethal force to protect the weak and the innocent and especially in the function of government duties. A hundred years ago (1920s),he wrote about dogs, their welfare and a citizen's duties in his paper, 'Young India'.

"The multiplication of dogs is unnecessary. A roving dog without an owner is a danger to society and a swarm of them is a menace to its very existence. If people were really religious, all dogs would have owners. There is a regular science of dog-keeping in the West. We should learn it." - MK Gandhi

"If we want to keep dogs in towns or villages in a decent manner, no dog should be suffered to wander.... It is a sin to feed stray dogs. It is a false sense of compassion. It is an insult to a starving dog to throw a crumb at him. Roving dogs do not indicate the civilization or compassion of the society, they betray on the contrary the ignorance and lethargy of its members." - MK Gandhi



"Taking life may be a duty", Gandhi proceeded. "Suppose a man runsamok and goes furiously about, sword in hand and killing anyone who comes his way and no one dares to capture him alive. Anyone who dispatched this lunatic will earn the gratitude of community. Connivance or putting up with status quo is no ahimsa, there is no thought or discrimination in it. Dogs will be killed whenever they are a menace to society. I regard this as unavoidable in the life of a householder. To wait until they get rabid is not to be merciful to them. We can imagine what the dogs would wish if a meeting could be called of them, from what we would wish under the same circumstances. We will not choose to live anyhow. That many of us do is no credit to us. A meeting of wise men will never resolve that men may treat one another as they treat rabid or stray dogs... We offend against dogs as a class by suffering them to stray and live on crumbs or leavings from our plates that we throw at them and we injure our neighbors also by doing so." - MK Gandhi

"If anyone thinks that the people of the West are innocent of humanity, he is sadly mistaken.

Photo: Gandhiji in London in 1931 with a dog named Blue.

The ideal of humanity in the West is perhaps lower, but their practice of it is very much more thorough than ours. We rest content with a lofty ideal and are slow or lazy in its practice. We are wrapped in deep darkness, as is evident from our paupers, cattle and other animals. They are eloquent of our irreligion rather than of religion." - MK Gandhi

"I do believe that, where there is only a choice between cowardice and violence, I would advise violence...Though violence is not lawful, when it is offered in self-defense or for the defense of the defenseless, it is an act of bravery far better than cowardly submission." - MK Gandhi

"The Mahajan [State] may feel itself safe and believe that it has saved their lives by dumping dogs near my field but it will have committed the greater sin of putting my life in danger." MK Gandhi

"Let no one say when I am gone that I taught the people to be cowards" - MK Gandhi

# INTERNATIONAL GUIDELINES AND PROTOCOL FOR MANAGEMENT OF FERAL DOGS



Spotted deer (Schedule III species) being attacked by FRD in Dandelli. Photo by Vikas Patel.

### THE INTERNATIONAL CONTEXTAND WILDLIFE MANAGEMENT PRINCIPLES

The provisions of the World Conservation Strategy – 1980 (WCS), revised 1991 and renamed: Caring for the Earth, A Strategy for Sustainable Living form a protocol, declared to be the official Mission Statement, and is reflected in the principal policy of the International Union for the Conservation of Nature and Natural Resources (IUCN). In 1980, the WCS was hailed by world society as being the blueprint for the symbiotic survival of both man and nature on planet Earth.

After the promulgation of the WCS, all those responsible sovereign states who were members of the IUCN at that time obligated themselves to model their National Conservation Strategies (NCSs) on the WCS template; and to write its provisions into their national laws.

India became a State Member of IUCN in 1969and is thus obligated itself to model India's National Conservation Strategies (NCSs) on the WCS template; and to write its provisions into itsnational laws.

The WCS proposed and promoted, inter alia, an integrated approach to development and sustainable natural resource management. The three principal objectives of what the WCS describes as living resource conservation (sic) are:

- To preserve genetic diversity (the range of genetic material found in the world's
  organisms), on which depend the functioning of many of the above processes and lifesupport systems, the breeding programs necessary for the protection and improvement
  of cultivated plants, domesticated animals and microorganisms, as well as much
  scientific and medical advancement, technical innovation, and the security of the
  many industries that use living resources;
- To maintain essential ecological processes and life support systems (such as soil regeneration and protection, the recycling of nutrients, and the cleansing of waters), on which human survival and development depend; and
- **3.** To ensure the sustainable utilization of species and ecosystems (notably fish and other wildlife, forests and grazing lands), which support millions of rural communities as well as major industries.

To tolerate dogs as Invasive Alien species in any environment containing any wildlife or biodiversity is a violation of all three WCS principles, asFRDs pose a serious threat to the survival of India's wildlife.

Globally, wildlife management principles take into consideration ecological principles such as (a) carrying capacity of the specific habitat, (b) preservation and management of habitat, (c) predator control, when necessary, especially removal or extermination of invasive alien predator species and (d) capture and reallocation of abundant species and management of "desirable" or "undesirable" species.

Wildlife management and protection is based on science and all decisions in the wildlife field must be based on scientific fact (the truth) and sound wildlife management principles alone, disregarding personal preference, emotion or sentimentalism.

The IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species state "When a potential or actual alien invasive species has been detected, in other words ....steps to mitigate adverse impacts include eradication, containment and control. Eradication aims to completely remove the alien invasive species" (Anonymous, 2000). The guidelines further state that the "Control and eradication of alien invasive species is more likely to be successful if supported by informed and cooperating local communities, appropriate sectors and groups"

Globally lethal control is applied to FRD and IAS and other measures are used for population control (for example: sterilization in cities for pet dogs). Lethal control is not made illegal or removed from available options, as it has been made to appear in India.



FRD killing Chital (Schedule III species), Karnataka. Photo: Shivanand Bhangare

### GLOBAL SOLUTIONS/EXAMPLES OF MANAGEMENT OFFRD

1. Feral dogs have been documented in all 50 states of the United States and estimates of damage in the U.S. from these animals, amount to >\$620 million annually or about 5,000 crore rupees(Bergman *et al.*, 2009)

US Federal regulations state (50 CFR § 28.43)

Destruction of dogs and cats: Dogs and cats running at large on a national wildlife refuge and observed by an <u>authorized official</u> in the <u>act</u> of killing, injuring, harassing or molesting humans or wildlife may be disposed of in the interest of public safety and protection of the wildlife.

State laws vary but in general allowing a dogto chase or hunt deer, elk, or any endangered animal, is a misdemeanor (for the human owner if any) which allows fish and wildlife officers to destroy the dog without warrant or process. Farmers and livestock owners may legally kill dogs that are chasing or attacking their animals, and the dog owners if any are responsible for any damages to the livestock. Unowned dogs that attack livestock or wildlife may be shot out of hand. Some examples of state law regarding owned dogs that free range, with the regulation mentioned, are.

Minnesota: The owner of a dog that kills or pursues a big game animal is guilty of a petty misdemeanor and is subject to a civil penalty of up to \$ 500 for each violation. (MN ST § 97A.321)

Nevada: It is unlawful for the owner of any dog to permit such dog to run at large if such dog is actively tracking, pursuing, harassing, attacking or killing any wildlife in a state-owned wildlife management area. A peace officer may kill the dog without any liability. (NV ST § 503.636)

New Hampshire: If any dog, at any time, shall maim, injure or destroy any wild animal protected by law, the owner thereof shall be fined the same amount which the statutes impose upon persons for killing the same animal contrary to law. (NH ST § 466:35)

North Dakota: Any district game warden may kill any unattended dog harassing or killing big game. No action for damages may be maintained against the person for the killing (ND ST § 20.1-05-02.1)

Pennsylvania: It is unlawful for any person controlling or harboring a dog to permit the dog to chase, pursue, follow upon the track of, injure or kill any game or wildlife at any time. (PA ST 34 Pa.C.S.A. § 2381)

Vermont : A game warden may shoot a dog who is pursuing a deer or moose close enough to endanger its life, or a fine may be issued (VT ST. T.10 § 4748)

Wyoming: Hunting, running, or harassing any of the named classes of animals may result in the dog being put to death or the owner being charged with a misdemeanor. There is an exception if the dog is protecting livestock. (WY ST § 23-3-109)

State law references above from (Tischler, 2007)

Note: All the above state laws apply to owned dogs that are free ranging.

2. In Australia 'Wild dogs', which include feral domestic dogs, dingoes and their hybrids, prey on livestock causing significant impact on agricultural production. Methods of control include poisoning with sodium monofluoroacetate (1080), trapping, shooting, exclusion fencing, aversion and use of livestock guarding animals. (Sharp, Trudy 2012). The sheep industry is significantly impacted and attacks on cattle are also common. Feral animals like cats have a devastating toll on Australia's wildlife, killing over a billion animals every year besides being implicated in at least 25 mammal extinctions and pressuring a further 124 threatened species. Invasive alien species such as domesticdogs and cats are lethally removed and citizens with firearms licensesare often enabled to do so. Australia encourages and allows for the shooting, trapping, poisoning of all feral, invasive, non-endemic species especially unowned domestic dogs and cats to protect endemic wildlife and livestock and the government/communities actively assists, encourages and holds events to lethally control feral dogs, the native dingo as well as other invasive species like domestic cats and goats.

Shooting is considered the most effective means of euthanizing wild dogs caught in trapping programs. Shooting is a quick and effective means of humanely destroying animals and in most situations is the only practical method available for use in the field (Sharp & Trudy 2016).

3. Similar or the same lethal protocols are used in almost all countries for the management of feral species or invasive alien species, including dogs that threaten endemic wildlife, including the USA, European Union, Australia, New Zealand, Israel, Canada, Brazil, Chile, Malaysia and most Gulf countries.



Smooth-coated Otter (Schedule II species) attacked by FRD, Rawatbhata, Rajasthan.

Photo: Devki Nandan

# PROPOSED SOLUTIONS AND PROTOCOLS FOR MANAGEMENT OF FREE RANGING DOGS

### 1. PREVENTIVE MEASURES: DOG OWNERSHIP, REGULATION AND CONTROL

As dogs frequently move between different categories – owned, straying, confined, feral, etc. – it is not always possible to differentiate between the various categories by sight alone. Therefore, various preventive measures must be taken to promote and regulate responsible ownership and penalize irresponsible ownership. Ownership of a dog entails –

- Physical ownership, which must necessarily be on one's own private property.
- Registering the animal with the government under relevant laws so as to establish legal ownership.
- Collaring and leashing of a dog as an identification mark, mark of ownership which allows
  control of a dog in a public place via a leash.

 Being legally and financially responsible for the actions of an owned animal not only in terms of caring for it but also in instances where it causes any damage, injury or to any other domestic animal, livestock, wildlife or human being.

Thus, the owner can be exposed to both criminal and civil liability for the above-mentioned damage caused by their ward i.e. their dog.

### Ownership within and around a Protected Area

The four schedules of the WLPA prohibit hunting of wild mammal, birds, reptiles, amphibians, fish, crustaceans, insects, or coelenterates which are listed in these Schedules of the Act, in PAs as well as wherever else theymay be found. They can be hunted, under a permit, only if they become dangerous to human life or property. The penalties for the said offences range from imprisonment from three years to seven years and a fine of Rs. 10,000 rupees (About 135 USD).

Therefore, any dog present within and/or around a PA may be considered a potential danger to wildlife, regardless of whether it is owned or not. Any dog not contained within private property is to be considered a threat i.e. as an IAS towards wildlife. For citizens without valid permission from authorities, entering a sanctuary area can attract imprisonment up to seven years and a fine up to Rs. 25,000 (about 335 USD) and imprisonment up to 3 years. The same penalty may be applied for owned dogs i.e. on the owner of any dog or dogs found within a PA, or the dog can be euthanized.



Nilgai (Schedule III species) being attacked by FRD, Gandhinagar, Gujarat. Photo: Vicky Chouhan

### DUTIES OF STATE FOREST/WILDLIFE DEPARTMENTS -

- 1. Publish a notice mandating all owners of dogs within a specified distance from notified forests to register their dogs with the Forest Department, along with the following requirements
  - **a.** All owned dogs to be provided an annual license and glow collar at cost of Rs 10 per dog per year. This fee can be made nil for SC/ST communities in and around PAs.

- b. Any owner (except for above mentioned exemptions) found to have an unlicensed dog will be fined Rs. 500 per animal and/or confiscation of said animal until license fee is paid of Rs. 10. If an unlicensed dog is found within a PA it is to be euthanized as soon as possible.
- C. All owners are required to compulsorily keep their dogs on/within their own property. Dog travelling in cars through PAs/forests must remain within the vehicle at all times. Owned dogs outside cars to be kept on a leash at all times in all PAs and in and around any wildlife habitat.
- **d.** Any dog found roaming inside a PA/forest, unsupervised and not on a leash with an owner, will be considered a feral/unowned dog and a clear and present threat to wildlife, regardless of a collar and/or license, and will be euthanized.
- **e.** Any owned and registered dog suffering from any diseases that can be contagious to wildlife like CDV, Mange etc. is to be treated immediately and the animal euthanized if necessary. If any dog is found with an infectious disease to wildlife within a PA/forest it is to be euthanized immediately and the carcass disposed of by burying or burning as soon as possible.
- f. Community cooperation and involvement regarding the control of FRDs is to be encouraged and assistance is to be sought from the community and incentivized by the FD so as to remove all FRDs from and around PAs and ensure registration of all owned dogs. This incentivization can be in the form of a bounty (Rs. 100 for any FRD humanely caught and/or euthanized) for the humane euthanasia of FRD or facilities arranged for the same.

### Duties of the veterinary department

- **a.** Neutering of owned dogs to be provided at nominal cost by the veterinary department to any owner who wants to get their animal neutered.
- b. Registered dogs will also get free anti-rabies, other vaccination, and treatment for dermal infections free of cost annually and Veterinary department will keep records of the same.

Protocols for people living around PAs/forestsor any environment containing protected species

• If they are valid arms license holders, people around PAs may humanely euthanize free-ranging dogs outside of these protected areas and in agricultural or private properties both as a service to wildlife and their own livestock and health. All such events must be brought to the notice of the FD for their records. Any citizen may hire pest control agencies to euthanize unowned dogs or euthanize them himself or herself, humanely, in any areas outside of protected areas/forests and outside any municipality where the duty to remove/euthanize unowned stray dogs is as per Municipal acts.

- The FD is bound to shoot dogs within a 10 km radius around any PA/forest and reduce the population of free ranging dogs in these areas to zero. Dogs may be owned in these areas but have to be under care and control of their owners.
- If an owner of any agricultural property finds dogs on his or her property, he or any valid arms license holder is within his or her rights to shoot the dogs or inform the forest department who can do the needful.
- In the case of Adivasi/tribals/farmers without arms licenses, if they complain to the Forest
  Department about dogs on or near their properties or harassing/killing their livestock, the
  FD is bound to act and euthanize the dogs within 3 days of the complaint being submitted.
- Any dog that is known to prey on livestock or wildlife is to be considered a clear threat to wildlife, and is to be euthanized as soon as possible.
- The rules of firearm safety (as detailed below) to be followed by any shooter as well as humane killing and compulsory disposal of the dog carcasses by burial by the arms license holder at his or her cost.
- If the dogs are owned by another individual the owner is liable for any damage (in the form of monetary compensation) the dogs inflict on livestock or property.



FD and local villagers around a PA in Rajasthan rescue and tend to wildlife attacked by FRD.

Photo credit: Rajasthan Forest Department

## ACTIVE MEASURES: REASONING AND PRECEDENT

In the 1920s, the apostle of 'ahimsa', Mahatma Gandhi, wrote in his paper Young India,

"I am therefore strongly of the opinion that if we practice the religion of humanity, we should have a law making it obligatory on those who would have dogs to keep them under guard and not allow them to stray and making all stray dogs to be liable to be destroyed after a certain date." – MK Gandhi

Methods of lethal control internationally include poisoning and trapping. However, the most effective, economical, humane and low-impact method of eliminating feral dogs in and around PAs is by shooting them dead with a firearm, as is practiced the world over. The culling can be carried out by skilled and responsible shooters when the animal is within range and the correct firearm, ammunition and shot placement is used to cause quick insensibility and/or quick death. Shooting of feral dogs can be undertaken by licensed firearm holders, land holders or their employees in a radius of 20kms surrounding any protected area/forest as well as trained and experienced shooters with valid arms licenses.

The advantages of this are many-fold:

- Shooting with a firearm can be used to target specific problem animals or packs of animals.
- Individual animals can be targeted without any danger of wounding or harming other animals.
- Feral dogs are put down immediately in a humane manner.
- Unlike a tranquillizer gun which has a range of less than 20 meters a low sound signature firearm like a 22 LR caliber rifle or 30.06 rifle can be used with great precision up to ranges of 50 meters (or 300 meters for a 30.06 caliber rifle) and can be humanely lethal if used by competent marksmen and correct ammunition is used. A 12-bore shotgun can be used very effectively with the right ammunition up to a range of 20 meters.
- When shot with a suitable firearm by a trained marksman the animal will expire
  immediately in its tracks making recovery simple unlike those shot with a
  tranquillizer dart which takes up to 10 minutes or more to take effect. A healthy dog
  can very easily run away in that time making recovery in forested areas impossible.
- The tranquillizer operation with a veterinarian and forest department personnel is expensive. Empowering communities and citizens to protect both wildlife and livestock does not cost the government anything.
- Feral dogs can be shot either when driving within a designated area, walking or by sitting up in a blind over a baited area.

- The carcasses of feral dogs are easy to dispose of (buried in a pit of depth 3 feet depth) unlike darted animals that have to be recovered, revived, vaccinated at tax payers cost and then shifted to another location to continue their depredations in a healthier state. Any individual or community can easily dispose of the carcasses at low cost.
- Dogs have been known to travel very long distances to return to their home territory.
   With lethal control this option is permanently removed. Dogs quickly learn to avoid areas they are shot within and it is believed that, after some time, privately owned dogs in these areas surrounding protected areaswill be the only remaining dogs.
- Communities that choose to retain their "free ranging dogs" must take responsibility
  for their dogs and must ensure that the dogs remain within private property or in the
  case of tribal owners/shepherds/working and herding dogs, within the presence and
  command of their owners.
- Lethal management of FRD is cheaper than sterilization. Consumable cost wise, shooting a dog costs between Rs. 20-200 as opposed to sterilization, which costs upwards of Rs. 2, 000-3,000 or more per dog and does not address the problem of canine predation in any way, leave alone resolve it. Sterilized dogs can still kill wildlife and spread a host of diseases. A dead dog cannot do the same.

# Methods allowed for humane euthanasia of dogs -

- a. Shooting with firearm by an arms license holder or anyone authorized or employed by the FD.
- b. Euthanasia by any veterinarian or FD employee/authorized personnel using any humane methods (fire arm or by appropriate injection of lethal substances after capture with methods listed in the guidelines i.e. large butterfly nets, hand held lassos, nets, etc.).It may be noted that capture does cause stress to the animal if it is to be euthanized (lassoing, Balinese loop, restraining, holding down etc.) but shooting can cause quick or instantaneous death.

As per the 'Glovebox guide for managing wild dogs" via the Centre for invasive species solutions in Australia, shooting is selective and target specific, can be done in areas where poison baiting is not suitable, can confirm the control of specific individual animals, enables a relatively quick and humane death, is relatively cheap, has limited broadscale application and does require a level of technical ability and local knowledge and can commonly be used together with trapping programs. (Allen & Harris, 2020)



Bar-headed Goose (Schedule IV species) killed by FRD, Haryana Photo: Mohammad Yasir Hussain

## TYPES OF FIREARMS

There are three categories of firearms than can be used for effective and humane euthanasia of dogs or other invasive species both within and outside PA's.

## 1. 22 LR caliber rifle

- a. Low noise signature and low cost of ammunition
- b. The .22 LR rifle should be used with preferably high powered ammunition, ideally with hollow-point bullets for quick and humane killing of feral dogs or for even other small invasive species including feral domestic cats.
- c. With proper selection of bullets there is no danger of bullets passing through the animal.
- d. The power of this ammunition is adequate for use on dog-sized animals or smaller if the dog is shot in the right place (heart &lung area/ brain)
- e. Effective range is limited to 50meters with an efficient marksman and correct ammunition.

# 2. Centrefire rifles (Calibers in .223, .243, .270, .275, 30.06, .315 etc.)

- a. These rifles have a louder sound signature and higher cost of ammunition
- b. More than adequate power to humanely eliminate feral dogs' and larger invasive species i.e. more powerful than 22 LR.
- c. Could be used very effectively at ranges up to 300 meters or more by competent marksmen and these arms are suggested for mountainous regions, desert areas or

areas with difficult access and terrain or with wide open spaces. It is recommended in some terrains such as in Ladakh that center fire rifles be used given the difficulties & serious dangers in capturing/euthanizing feral or semi wild packs of dogs, especially in winter.

- 3. Shotguns (12 bore SBBL or DBBL shotguns firing multiple pellets in sizes above #2 size i.e. BB, 1, 4.5, single ball, rifle slug).
- a. Higher cost of ammunition than .22LR but ammunition easily available across India.
- b. These weapons are the most commonly owned weapons, by landowners/ farmers/arms license holders. The 12-bore shotgun was the weapon of choice for Indian municipalities in the 70s and 80s for dog control and was frequently used within and around cities as the pellets quickly lose energy and become ineffective after 70-80 meters.
- c. Since multiple pellets are used instead of a single bullet there are chances of wounding the targeted animal if shots are taken when the animal is too far away. Thus, shots should be limited to within 20 meters.
- d. No pass through of pellets if suitable sizes are used.
- e. More than adequate power to humanely dispatch feral dogs if used within a maximum range of 20 meters using correct ammunition.
- f. These have a louder sound signature than .22 LR but less than most centerfires rifles
- g. Use of this firearm does not require a highly trained marksman.



Deer fawn killed by FRD in Baramati, Maharashtra. Photo: Omkar Sumant

## PROTOCOL FOR A SHOOTER TO FOLLOW

- Only head (brain) or chest (heart-lung) shots must be used. As far as possible a single
  shot to the brain is the most effective, humane and instantaneous way of killing a dog
  if any rifle is used.
- If a shotgun (12 bore SBBL or DBBL shotgun) is used, the behind the shoulder region should be aimed for a heart/lung shot within a range of 20 meters.
- All rifles and arms to be in good condition and properly sighted in. If a 22 LR rifle is
  used, it is advised that only shots under 50 meters are taken for maximum accuracy
  and humane killing with correct ammunition.
- Shooters should be able to tell the difference between wild canids and FRD, i.e. a dhole, jackal, wolf, hyena and fox so as not to confuse species. It is imperative that unless the animal is conclusively identified to be an invasive species (domestic dog/Canis lupus familiaris) that a shot is never taken. Under no circumstances are shots to be taken if animal is not identified conclusively and if vital areas are not visible for a clear and lethal shot.
- The five primary rules of firearms safety to be strictly followed so as to ensure accurate firing and prevent injury or death to both other animals and human beings *i.e.* (1) the muzzle of weapon is always to be pointed in a safe direction regardless of whether it is loaded or not;(2) the shooter is to make sure of his or her target;(3) the shooter is to make sure of what is in front of target animal and beyond it; (4) The safety catch of the firearm should be kept on until the moment of firing and (5) the finger should not touch the trigger until firing takes place. All people should stand well behind the shooter when a dog is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets. (Sharp, Trudy 2012)
- Wounded dogs, if any, must be located and dispatched as quickly and humanely as
  possible with a second shot, preferably to the brain.
- Death of shot animals should always be confirmed by observing the following:
   Anabsence of rhythmic, respiratory movements, Absence of eye protection reflex (corneal reflex) or 'blink', A fixed, glazed expression in the eyes, Loss of colour in mucous membranes (become mottled and pale without refill after pressure is applied).
   If death cannot be verified, a second shot to the head should be taken immediately. (Sharp, Trudy, 2012)
- With regular shooting, dogs learn to avoid visiting certain areas and eventually do not
  even go near them. Thus, a 'Protected Area' remains so. It is advised that the activity
  and monitoring of shooting of dogs within PAs is carried out regularly by competent
  shooters in efficient fashion and whenever dogs are spotted within PAs.

 As is practiced when dealing with other pests, e.g. rats, mice, breeding seasons shouldbe ignored.

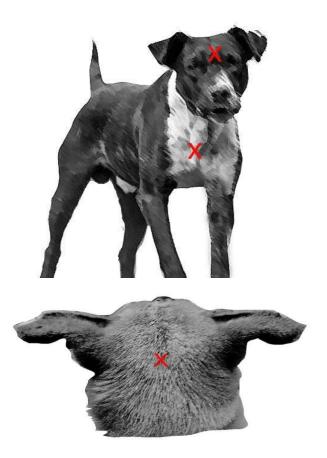


FRD with Little Grebe hatchling (Schedule IV species), Kailana Lake, Jodhpur. Photo: Pranjal Saikia.

# SHOT PLACEMENT

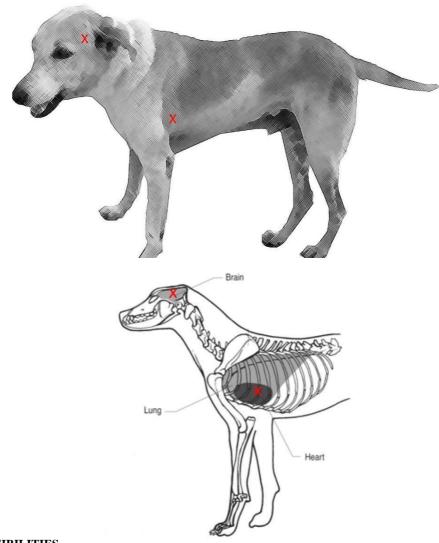
# Frontal method

- Heart/Lung shot aim at the center of the chest
- Brain shot aim horizontally at the point of intersection of lines taken from the base of each ear to the opposite eye.



## **Broadside Shots**

- Brain shot aim horizontally from the side of the head at the point midway between the eye and the base of the ear. If placed correctly death is instantaneous.
- Heart/Lung shot- one should aim at the forward chest, above the point of the elbow at
  the area behind the shoulder below the midpoint of the animal and close to the
  shoulder as shown. Death very quickly if shot is placed well.



RESPONSIBILITIES, REQUIREMENTS AND PROTOCOL FOR THE FD -

a. Form a panel of proficient and authorized shooters in the State that are themselves authorized to train and create groups of proficient shooters for the purpose of invasive species control.

- b. The state rifle association can advise regarding the shooters. Otherwise, local citizens, volunteers or forest department employees proficient in the use of firearms may be used. Any citizen with a valid arms license and suitable weapon with proficiency in use of the forearm maybe asked to volunteer or be hired for this purpose. All landowners around PAs can be empowered to lethally control FRD.
- c. Prevent and disallow any 'Animal Rights' or 'Animal Welfare' organizations and NGOs from interfering or inhibiting the activities of the forest department in its constitutional duty to protect wildlife.
- d. Harassment, including online harassment, bullying or defamation, or threats by any individuals or organizations towards any forest department officers or employees or to any citizens carrying out control measures of FRD are to be prosecuted to the full extent of the law, e.g. under IPC Section 186- obstructing public servant in discharge of public duty (Ratanlal Ranchhoddas, 2007).
- e. FD personnel must accompany shooters at all times within PAs/forests.
- f. Care must be taken to use the right weapon and ammunition for the situation.
- g. Dogs shot must be disposed of as soon as possible by burying them at a depth of a minimum of three feet.
- Treat the killing of any wild species, in the course of shooting of feral dogs, accidentally or otherwise, as an offence under relevant sections of WLPA.
- Ensure shooting of dogs is carried out inside PAs only in the day time. However, the FD
  must intervene in any dog attack on wildlife, when informed, regardless of whether in day
  or at night and intervene to save the wildlife in question and euthanize attacking dogs.
- Outside a PA shooting of free roaming dogs may be permitted on private property during day light hours and at any time, when livestock is attacked.
- k. All FD shooters team or personnel are to follow, capture and/or euthanize any FRD coming out of PAs. If ownership is proven (i.e. dog is registered), the owner is to be fined at the rate of Rs. 1000 or more per dog for any instance of trespass into a PA. If the fine is not paid or ownership is denied, the dog may be euthanized.
- FD personnel or anyone authorized by the FD is encouraged to take any issue of trespass (not predation) by owned dogs only, on a case-to-case basis and can issue warning(s) before action is taken. Discretion is left to the forest officials in such cases regarding appropriate course of action so as to ensure community support and involvement for the overall objective of management of FRD.
- m. Any photographic evidence of any dog harassing or preying on wildlife protected by the WLPA or State legislation is to be followed up with an investigation and the offending dogs captured and euthanized. If ownership is claimed and/or proven, the owner is to be fined up to Rs. 25,000.
- n. Additionally, FD shooters are allowed to shoot on any public lands (or private lands if Sarpanch (village head) or landowner co-operation is taken) outside PAs.

- o. If a dog is known for depredation, chasing or harassing wildlife beyond the limits of private property, it is to be euthanized or tracked down if euthanasia is not possible at the time, and the owners, if any, held responsible. If a pack of dogs is seen or photographed preying on wildlife, the entire pack is to be euthanized. If ownership is proven or claimed, the owner is to be additionally fined Rs. 25,000.
- p. Owned dogs chasing wildlife like wild boar, nilgai or any other crop raiding species, away from private lands and thus aiding farmers in protecting crops, life and property are exempt from these rules under Article 21 of the Constitution. Likewise, any owned dog that defends human life from any wildlife/threat, is exempt. Likewise, dogs owned by shepherds or people legitimately grazing livestock in permitted areas, must not be penalized for defending resources, including livestock and human life, from any wildlife threat.
- q. Document and allow the study of all 'Invasive Alien Species' and their effects in all protected areas and enforce protocols and measures to control and eliminate their populations so as to protect Indian biodiversity from biological invasions using any effective means necessary including lethal means as mentioned in this document. These invasive species can be both flora and fauna and can include but not be limited to dogs, cats, fish species or even species native to other parts of the subcontinent, like spotted deer and feral elephants in the Andaman Islands where they are not a 'native species' but an 'Invasive Alien Species' in that specific context.



Steppe Eagle (Schedule I species) harassed by FRD, Bikaner. Photo: Mohit Verma

# POLICY RECOMMENDATIONS

The reasoning and precedent for why citizens should be allowed to

humanely euthanize FRD – an established and continuous threat to human life, wildlife and livestock.

• The Central government has declared the rhesus macaque species of monkey as vermin (pest animals) in 10 districts of Himachal Pradesh where farmers have suffered massive losses to crops and horticulture. Anyone can now kill monkeys there to protect crops, life and property.

A child is carried by his parents after being killed by FRD.

- Similarly, the Supreme Court in 2016 declined to stay the government's notification
  on declaring nilgai in Bihar, rhesus macaque in Himachal Pradesh and wild boar in
  Uttarakhand as vermin.
- Animal rights NGOs filed the request to stay the above government notifications. The
  plea against culling was filed by Federation of Indian Animal Protection
  Organizations (FIAPO) a known animal rights collective. Similarly, HSI (Humane
  Society International) has actively worked on the ground in Himachal to stop monkey
  culling and has suggested farmers shift to "crop rotation or [to growing] unpalatable
  crops for monkeys".

Given that State governments have issued notifications allowing the killing of certain species protected under the WLPA and that the Honorable Supreme Court has upheld these notifications despite the pleas against these government notifications by animal rights NGOs, it is interesting to note that citizens are still not allowed to protect their livestock and wildlife with lethal control from free-ranging dogs, a species that besides killing huge amounts of wildlife is also responsible for the following-

- As a disease carrying vector species FRD kill about 20,000 people from rabies alone every year in India (Sudarshan M.K, 2017) with FRD being the main transmitters for rabies (96.2%) and biting about 17.4 million people every year in India (Gogtay *et al.*, 2014). As rabies is a non-notifiable disease, it has been postulated in a WHO survey that the real number can be ten times higher than reported (Sudarshan M.K, 2005) or about or 180,000 to 200,000 people killed annually. Most deathsoccur in rural areas where surveillance is poor andamongst economically weaker sections of society.
- The killing of over 100 children below the age of 15, in the last 5 years alone who have been killed/preyed upon by roving packs of dogs.



Three-year-old Devanand, son of Ravi and Ambili of Thrikkariyoor, was playing on the veranda of his house when FRD pulled him off the verandah and mauled him.

- Killing untold numbers of livestock owned by farmers in rural areas. So much so that
  in some areas farmers have given up livestock rearing totally (Home et al,
- Currently citizens are forbidden to lethally control free roaming unowned dogs by the ABC policy even though Article 51-A (g)tells citizens that it is his/her duty to protect wildlife, Article 21 guarantees a citizen life, livelihood and freedom of movement and despite the precedents regarding lethal control of animals that pose a threat to resources and life, already set both by the Hon'ble Supreme Court and State governments.



FRD kill a domestic sheep. Photo: Pitam Chattopadhyay

If animals protected under the WLPA can be shot dead in defense of life, property and crops, then the same reasoning can be applied to Invasive Alien Species including FRD that, besides killing wildlife, also attack, injure and kill more citizens than all large wildlife human conflict in the country does, many times over.



FRD attempt to separate an Indian Wild Ass foal (Schedule I species) from its mother, Rann of Kutch, Thar Desert, Gujarat. Photo: Kalyan Verma

## INTEGRATED VECTOR MANAGEMENT AND FRD

Given the massive threat FRD pose to human and wildlife with regard to both health and survival and especially with regard to disease transmission, the WHO lists guidelines for all countries regarding the control of dog populations which specifically recommend the euthanasia of FRD as described below. The IUCN consider FRD to be a serious and relentless threat to endemic species of wildlife and recommends similar strategies to remove the threat.

It is important to note that there has been no culling of FRD via government backed initiative for over 20 years with a resultant population explosion due to highly questionable methods used with an ABC policy built on obfuscation, misrepresentation, manipulation of data and international guidelines or usage of animal rights oriented 'research' to push an animal rights verses science based conservation agenda. Previous to ABC, control of FRD via lethal means worked well in many areas though was not done effectively enough and without an integrated management plan.

WHO leads the collective "United Against Rabies" to drive progress towards "Zero human deaths from dog-mediated rabies by 2030." Rabies is included in WHO's new 2021-2030 road map. The WHO suggests IVM (integrated vector management) to control any disease carrying vector and that includes FRD which are important and extensive disease carrying vectors.

"Integrated Vector Management (IVM) was developed by the World Health Organization (WHO) as the new strategic approach to control vector borne diseases (VBDs) by optimising the use of resources and tools available for vector control to prevent vector-human contact in an efficient, cost-effective and sustainable manner. IVM approach depends on collaboration of the health sector, public and private agencies, and communities, while focusing attention on capacity building at different levels in order to plan, implement, monitor and evaluate vector control operations (Anonymous, 2012; Chanda *et al.*, 2008; Chanda *et al.*, 2017). Furthermore, by using the IVM approach several diseases can be addressed at the same time, either because some vectors transmit several diseases or because some interventions are effective against several vectors (Anonymous, 2012)."

Integrated vector management (IVM) entails the optimum use of a range of interventions of proven efficacy as well as collaboration within the health sector and with various other sectors such as agriculture, private agencies, communities, citizens and the environment. Such an intersectoral and inter-programmatic approach improves the efficacy, cost effectiveness, ecological soundness and sustainability of disease control and in the case of FRD being both a disease vector and Invasive Alien Species, two birds, so to speak, are served with one stone. In order to completely end predation, attack, bites, disease transmission and harassment of wildlife and human citizens by FRD in all protected areas and surrounding areas at minimum cost with maximum benefit while upholding constitutional articles and values, the law and relevant parent acts like the WLPA and PCAA, an IVM strategy needs to identify a specific objective and goal, and specific actions to achieve the same, using various integrated approaches.

Objective: The health, well-being and protection of endemic species of wildlife in India and the protection of human beings and resources from Invasive Alien Species / disease causing vectors like FRD in and around PAs in India.

Goal: the permanent and maximum possible reduction of FRD populations, particularly in and around protected areas/forests, in India leading up to total elimination of FRD, both as a threat to wildlife and to human beings and resources.

## Integrated approaches -

- 1. Gram Sabhas could be incentivised *via* an amount paid for every dog humanely euthanised as per WHO protocols or internationally accepted methodologies for euthanasia of IAS (Invasive Alien Species) and disease vector animals. If Rs 1,500 is what it costs to sterilize a dog a private citizen, panchayat, Gram Sabha or agency could be paid Rs 500-1,000 for every dog removed (or Rs 1,500). Thus, public monies can be effectively spent after 20 years of them being wasted on sterilization, as per the AWBI's own internal reviews. Private citizens/ agencies/ gram sabhas could be incentivised at half the cost it would take to ineffectively sterilize a dog.
- 2. Private pest control agencies could take contracts for humane removal and euthanasia of dogs. Private agencies could be paid to remove dogs from within protected areas in conjunction with forest department efforts and especially where expertise in firearms usage or large-scale trapping is required. Result oriented payments can be negotiated i.e., depending on numbers collected, and areas cleared of FRD. This would be far more effective and data reliant than current methods of vaccination and sterilization being practised by NGOs that depend on obscurity, obfuscation and consumption of recurring large doses of public funds.
- 3. Private citizens to be empowered to humanely remove or euthanise FRD or hire agencies to remove and euthanise FRD within 20 km of any PA/forest at their cost depending on need. Accredited private agencies and citizens to remove and/or euthanise FRD is also supported by the WHO guidelines on dog population control which also allow for citizens to humanely dispatch dogs via any humane methods including shooting with a firearm following humane principles and methods, getting a vet to do the needful, hire pest control agencies etc.
- 4. Carcass biomass can be used in whatever way seen fit and/or rendered and the resulting materials can be profitably used including but not limited to agar manufacture, fertilizer, animal feed, human consumption in some areas, leather production, bonemeal etc. In Gujarat, for example, the livestock carcass rendering industry is a 1,500 crore a year industry. A potential benefit is thus retained via both complete and permanent removal of FRD as well as potential beneficial usages of biomass.

This integrated and multi sector approach would likely cause a dramatic and effective decline in the FRD population given the incentives offered. Additionally, these measures if effectively implemented will ensure that private dog owners remain responsible and confine their owned animals to private property and control.

With incentives in place to remove and euthanise invasive alien species (IAS) that are also disease-causing vectors, it is likely this would motivate and incentivize vast numbers of unemployed, lower income or disadvantaged communities, tribal communities, farmers and other private citizens and agencies to become removers of FRD following humane methods as payment is tied to the same and thus add to rural livelihoods and incomes.

This approach would be in synchronisation with –

- a. The IVM approach of the World Health Organization
- b. The WHO dog population management guidelines
- c. Internationally accepted approaches regarding IAS and disease vector control management
- d. The Prevention of Cruelty to Animals Act
- e. The Wildlife Protection Act
- f. Encouraging rural livelihoods
- g. The Biodiversity Act
- h. IUCN guidelines

The cost per dog for removal can be considered well spent in terms of –

- Less than what it costs to sterilize and inoculate a dog against rabies with current methods used in a program that does nothing to reduce dog populations and likely increases them with ineffective and unworkable measures.
- The cost and price Indian society pays for having FRD in massive numbers including but not limited to work hours lost, faecal and noise pollution, rabies deaths, loss of work hours, hospital fees for humans, livestock losses, traffic accidents and the various other diseases carried and transmitted by FRD. It might be pertinent to note that one in ten human deaths in the country is linked to poor hygiene standards and approximately 30,000 tons or more of toxic and pathogen transmitting dog faeces deposited in public spaces every day is likely to be a significant causal factor.
- The cost and price wildlife pays in terms of deaths, cross breeding, rabies deaths, predation, harassment of wildlife and the various other diseases carried and transmitted by dogs to wildlife as well as protection of big cats like tigers, lions, leopards who are susceptible at the population level to canine distemper virus etc.
- The prevention of imminent and localized extinction of particular species in India forever due to FRD like the Great Indian Bustard, Black Necked Crane (direct predation of eggs and chicks) and Tibetan wolf (due to cross breeding).

Specific points in WHO Guidelines for dog population control -

5. Feral dogs Control of reproduction in feral dogs is rarely worthwhile (see Section 2.6). If feral dogs are captured and unclaimed, they should be humanely killed. See Section 6.5.

# b) at a distance

The shooting of dogs (and cats) by hunters is prescribed or accepted in many countries where such animals are found freely roaming and unsupervised in forests or other hunting areas.

3. Animals which cannot be rehomed Animals in pounds or shelters which cannot be rehomed because of old age, disease or unsuitable behaviour should be humanely killed. See Section 6.5.

It may be noted that the above recommendations are used by nearly all so called 'western countries' in their management of stray dogs and have part of measuresused by many countries that have successfully managed their stray dog issues, with zero or very few incidents of rabies. However, these same strategies are not advocated for other nationsby animal rights groups, especially for countries in Asia, the Middle East and Turkey with disastrous results to both human beings and wildlife, not to mention the dogs themselves who are then forced into states of homelessness at scalevia policy. It is pertinent to note thatanimal rights groups like PETA and HSI are actively involved via funding of local groups, judicial interventions and other approaches in the making of 'animal rights inspired' policy in countriesthat are patently illegal in thehome countries of PETA and HSI etc.

# The ABC program versus IVM approach

Contrarily, the ABC program mandates the presence of free-roaming dogs, instead of their removal, likely made healthier with vaccinations continue their depredations on wildlife. Sterilization does not reduce dog numbers in any way if not a part of a larger strategy including euthanasia of free roaming feral dogs and a sterilized dog, while notable tomate with a fox, can still killand eat it.

The ABC program has proven highly ineffective and likely responsible for growing the FRD population over 20 years of mismanagement and according to its own internal reviews. The ABC in its revised policy has chosen to misrepresent the WHO rules to suggest that the WHO is

against euthanasia and culling of dogs and instead suggest treating these dogs and releasing them back into public areas. It is likely that this attitude is inspired or forced by adherents to animal rights philosophy that are in direct contradiction to both the law and constitutional values.

The ABC approach entirely ignores the IUCN which states that "the introduction of species to new areas is increasing and is one of the top threats driving biodiversity loss. Invasive alien species also have a strong negative impact on ecosystem services, economic activities and human livelihoods around the world."

It is important to note that animal rights agendas have nothing to do with conservation and animal rights philosophy is not concerned with species extinction or the categorization of value of one species over another, i.e., a snow leopard is worth as much as a FRD through the lens of animal rights activism.

The ABC program has failed miserably, over 20 years of being implemented at massive cost. It has failed to contain about 400,000 reported human deaths from rabiesover 20 years and hundreds of millions of bite and attack cases on humans that have occurred due to a huge and growing dog population not contained by ABC 'animal rights' inspired methodologies. Even rabid dogs are not euthanised as per the ABC but are restrained and allowed to die, an act of grotesque cruelty.

Culling *via* any methodology approved by WHO guidelines or any other tried and tested procedures followed by 'developed' countries is currently not allowed as per the ABC program which has obfuscated, misrepresented or selectively chosen biased research to back an animal rights perspective versus an animal welfare or conservation perspective, in direct contravention to international recommendations via the WHO, OIE, etc, its parent act the PCAA, the law and constitutional articles and values.

# Animal Rights as a 'colonizing' ideology

- Critically, these 'animal rights-oriented' solutions are only offered to 'developing' countries as life (both human and animal) is likely considered cheaper as compared to 'developed' countries which today do not have problems associated with FRD simply because they have euthanised all unwanted FRD.
- The United States, Canada, Australia, most European countries, and all countries who have got rid of their FRD problems *i.e.*, all 'developed' countries mandate euthanasia for all unwanted FRD.
- Thus, developing countries become the ideological playgrounds for animal rights
  activists who are allowed to function in countries like India. For the same actions,
  they would be jailed and fined in 'developed' countries, including their own, which

do not allow such activities. For example, feeding of FRD and pigeons is most often illegal in all developed countries that also have zero-tolerance for stray animals.

- The AWBI has misrepresented the WHO and pushed the policies of countries like Bangladesh and Thailand who have animal rights organizations (with an ideological commitment to 'zero euthanasia' like HSI) influencing and funding their policy.
- Animal rights organizations like PETA and HSI actively fund NGOs in India to change policy and publicly state the same. People for Animals in India for example has received tens of millions of rupees from these organizations and plays an important role in the creation of animal rights-oriented policy in India to the serious detriment of people and wildlife.

The cruelty of the ABC 'animal rights' approach versus humane euthanasia –

The ABC program is inhumane and cruel to FRD who are consigned to a life of starvation, disease, homelessness and ill treatment. All dogs deserve responsible and caring ownership. As a species they are called *Canis lupus familiaris* which means "dog (or wolf) of the household". Ensuring the homelessness of millions of dogs supports an ecosystem of wasteful expenditure of public monies that exists in both the private and public spheres. The first kindness to FRD would be to get them adopted. If that fails the next kindness would be to euthanise them, as humanely as reasonably possible, so as to avoid their unnecessary suffering as per the PCA act, which actively supports their euthanasia.

## Adherence to Constitutional Values-

- This would be in conjunction with Indian constitutional articles and values. There are multiple references in the Constitution to public health and on the role of the State in the provision of healthcare to citizens as well as the creation of a safe and disease-free environment, plus Articles like 48 and 51-A (g) for protecting forests and wildlife.
- The Directive Principles of State Policy in Part IV of the India Constitution provide a
  basis for the right to health. Article 39 (E) directs the State to secure health of
  workers, Article 42 directs the State to just and humane conditions of work and
  maternity relief, Article 47 casts a duty on the State to raise the nutrition levels and
  standard of living of people and to improve public health.
- Moreover, the Constitution does not only oblige the State to enhance public health, it
  also endows the Panchayats and Municipalities to strengthen public health under
  Article 243G (read with 11th Schedule, Entry 23). In State of Punjab & OR's versus
  Mohinder Singh Chawla the apex court reaffirmed that the Right to Health is

fundamental to the Right to Life and that the government had a constitutional obligation to provide health services.

• Removal and culling of FRD via an IVM approach are likely to be effective and beneficial to both humans, wildlife and the dogs themselves with regards to animal welfare principles. Not following these tried and tested approaches that in this case benefit and involve citizens in protecting wildlife, resources and themselves, will result in the same animal rights propaganda being put out year after year regarding imagined or misrepresented successes in dog population control with ensuing wastage of funds and certain catastrophes for both human beings and wildlife.



FRD harass a Himalayan Brown Bear (Schedule I species), Ladakh

Photo: Dhritiman Mukherjee

## **CONCLUSION**

The Wildlife Protection Act of India is a central Stature that protects wildlife in and around Protected Areas and wherever else wild animals may be found. Bad management, neglect and a lopsided dog control policy have together led to a massive increase in stray and feral dog populations across the country. Dogs are a massive threat to wildlife in the country and, unless eliminated, have the potential to wipe out or reduce populations of various species of wildlife.



A Blackbuck (Schedule I species) being eaten alive by FRD in the Blackbuck National Park in Velavadar. Photo by Vinodh Venugopal.

Both, the MoEFCC and the NTCA, are duty bound to take all measures to protect wildlife and not be bullied, intimidated or give in to the propagators of animal rights activism, both from within elected office and from other quarters. Critically, the WLPA ensures protection of wildlife from all threats, including dogs. The wildlife resources of India belong to its people and not foreign-funded NGOs with their ownagendas or to local 'animal rights' or so called 'animal welfare' groups whose agendas have nothing to do with genuine conservation as per World Conservation Strategy protocols (1980). It is also important to note that all of these policies are tax payer funded activities and the government is duty bound to ensure that these funds are not wasted, nor are they spent on furthering private agendas of foreign or domestic NGOs.

The losses suffered by farmers, scheduled tribes (ST's) and 'Other Tribal Forest Dwellers' (OTFD) including loss to livelihood, life and wildlife resources, due to millions of feral dogs living within and around PA's is ongoing and relentless and the writers of this report recommend that decisive and internationally acknowledged, effective and humane actions to eliminate dogs in and around protected areas be undertaken with immediate effect so as to permanently and humanely remove existing invasive dogs and deter other dogs from entering any wildlife habitat.

The measures mentioned in this document are based on international protocol and treaties that India is a signatory to and are within the existing legal framework of India's laws, for the protection of its people and biodiversity. It is recommended that they be implemented with immediate effect for the benefit of India's citizens, the protection of its biodiversity and the welfare of the dogs themselves.

## **ADDENDUMS**

- Documented instances of scheduled species of wild animals and birds under predation from FRD/feral dogs in and around Protected Areas in India
- Media reports on FRD-Wildlife Conflict
- Reference paper and research list

# DOCUMENTED INSTANCES OF SCHEDULE SPECIES OF WILD ANIMALS AND BIRDS UNDER PREDATION FROM FREE-RANGING/FERAL DOGS IN AND AROUND PROTECTED AREAS IN INDIA

STATE	PROTECTED AREA/REGION	SCHEDULE SPECIES UNDER DIRECT THREAT
ARUNACHAL PRADESH	Sangti Valley, Dirang	Long-billed Plovers
	Mandala, Arunachal	Temminck's Tragopan
ASSAM	Koklabari near Manas National Park	Bengal Florican
	Cachar Dist, Assam	Phayre's Leaf Monkeys
	Near NH-37, Kaziranga National Park	Hog deer
	Manas National Park	Hog deer

GOA	Chorao Island Wildlife Sanctuary	Otters
	Galgibaga Turtle Beach	Olive-Ridley Turtle
GUJARAT	Blackbuck National Park & adjoining landscape	Blackbuck
	Indian Wild Ass Sanctuary	Indian Wild Ass
	Banni Grasslands	Wild Pig
HARYANA	Sultanpur National Park	Nilgai
HIMACHAL PRADESH	Kibber Wildlife Sanctuary	Bharal, snow leopard
KARNATAKA	Jayamangli Blackbuck Conservation Reserve	Blackbuck
	Areas around Haveri	Blackbuck
	Kali Tiger Reserve	Chital
	Coorg (Suntikoppa)	Leopard cat
	Kabini, Nagarahole Tiger Reserve	Gaur calf
	Kabini, Nagarahole Tiger Reserve	Chital

	Kudremukh National Park	Sambar
	Turahalli Reserve Forest	Chital
	Hesaraghatta Grasslands	Black-naped hare
	Magadi Kere Conservation Reserve	Bar-headed goose
	Honnikeri Reserve Forest	Indian fox and Blackbuck
	Bhadra Tiger Reserve	Chital
KASHMIR	Dachigam National Park	Hangul
KERALA	Wayanad Wildlife Sanctuary	Chital
LADAKH	Changthang Wildlife Sanctuary	Tibetan Wild Ass, Red fox
		Black-necked Crane
		Marmots, Voles
	Hemis National Park	Wolves
MADHYA PRADESH	Gandhi Sagar Wildlife Sanctuary	Otters
	Van Vihar National Park	Blackbuck

MAHARASHTRA	Tadoba National Park	Leopard
	Amboli Reserve Forest	Sambar
	Adjoining Mayureshwar Wildlife Sanctuary	Chinkara, Hare
	Grasslands near Pune	Wolves
	Phaltan, Near Satara	Wolves
ODISHA	Bhitarkanika Wildlife Sanctuary	Olive Ridley Turtle
	Bhetanai Blackbuck Conservation Area	Blackbuck
RAJASTHAN	Desert National Park	Chinkara, Nilgai, Great Indian Bustard, Peafowl
	Tal Chhapar Wildlife Sanctuary	Blackbuck, Desert Fox
	Keoladeo Ghana National Park	Chital, Nilgai
	National Chambal Wildlife Sanctuary	Otter
	Near Jodhpur city	Blackbuck, Chinkara
	Jodhpur	Little Grebe

	Jor beed Gadwala, Bikaner Conservation Reserve	Vulture species
	Around Gajner, Bikaner	Blackbuck, Chinkara
	Kumbhalgarh National Park (Sumer area)	Grey Junglefowl
	Kailadevi Wildlife Sanctuary	Leopard cubs
	Dhawa Doli, Jodhpur	Chinkara
SIKKIM	Himalayan Zoological Park, East Sikkim	Red Panda
TAMIL NADU	Guindy National Park & surrounding landscape	Blackbuck, Chital
	IIT-Madras	Blackbuck, Chital
	Mudumalai National Park	Chital
	Ooty, Nilgiri Forest Division	Chital
	Point Calimere	Blackbuck
	Manthada, Nilgiri Forest Division	Sloth bear
TELENGANA	Kawal Tiger Reserve	Chital
	Amrabad Tiger Reserve	Chital

	Kasipet, Mancherial District	Sambar
UTTARAKHAND	Corbett TR & adjoining buffer	Chital
	Cloud's End, Near Binog Wildlife Sanctuary	Barking Deer
UTTAR PRADESH	Dhanauri Wetlands	Sarus Crane
WEST BENGAL	Howrah	Jackal
	Buxa Tiger Reserve	Monitor Lizard

## MEDIA REPORTS ON FRD-WILDLIFE CONFLICT

https://www.thethirdpole.net/en/nature/feral-dogs-aggravate-biodiversity-crisis-in-indian-himalayas/

https://www.conservation india.org/gallery/free-ranging-dogs-a-serious-threat-to-wild life-in-pascent and the properties of the properti

https://www.down to earth.org. in/blog/wild life-biodiversity/india-s-wild life-is-under-threat-from-free-roaming-dogs-70648

https://www.bbc.com/news/world-asia-india-36035456 - Do India's stray dogs kill more people than terror attacks?

https://www.natureinfocus.in/environment/indian-wildlife-s-perilous-dog-problem

https://news.mongabay.com/2018/04/dogs-in-india-are-a-problem-for-wildlife-study-finds/

https://www.firstpost.com/india/in-the-himalayas-growing-population-of-feral-dogs-poses-threat-to-wildlife-humans-6148741.html

 $https://www.researchgate.net/publication/321946084\_Canine\_Conundrum\_Domestic\_dogs\_as\_an\_invasive\_species\_and\_their\_impacts\_on\_wildlife\_in\_India$ 

https://www.hindustantimes.com/india-news/it-s-time-we-respond-to-feral-dog-menace/story-BioA27cci88ObJSREqScNI.html

https://www.hindustantimes.com/cities/noida-news/feral-dogs-major-threat-to-wildlife-in-dhanauri-wetland-say-experts-101617993856367.html

https://www.tribuneindia.com/news/haryana/wildlife-falling-prey-to-stray-dogs-in-hisar-197089

https://www.newsclick.in/Wildlife-Thar-Desert-Threatened-Free-ranging-Dogs-India-Lacks-Clear-Policy-Solution

https://www.livemint.com/Leisure/yYkp5QE3yTnqnVoELnW9jL/The-menace-of-fer aldogs.html

https://indian express.com/article/opinion/columns/stray-dogs-menace-bites-deaths-accidents-animal-rights-cruelty-7132547/

https://www.outlookindia.com/website/story/india-news-feral-dogs-pose-a-threat-to-biodiversity-in-the-cold-deserts-of-spiti/372713

https://www.conservationindia.org/gallery/dogs-at-war

https://www.conservationindia.org/gallery/dog-hunting-chital-in-kabini

https://www.conservationindia.org/articles/indian-gazelle-facing-threat-from-stray-dogs

https://www.conservationindia.org/gallery/wolves-chased-by-feral-dogs-pune-grasslands

https://www.conservationindia.org/gallery/nilgai-attacked-by-feral-dog-pack-bikaner-rajasthan

https://www.conservationindia.org/gallery/stray-dogs-killing-a-chital-fawn-muthanga-kerala

https://www.conservationindia.org/gallery/stray-dog-pack-bring-down-nilgai-sultanpurnational-park-haryana

https://www.conservationindia.org/gallery/feral-dogs-attacking-otters-chambal-river-rajasthan

https://www.conservationindia.org/gallery/feral-dog-with-little-grebe-kill-sonipat-haryana

https://www.conservation india.org/gallery/feral-dog-menace-at-maiden a halli-black buck-reserve-karnataka

https://www.conservationindia.org/gallery/feral-dog-hunting-bar-headed-goose-magadi-karnataka

https://www.conservation india.org/articles/friends-in-wrong-places-assessing-the-impacts-of-domestic-dogs-on-wildlife-in-india

https://www.conservationindia.org/articles/a-dogged-problem

https://www.conservation india.org/gallery/village-dog-feeding-on-barking-deer-muss oor ie-uttarakhand

https://www.conservationindia.org/gallery/feral-dogs-attack-a-tibetan-wild-ass

https://www.conservationindia.org/gallery/wolf-dog-hybridisation-threat-in-the-himalaya

https://www.conservationindia.org/gallery/dogs-attack-a-spotted-deer-near-dandeli-karnataka

https://www.conservationindia.org/gallery/blackbuck-feral-dog-conflict-vetnai

https://www.conservationindia.org/gallery/leopard-cat-killed-by-feral-dogs

https://www.conservationindia.org/gallery/dog-chasing-sambhar-kudremukh-national-park

https://india.mongabay.com/2018/08/ladakhs-revered-bird-is-under-threat-from-humans-best-friend-dogs/ Article by Athar Parvaiz on Canine threats to BNC, 22 August 2018

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## REFERENCES

Aggarwal, R.&T. Kivisild, J. Ramadevi & L. Singh, 2007. Mitochondrial DNA coding region sequences support the phylogenetic distinction of two Indian wolf species. *Journal of Zoological Systematics and Evolutionary Research* 45: 163 - 172. 10.1111/j.1439-0469.2006.00400.x.

Allen B.L. & C. Harris (eds.). 2020. *Glovebox Guide for Managing Wild Dogs*. 4th edition 20. PestSmart Toolkit publication. The Centre for Invasive Species Solutions, Canberra, ACT. 28 pp.

Anonymous, 2015. W.P. No. 4075/2015 from the Hon'ble Bombay High Court. 33 pages.

Anonymous, 2000. *IUCN Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species*. IUCN Council, Gland. 25 Pages.

Anonymous, 2001. ANIMAL BIRTH CONTROL (DOGS) RULES, 2001. NO. 929 New Delhi, Monday, December 24, 2001. *The Gazette of India extraordinary* part ii - Section 3 - Sub Section (ii) Published by authority. Ministry of Culture notification.

Anonymous, 2010. Global Invasive Species Database (2022) Species profile: *Canis lupus*. Downloaded from http://www.iucngisd.org/gisd/species.php?sc=146 on 06-08-2022.**Compiler:** IUCN SSC Invasive Species Specialist Group (ISSG) with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment.

Anonymous, 2017. WPPIL No.84/2017 from the Hon'ble Uttarakhand High Court

Anonymous, 2019. WP No. 110352/2019 from the Hon'ble Karnataka High Court

Anonymous. 2017a. *National Wildlife Action Plan*(2017-2031). Ministry of Environment, Forest and Climate Change, Government of India. 160 pp.

Anonymous. 2020. Standard Operating Procedures for Stray/Feral Dogs in Tiger Reserves. National Tiger Conservation Authority, New Delhi. 20 pp.

Beck, A. M. 1973. *The Ecology of Stray Dogs: A Study of Free-Ranging Urban Animals. Purdue University Press Books.* West Lafayette. 3.

https://docs.lib.purdue.edu/purduepress\_ebooks/3\_51-53 (1973)

Beck, A.M. 1974. The ecology of "feral" and free-roving dogs in Baltimore. In: M.W. Fox (Editor), *The Wild Canids*. Van Nostrand Reinhold, New York. pp. 380-390.

Beck, A.M. 1979. The ecology of urban dogs. In: R.D. Allen and W.H. Westbrook (Editors), *The Handbook of Animal Welfare*. Garland STPM Press, NY, pp. 51-55.

Beck, A.M., H. Loring and R. Lockwood. 1975. The ecology of dog bite injury in St. Louis, Missouri. *Public Health Rep.* 90: 262-267.

Benediktova, K.& J. Adámková, J. Svoboda, M. Painter, L. Bartos, P. Nováková, L. Vynikalová, V. Hart, J. Phillips & H. Burda. 2020. Magnetic alignment enhances homing efficiency of hunting dogs. 9. e55080. 10.7554/elife.55080.sa1. p 4

Bergman, D., S. Breck &S. Bender. 2009. Dogs Gone Wild: Feral Dog Damage in the United States. Conference paper: *Proceedings of the 13th Wildlife Damage Management Conference* (J.R. Boulanger, Ed.).

Bhalla, S.&R. Kemmers, A. Vasques & A. Vanak. 2021. 'Stray appetites': a socio-ecological analysis of free-ranging dogs living alongside human communities in Bangalore, India. *Urban Ecosystems* 24: 1-14. 10.1007/s11252-021-01097-4.

Chandan, P., A. Khan, J. Takpa, S.A. Hussain, K. Mehdi, P. Jamwal, R. Rattan, N. Khatoon, T. Rigzin, A. Anand, P. Dutta, T. Ahmed, P. Ghose, P. Shrestha & L. Theengh. 2014. Status and distribution of Black-necked Crane (*Grus nigricollis*) in India. *Zoological Research* 35: 39-50. 10.13918/j.issn.2095-8137.2014.s1.0039.

Chaudhary, V., N. Rajput, A.B. Shrivastav & D. Tonkyn. 2018. Risk of disease spillover from dogs to wild carnivores in Kanha Tiger Reserve, India. bioRxiv preprint. http://dx.doi.org/10.1101/360271

Collar, N., H.S.Baral, N. Batbayar, G. Bhardwaj, N. Brahma, R.Burnside, A. Choudhury, O. Combreau, P. Dolman, P. Donald, S. Dutta, D. Gadhavi, K. Gore, O. Goroshko, C. Hong, G. Jathar, R. Jha, Y. Jhala, M. Koshkin & M. Kessler. 2017. Averting the extinction of bustards in Asia. *Forktail* 33: 1-26.

Daniels, T. J. & M. Bekoff. 1989. Spatial and temporal resource use by feral and abandoned dogs. *Ethology* 81(4): 300–312. https://doi.org/10.1111/j.1439-0310.1989.tb00776.x

Daniels, T.J. & M. Bekoff. 1989a. Feralization: The making of wild domestic animals. *Behav. Processes* 19(1-3): 79-94. doi: 10.1016/0376-6357(89)90032-6. PMID: 24895903.

Doherty, T.,C. Dickman, A. Glen, T. Newsome, D. Nimmo, E. Ritchie, A. Vanak&A. Wirsing. 2017. The global impacts of domestic dogs on threatened vertebrates. *Biological Conservation* 210: 56-59. 10.1016/j.biocon.2017.04.007.

Gompper, M. E. 2014. The dog-human-wildlife interface: assessing the scope of the problem. In: Gompper M.E. (ed.) *Free-ranging dogs and wildlife conservation*. 1st ed. Oxford University Press, New York. pp 9–54.

Hennelly, L.&B. Habib&S. Lyngdoh. 2015. Himalayan wolf and feral dog displaying mating behaviour in Spiti Valley, India, and potential conservation threats from sympatric feral dogs. *Canid Biology and Conservation* 18(7): 27-30.

Home, C., A. Vanak&Y. Bhatnagar. 2017. Canine Conundrum: Domestic dogs as an invasive species and their impacts on wildlife in India. *Animal Conservation* 21. 10.1111/acv.12389.

Home, C., R. Pal, R. Sharma, K. Suryawanshi, Y. Bhatnagar & A. Vanak. 2017. Commensal in conflict: Livestock depredation patterns by free-ranging domestic dogs in the Upper Spiti Landscape, Himachal Pradesh, India. *Ambio* 46: 1-12. 10.1007/s13280-016-0858-6.

Jhala, Y. V, Q. Qureshi & A.K. Nayak (eds). 2019. *Status of tigers, co-predators and prey in India 2018*. Summary Report. National Tiger Conservation Authority, Government of India, New Delhi & Wildlife Institute of India, Dehradun. TR No./2019/05.

Knobel, D.L., S. Cleaveland, P.G. Coleman, E.M. Fevre & M.I. Meltzer. 2005. Re-evaluating the burden of rabies in Africa and Asia. *Bull. World Health Organ* 83: 360–368.

Kumar, A.&R. Paliwal. 2015. Feral dogs of Spiti Valley, Himachal Pradesh: An emerging threat for wildlife and human life. *Current Science* 108: 1799-1800.

Lobo, R. & M. Uniyal. 2021. Animal rights ideology and animal welfare philosophy in the Indian context. *Bionotes* 23(4): 204-217.

Mourya, D., P. Yadav, S. Mohandas, R. Kadiwar, M. Vala, A. Saxena, A. Shete, N. Gupta, P. Purushothama, R. Sahay, R. Gangakhedkar, S.Mishra &B. Bhargava. 2019. Canine Distemper Virus in Asiatic Lions of Gujarat State, India. *Emerging infectious diseases* 25: 2128-2130. 10.3201/eid2511.190120.

Nahm, M. 2019. Mysterious ways: the riddle of the homing ability in dogs and other vertebrates. *Journal of the Society for Psychical Research* 79(3). No. 920

Nayak, R. 2020. Surveillance of Major Canine Pathogens in Feral Dogs and Big Cats at the Domestic-Wildlife Interface in Panna Tiger Reserve, India. Journal of Animal Research. 10. 10.30954/2277-940X.02.2020.20.

Nesbitt, W.H., 1974. Ecology of a feral dog pack on a wildlife refuge. In: M.W. Fox (Editor), *The Wild Canids*. Van Nostrand Reinhold, New York. pp. 391-395

Papi, F. 1992. *Animal Homing*. Springer, Berlin, Heidelberg: Springer. DOI: https://doi.org/10.1007/978-94-011-1588-9

Ranchhoddas, R. 2007. Ratanlal & Dhirajlal's the Indian Penal Code (Act XLV of 1860). Wadhwa, New Delhi.

Ritchie, E., C. Dickman, M. Letnic &A. Vanak. 2013. Dogs as predators and trophic regulators. *InFree-ranging dogs and wildlife conservation* (pp.55-68) Chapter 2. Oxford University Press, New York. 10.1093/acprof:osobl/9780199663217.003.0002.

Rubin, H.&A.M. Beck. 1982. Ecological behavior of free-ranging urban dogs. *Applied Animal Ethology* 8: 161-168. 10.1016/0304-3762(82)90141-9.

Schmidt-Koenig, K. & W.T. Keeton. 1978. *Animal Migration, Navigation and Homing*. Berlin, Heidelberg: Springer. DOI: https://doi.org/10.1007/978-3-662-11147-5

Scott, M.D. & K. Causey. 1973. Ecology of Feral Dogs in Alabama. *The Journal of Wildlife Management* 37 (3): 253-265.

Sharma, D.K., J.E. Maldonado, Y.V. Jhala & R.C. Fleischer. 2004. Ancient wolf lineages in India. *Proc. R. Soc. Lond. B Biol. Sci.* 271(Suppl. 3): S1–S4

Sharp, T. 2012. *Ground shooting of wild dogs. Standard Operating Procedure*. Pestsmart: The Centre for Invasive Species Solutions, Australia. Downloaded from <a href="https://pestsmart.org.au/toolkit-resource/ground-shooting-of-wild-dogs/">https://pestsmart.org.au/toolkit-resource/ground-shooting-of-wild-dogs/</a>. 6 pp..

Sharp, T. 2016. General methods of Euthanasia in field conditions. Standard Operating Procedure. PestSmart website. <a href="https://pestsmart.org.au/pest-animals/general-methods-of-euthanasia-in-field-conditions">https://pestsmart.org.au/pest-animals/general-methods-of-euthanasia-in-field-conditions</a>. 26 pp. Accessed 12-08-2022

Sharp, Trudy 2016. Trapping of wild dogs using cage traps. Standard Operating Procedure. PestSmart. PestSmart website. <a href="https://pestsmart.org.au/toolkit-resource/trapping-of-wild-dogs-using-cage-traps">https://pestsmart.org.au/toolkit-resource/trapping-of-wild-dogs-using-cage-traps</a>. 10 pp. Accessed 12-08-2022

Shrotriya, S., B. Habib &Y.V. Jhala. 2013. *Ecology and Conservation of Himalayan Wolf*. Report number: TR – 2013/01. Wildlife Institute of India, Dehra Dun. 10.13140/RG.2.2.36012.87685.

Sidhu, N., J. Borah, S. Shah, N. Rajput&K. Jadav. 2019. Is canine distemper virus (CDV) a lurking threat to large carnivores? A case study from Ranthambhore landscape in Rajasthan, India. *Journal of Threatened Taxa* 11: 14220-14223. 10.11609/jott.4569.11.9.14220-14223.

Singer, P. 1975. *Animal liberation: A new ethics for our treatment of animals*. New York Review, New York. P6, 356 pp.

Sprake, L. 1932. The Art of Dog Training. H.F. & G. Witherby, London. 189 pp., 7 pl.

Sudarshan M.K. 2005. Assessing Burden of Rabies in India: WHO Sponsored National Multicentric Rabies Survey, 2003. *Indian J. Community Med.* 30(3):100-101.

Sudarshan M.K. 2017. Vision 2030: Dog mediated human rabies-free India: Action must begin now. *Indian J. Public Health* 61:1-2.

Taylor, A. (ed.). 2009. *Animals and Ethics An Overview of the Philosophical Debate*. 3<sup>rd</sup> Ed. Broadview Press, Guelph. 214 pp.

Tischler, Joyce 2007. Animal Legal Defense Fund (ALDF). Michigan State University College of Law. Downloaded from <a href="https://www.animallaw.info/article/table-state-and-federal-laws-concerning-dogs-chasing-wildlife">https://www.animallaw.info/article/table-state-and-federal-laws-concerning-dogs-chasing-wildlife</a> on August 01, 2022.

Werhahn, G., H. Senn, M. Ghazali, D. Karmacharya, A. Sherchan, J. Joshi, N. Kusi, J.V. López-Bao, T. Rosen, S. Kachel, C. Sillero &D. Macdonald. 2018. The unique genetic adaptation of the Himalayan wolf to high-altitudes and consequences for conservation. *Global Ecology and Conservation* 16. e00455. 10.1016/j.gecco.2018.e00455.

Wiltschko, R. & W. Wiltschko. 1995. *Magnetic Orientation in Animals*. Springer, Berlin, Heidelberg. DOI: https://doi.org/10.1007/978-3-642-79749-1

Wise, A.E. & R. E. Tarlinton. 2012. Seroprevalence of vector-borne diseases in free-roaming dogs in Goa, India. *The Veterinary Record* 170(3): 76