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TRAFFIC[®] POST

NEWSLETTER ON WILDLIFE TRADE IN INDIA

► Special Edition :

SNAKES

CONTENTS

Illegal wildlife trade is reportedly the fourth largest global illegal trade after narcotics, counterfeiting and human trafficking. It has evolved into an organised activity threatening the future of many wildlife species.

TRAFFIC's newsletter - TRAFFIC Post- on wildlife trade in India was started in September 2007 with a primary objective to create awareness about poaching and illegal wildlife trade.

TRAFFIC Post was born out of the need to reach out to various stakeholders including decision makers, enforcement officials, judiciary and consumers about the extent of illegal wildlife trade in India and the damaging effect it could be having on the endangered flora and fauna.

Since its inception, TRAFFIC Post has highlighted pressing issues related to illegal wildlife trade in India and globally, flagged early trends, and illuminated wildlife policies and laws. It has also focused on the status of legal trade in various medicinal plant and timber species that need sustainable management for ensuring ecological and economic success.

TRAFFIC Post comes out three times in the year and is available free of cost both online and in print. You can subscribe to it by writing to traffind@wwfindia.net.

All issues of TRAFFIC Post can be viewed at www.traffindia.org; www.traffic.org.

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EDITORS' DESK



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Dear Readers

Welcome to the 39th Issue of TRAFFIC Post and the last one for 2023.

TRAFFIC Post is arguably India's longest-running dedicated newsletter on wildlife trade issues. It has been a medium for communicating updates in the area of wildlife protection while encapsulating and highlighting early and ever-changing trends of illegal wildlife trade. Every edition of the newsletter brings forward a growing concern that endangers the future of wildlife as trade in species, which was not seen before in the country has been noticed.

In the last issue of TRAFFIC Post, we highlighted illegal pet trade in India. In this Issue, under the IN FOCUS section of the newsletter, there is an article about the status of the illegal snake trade in India from 2018-2022.

In recent years, trafficking and illegal trade of snakes have become a serious conservation crisis as India reports numerous snake seizures involving both native and exotic species. An increasing fascination with snakes in the pet trade and keeping snakes for good luck are significant drivers of this trade. There have also been reports of the use of snake venom as party drugs.

Native snake species are protected under the Wild Life (Protection) Act, 1972, but there have been gaps in regulating the trade of exotic species. With CITES-listed non-native species now included in the Act after its amendment in December 2022, the trade may now be regulated and subject to the provisions of the Act and CITES regulations. Hopefully, this

should help address the regulation gaps in the trade of exotic snake species.

On a positive note, TRAFFIC Post, Issue 39, brings forward extraordinary achievements of TRAFFIC and WWF-India's wildlife sniffer dogs ktko help curb wildlife crime in India. You will also read about the new batch of 12 young dogs and their handlers currently under training to become wildlife sniffer dog squads. With the passing out of this batch next year, the total number of wildlife sniffer dogs trained under our programme will cross 100.

The current Issue also reports on an exciting new regional project - *Countering wildlife trafficking in South Asia*- to curb wildlife trafficking and illegal wildlife trade in South Asia. TRAFFIC's India Office and WWF-India, in collaboration with the South Asia Wildlife Enforcement Network (SAWEN) and the Wildlife Crime Control Bureau (WCCB) of the Government of India, have implemented this unique regional project to strengthen and build the capacity of law enforcement agencies in Bhutan, Nepal, Bangladesh, Sri Lanka and India and strengthen cooperation among them. The project is being implemented with funding support from the US Government, and two regional Training of Trainers (ToTs) have already been organised under this.

We hope that you find TRAFFIC Post, Issue 39, interesting and informative.

Good wishes for a wonderful 2024!

A | IN FOCUS



A1. WORRISOME TRENDS OF ILLEGAL SNAKE TRADE IN INDIA

Dr Merwyn Fernandes, Associate Director, TRAFFIC's India Office
Astha Gautam, Former Project Officer, TRAFFIC's India Office

For most, the thought of a snake encounter may send shivers down the spine. However, the recent trend in the illegal trade of snakes as pets paints a different picture. Snakes are increasingly gaining popularity as pets; their skins are in demand in the fashion industry, and their venom is used in traditional medicine.

Globally, 3000 species of snakes are found across various habitats, and of these, around 209 snake species are listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), regulating their international trade.

Analysis of CITES trade data from 1975 to 2018 showed that trade involved 6.2 million CITES-listed live snakes, 34.5 million snake skins (either whole or processed into products such as handbags and belts) and over 48,000 snake bodies, and hundreds of skulls, heads and other body parts. Pythons have dominated the global snake trade, accounting for almost 40% of all traded snakes. Live snakes were imported mainly by China and the USA. Trade in venomous snakes was also popular, with over 75% of wild-sourced venomous snakes being sourced from Indonesia.

According to a TRAFFIC Factsheet on snake seizures in Southeast Asia from 2012-2021, nearly a



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million endangered and threatened snakes, on average, were estimated to be sold on the international market every year for the study period. However, this is likely far lower than the true scale of the trade that is both legal and illegal. Fascination for snakes is one of the main drivers for the collection, harvest and trade, especially for the exotic pet trade.

India is home to about 300 snake species, protected through their listing under various Schedules of the Wild Life (Protection) Act, 1972. After amendment to the Act in December 2022, CITES-listed species have also been brought under the Act.

Despite the legal status, snakes such as Red Sand Boa *Eryx johnii* and cobras *Naja* spp., are



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commonly trafficked for pet trade or snake venom in India. Exotic species such as Ball Python *Python regius*, Burmese Python *Python bivittatus*, Kingsnake *Lampropeltis* spp., Mangrove Cat Snake *Boiga dendrophila*, (Egyptian or Kenyan) Sand Boa *Eryx colubrinus* and Red Cornsnake *Pantherophis guttatus* have also been reported in illegal trade in India.

Owing to an increasing interest in keeping snakes as pets, deaths caused by snake bites to pet owners and illicit trade of snake venom are evolving as a serious issue. The World Health Organisation notes that up to 2 million people are bitten by venomous snakes in Asia each year. India had 1.2 million snakebite deaths (average 58,000/year) from 2000 to 2019 (Suraweera *et al.*, 2020)

Administering anti-venom serum within four hours of the snake bite is crucial to saving life, and anti-venom serum can only be obtained by using snake venom. This serum contains vital antibodies that help to combat the invasion of venom. The venom is extracted from mainly four snakes in India commonly known as the "Big Four"- Indian cobra *Naja naja*, Common Krait *Bungarus caeruleus*, Western Russell's Viper *Daboia russelii* and the Saw-scaled Viper *Echis carinatus*.

Venom production in India is highly regulated as snakes are protected under the Wild Life (Protection) Act, 1972, and therefore snakes can not be collected for venom extraction. Special permissions have to be sought from the state

governments and wildlife authorities. Despite this, India has reported an illegal trade of snake venom.

News reports have also pointed towards using snake derivatives for recreational purposes and as a substitute for other mind-alerting. The illegal trade of snake venom as a 'party drug' is a growing issue that needs further investigation and research.

ANALYSIS OF SNAKE SEIZURE REPORTS IN INDIA (2018-2022)

To highlight the illegal trade of snakes in India and create awareness about conservation issues, TRAFFIC collated online seizure reports of snakes and snake venom seizures in India for 2018-2022. Information was taken from online news reports, Sashastra Seema Bal (SSB) operational achievements data, Ministry of Home Affairs, and newsletter and social media handle of Wildlife Crime Control Bureau (WCCB), Ministry of Environment, Forest and Climate Change, Government of India, and pertained to the seizure of both native and exotic snake species and their derivatives.

In India, 155 seizures of snakes and their derivatives were reported from 2018-2022. Of these, 130 incidents (about 84%) reported 905 live snakes and 21 incidents (about 10%) reported

30 kg of snake venom. The remaining incidents included the seizure of other derivatives, such as three carcasses and an unreported quantity of skin, rat snake meat, body parts, and python fat.

The 130 incidents that reported 905 live snakes included over 40 native and exotic species, some of which are mentioned below:

Native species seized: Indian Cobra or Spectacled Cobra, Monocled Cobra *Naja kaouthia*, Common Sand Boa *Eryx conicus*, Red Sand Boa *Eryx johnii*, Indian Krait Snake *Bungarus caeruleus*, Indian Rat Snake *Ptyas mucosa*, Indian Rock Python *Python molurus*, Indian Wolf Snake *Lycodon aulicus*, Keelback Snake *Xenochrophis* spp., Russell's Viper *Daboia russelii*, Saw-scaled Viper *Echis carinatus*, Checkered Keelback Water Snake *Fowlea piscator*, Flying Snake *Chrysopelea* spp, Indian Rattlesnake *Crotalus cerastes*, and more.



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Exotic species seized: Ball Python *Python regius*, Reticulated Python *Python reticulatus*, Amethystine Python *Morelia amethystina*, Burmese Python *Python molurus bivittatus*, Green Tree Python *Morelia viridis*, Red Python *P. brongersmai*, Boa constrictor *Boa constrictor*, Rainbow Boa *Epicrates cenchria*, Cobra *Naja* spp., Corn Snake *Pantherophis guttatus*, Gaboon Viper *Bitis gabonica*, Horned Pit Viper *Protobothrops cornutus*, Kenyan Sand Boa *Eryx colubrinus*, Sand Boa *Eryx* spp., Kingsnake *Lampropeltis* spp., Mangrove Snake *Boiga dendrophila*, Milk Snake *Lampropeltis Triangulum*, Blackhead Royal Snake *Lampropeltis getula nigrata*, Bronze Back Snake *Dendrelaphis pictus* and more.

The snake seizure incidents were reported from 22 states and two Union Territories (Delhi and

Chandigarh). Maharashtra reported the highest number of incidents (35); however, the number of snakes seized (66) or derivatives seized (0.85 ml snake venom and unreported quantity of snake skin) was not among the highest among the reported incidents.

Uttar Pradesh reported the second-highest number of snake seizure incidents (24). This included 261 live snakes seized and an unreported quantity of snake venom. This was followed by West Bengal, which reported 18 incidents, in which five incidents reported seizure of 72 live snakes and 13 incidents reported seizure of over 20 kg of snake venom.

Kerala and Karnataka reported nine seizure incidents each, and Telangana, Tamil Nadu and Madhya Pradesh reported eight incidents each. Odisha and Andhra Pradesh each reported five incidents, while Mizoram and Gujarat reported four incidents each. Assam reported three incidents, and Uttarakhand, Sikkim, Delhi and Bihar reported two incidents each. Punjab, Manipur, Jharkhand, Himachal Pradesh, Haryana, Chhattisgarh and Chandigarh each reported a single incident.

Seizure of live snakes

Twenty-one states and two union territories (Delhi and Chandigarh) reported seizure of live snakes belonging to over 40 species. Tamil Nadu reported the highest quantity of live snakes (300 live snakes) in eight seizure incidents during 2018-2022 of which six seizure incidents were reported from the Chennai International Airport. Uttar Pradesh reported the seizure of 261 live snakes in 23 incidents. Seven of these incidents were reported from adjacent international borders.

In 92 incidents, the seized live animals were boa snakes, mainly Red Sand Boa snake. Other snake species seized were cobras (24 incidents), pythons (19 incidents) and vipers (3 incidents).

Fourteen snake seizure incidents reported 242 live snakes of over 21 species of exotic origins. These seizures were reported from Tamil Nadu (5 incidents), Mizoram (3 incidents), Maharashtra (2 incidents), one incident each from Manipur, Kerala, Jharkhand and Assam. The highest number of snakes were reportedly seized from Tamil Nadu (132 snakes), followed by Mizoram (33 snakes),



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Jharkhand (26 snakes), Maharashtra (22 snakes), Assam (19 snakes), Manipur (6 snakes), and Kerala (4 snakes).

Seizure of snake venom

During 2018-2022, seven states reported 21 seizure incidents of snake venom of about 30 kg. West Bengal reported 13 incidents of snake venom and the largest quantity seized (over 20 kg). Six of these incidents were reported from areas adjacent to the international borders. The other reporting states were Odisha (3 incidents), one incident each from Uttar Pradesh, Maharashtra, Haryana, Gujarat, and Bihar.

Conclusion

Trafficking and illegal trade of snakes is a growing conservation concern in India. Though native species are protected under the Wild Life (Protection) Act, 1972, there have been gaps in regulating the trade of exotic species. With CITES-listed non-native species now included in the Act after its amendment in December 2022, the trade may now be regulated and subject to the provisions of the Act and CITES regulations. Hopefully, this should help address the regulation gaps in trade of exotic snake species.

Creating awareness about the threat of zoonotic diseases spread due to illegal pet trade can not be undermined. Zoonotic diseases are estimated to be about 75% of the emerging infectious diseases in recent times. Many of these are carried by exotic pets or wildlife species, and include some recent outbreaks in humans such as but not limited to Severe Acute Respiratory Syndrome (SARS), Ebola virus, salmonellosis, and monkeypox.

New age superstitions are also reported to be a major driver of the illegal trade of certain snake such as the Red Sand Boa. Superstitions range from the more common ones, such as bringing good luck to their keepers, to the more bizarre ones like claiming that the snake contains rare elements that are highly expensive and have supernatural powers. Education and awareness is very crucial to protecting snakes from such malpractices.

REFERENCES:

<https://www.sciencedirect.com/science/article/abs/pii/S0006320720306595>

Factsheet on snake seizures in Southeast Asia;

https://www.traffic.org/site/assets/files/18905/snakeday-r4_rgb.pdf

<https://wildlifesos.org/animals/venomous-snakes-of-india/#:~:text=Nearly%20300%20snake%20species%20inhabit,Elapidae%2C%20Hydrophiidae%2C%20and%20Viperidae.>

In Unfamiliar lands: Trafficking of exotic wildlife species in India;

https://www.wwfindia.org/news_facts/feature_stories/trafficking_of_exotic_wildlife_species_in_india/

<https://www.who.int/news-room/fact-sheets/detail/snakebite-envenoming>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7110438/#:~:text=Zoonoses%20are%20estimated%20to%20make,of%20today's%20emerging%20infectious%20diseases.&text=Many%20of%20these%20zoonoses%20are,4%20salmonellosis%2C5%20and%20monkeypox>

Nearly a million <https://www.britannica.com/topic/list-of-snakes-2032997>

A total of 326 species and subspecies of the suborder Serpentes distributed in 87 genera and 11 families. <https://faunaofindia.nic.in/PDFVolumes/fi/037/index.pdf>

<https://www.deccanherald.com/india/india-is-snakebite-capital-of-the-world-1235307.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5968650/>

Suraweera, W., Warrell, D., Whitaker, R., Menon, G., Rodrigues, R., Fu, S.H., Begum, R., Sati, P., Piyasena, K., Bhatia, M., Brown, P., and Jha, P. (2020). Trends in snakebite deaths in India from 2000 to 2019 in a nationally representative mortality study. *eLife*. 2020; 9: e54076.



B

TRAFFIC UPDATES (INDIA)



B1. SOUTH ASIAN COUNTRIES COLLABORATE TO COUNTER WILDLIFE TRAFFICKING AND ILLEGAL WILDLIFE TRADE

Wildlife crime decimates endangered species populations, fuels corruption, and enriches transnational criminal syndicates. South Asia, a region rich in biodiversity, is a crucial source of poaching for wildlife trafficking, as well as a transit hub for illegal wildlife trade.

To curb wildlife trafficking and illegal wildlife trade in South Asia, TRAFFIC's India Office and WWF-India, in collaboration with the South Asia Wildlife Enforcement Network (SAWEN) and the Wildlife Crime Control Bureau (WCCB), Government of India, are implementing a unique regional project - *Countering wildlife trafficking in South Asia*- to strengthen and build the capacity of law enforcement agencies in Bhutan, Nepal, Bangladesh, Sri Lanka and India and strengthen cooperation among them. The project is being implemented with funding support from the US Government.

Project activities include regional capacity building for trainers, national capacity building for law enforcement, new tools and technologies for identification and detection, and support for more effective prosecution and judiciary work.

Mr H.V. Girisha IFS, Additional Director, WCCB, said, "The regional workshops have been carefully

designed considering the evolving scenario of illegal wildlife trade. The training focuses on increasing interdiction of the illegal wildlife trade, building investigative and enforcement capabilities to handle transboundary issues, and enhancing cross-border coordination. As a specialist organisation working on curbing wildlife crime in India, WCCB will lead the execution of a regional workshop".

Mr Sindhu Prasad Dhungan, PhD, Chief Enforcement Coordinator, South Asia Wildlife Enforcement Network (SAWEN) added, "SAWEN was established in 2011 as an inter-governmental wildlife law enforcement support body to focus on policy harmonisation; institutional capacity strengthening through knowledge and intelligence sharing; and collaboration with regional and international partners to enhance wildlife law enforcement in the member countries. Therefore, these regional trainings are integral to its overarching mission to curb wildlife crime and illegal wildlife trade in South Asia. SAWEN is providing full support for this regional project".

Dr Dipankar Ghose, Senior Director, Biodiversity Conservation, WWF-India and Interim Head of TRAFFIC's India Office, said, "Wildlife crime is an

organised crime that needs a strategic and tactical response. It is also transnational and cannot be dealt with in isolation. Therefore, this regional project focuses on bringing together South Asian countries to build their wildlife enforcement capacity, coordination and prosecution across the region through assessment, technology and community engagement. The project activities are designed to strengthen South Asia's criminal justice institutions effectively and sustainably for better deterrence, detection and enforcement, ultimately reducing wildlife trade and trafficking".

Shri Ravi Singh, Secretary General & CEO, WWF-India, said, "The new regional project – *Countering wildlife trafficking in South Asia* - aims to build on knowledge and experience sharing among enforcement officials in South Asian countries for curbing illegal wildlife trade. The workshops planned under the project will bring together officials from Nepal, Bhutan, Sri Lanka, Bangladesh and India and will help to strengthen the foundation for future cooperation and collaboration".

The first two Training of Trainers (ToT) workshops for the enforcement officials from Nepal, Bhutan, Bangladesh, Sri Lanka and India have been organised, details of which are below.

FIRST TRAINING OF TRAINERS (TOT) WORKSHOP

The first Training of Trainers (ToT) workshop under this regional project commenced on 21 November

2023 at Dehradun, Uttarakhand and culminated on 29 November 2023 in New Delhi. The Chief Guest of the workshop, Mr Jag Mohan Sharma, IFS, Director, Indira Gandhi National Forest Academy and the Guest of Honour, Mr Virendra Tiwari, IFS, Director, Wildlife Institute of India, inaugurated the ToT. Also present were the Additional Director, Wildlife Crime Control Bureau, Mr H V Girisha, IFS, and Advisor – WWF-India & TRAFFIC's India Office, Mr Soumitra Dasgupta, IFS (Retd.), former ADG (Wildlife), MoEFCC and Head of Forest Force, West Bengal. The dignitaries spoke about the importance of this training to curb wildlife crime in the South Asia region.

The ToT was attended by 34 officials, ten from Bhutan, India, Nepal, and two from Bangladesh and Sri Lanka. The officers were from various law enforcement agencies in their respective countries, including Forest Departments, Customs, Police, and para-military forces.

The 9-day training workshop focussed on building the participants' knowledge and skills in curbing wildlife trafficking in the region. It was conducted by experts from WCCB, National Crime Records Bureau, Centre for Cell and Molecular Biology (CCMB), Forest Research Institute (FRI), Wildlife Institute of India (WII), and Dr Keshav Kumar IPS (Retd.), among other subject experts from India.



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SECOND TRAINING OF TRAINERS (TOT) WORKSHOP

A second Training of Trainers (ToT) workshop organised by TRAFFIC and WWF-India, in collaboration with the South Asia Wildlife Enforcement Network (SAWEN) and the Wildlife Crime Control Bureau (WCCB), Government of India, to strengthen and build the capacity of law enforcement officers from Bhutan, Nepal, Bangladesh, Sri Lanka, and India commenced on 11 December 2023 in New Delhi and culminated on 19 December 2023 in Dehradun, Uttarakhand.

Twenty eight officials from various law enforcement agencies, including Forest Departments, Customs, Police, and para-military forces from Bhutan, Nepal, Bangladesh, Sri Lanka and India, attended the workshop.

Mr Bivesh Ranjan, IFS, Additional Director, Ministry of Environment, Forest and Climate Change (MOEF&CC), Government of India, inaugurated the workshop along with Dr Manoj Kumar, Joint Director, WCCB; and Mr Ravi Singh, Secretary General & CEO, WWF-India in New Delhi. Mr Rakesh Kumar Jagenia, IFS, Deputy Inspector General (DIG)- Wildlife, MOEF&CC, took an important session on role of the



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Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and its implementation.

Subject experts from WCCB; National Crime Records Bureau; National Tiger Conservation Authority (NTCA); Centre for Cell and Molecular Biology (CCMB); Forest Research Institute (FRI); Wildlife Institute of India (WII); Lucknow Zoo; Uttar Pradesh Police Department, Central Zoo Authority (CZA); and Uttarakhand Forest Department led sessions during this nine-day workshop and included insights into the evolving illegal wildlife trade scenario in Asia, strategies, and new tools and techniques to help curb this menace.

To learn more about the regional ToTs, please visit www.trafficindia.org



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B2. TWELVE WILDLIFE SNIFFER DOGS BEGIN THEIR TRAINING AT BTC-ITBP, PANCHKULA WITH SUPPORT FROM TRAFFIC AND WWF-INDIA



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A new batch of 12 young dogs and their 24 handlers began training on 20 November 2023 at the Basic Training Centre, Indo-Tibetan Border Police Force (BTC-ITBP) camp in Panchkula, Haryana. With this, TRAFFIC and WWF-India's wildlife sniffer dog squads will cross an important milestone as the number of wildlife sniffer dogs trained under the programme will be 106.

The young dogs of six to nine months of breed Belgian Malinois and their handlers will undergo rigorous training at BTC-ITBP for about seven to eight months, learning skills to detect and curb wildlife crime.

After completion of the training, the wildlife sniffer dog squads will join the forest departments of Uttarakhand, Jharkhand, Maharashtra, Odisha, Chhattisgarh, Madhya Pradesh and West Bengal. In Uttarakhand, three wildlife sniffer dog squads will be deployed by Corbett Tiger Reserve and one squad by Rajaji Tiger Reserve. In Jharkhand, the wildlife sniffer dog squad will be deployed by Palamu Tiger Reserve.

In Maharashtra, the wildlife sniffer dog squad will be deployed by the Pench Tiger Reserve, and in Madhya Pradesh, by the Kanha Tiger Reserve. In Odisha, two

squads will be deployed by the Similipal Tiger Reserve. In Chhattisgarh, two wildlife sniffer dog squads will be deployed by Achanakmar Tiger Reserve and in West Bengal, a dog squad will be deployed by Buxa Tiger Reserve.

"Popularly known as Super Sniffers, the wildlife sniffer dogs trained under TRAFFIC and WWF-India's programme have been highly successful in seizing wild species contraband from smugglers and catching poachers and offenders in the act. Much like with detecting drugs or explosives, these dogs use their incredible sense of smell to detect various wild species parts and derivatives in trade, including those from tigers, elephants, and rhinos, deer meat, live birds, snakes, porcupines, red sanders, turtles, and tortoises" said Dr Merwyn Fernandes, Associate Director, TRAFFIC's India office.

Dr Dipankar Ghose, Senior Director, Biodiversity Conservation, WWF-India, further adds, "This important programme of training sniffer dogs for wildlife crime prevention and detection in India was launched in 2008 with just two dogs. Till the end of 2022, 94 wildlife sniffer dogs were trained and deployed under this programme. With this



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batch, the number of wildlife sniffer dogs trained under TRAFFIC and WWF-India's programme will hit a century. It is heartwarming to see the overwhelming response and support from the government enforcement agencies for this programme".

Inspector General, BTC-ITBP, Panchkula Haryana, said, "Wildlife crime is growing to become one of the largest crimes that need to be curbed to protect

the future of our wildlife. BTC-ITBP, Panchkula, has years of experience in training sniffer dogs for crime detection in India, and we have extended our full support in conducting specialised training of sniffer dogs for wildlife crime detection in India. For this, we have partnered with TRAFFIC and WWF-India in their unique programme. The new batch of wildlife sniffer dogs is the fourth to be trained at our centre, and we wish the participants good luck with their training".

The wildlife sniffer dog training programme at BTC-ITBP is divided into two critical phases. The first phase focuses on developing an emotional and trusting bond between the dog and the handler, crucial to becoming a successful wildlife sniffer dog squad. It is followed by basic obedience training. Later, the dogs learn sniffing and tracking skills and are trained to detect tiger and leopard skins, bones and other body parts, bear bile, red sanders, and other illegal wildlife products.

Till 2022, 94 wildlife sniffer dogs have been trained and deployed in 21 states and Union Territories. With the current batch, the number of participating states and Union Territories will become 22.

B3. FIGHTING WILDLIFE CRIME: FOREST OFFICIALS UNDERGO TRAINING TO UPDATE KNOWLEDGE AND SKILLS

Wildlife crime is an ever-evolving organised crime that requires an organised response to combat it. Keeping this in mind, TRAFFIC organises capacity-building training of officials from the forest department and other enforcement agencies to enhance wildlife law enforcement for curbing wildlife crime in India. These trainings give insight into the new and emerging illegal wildlife trade trends and introduce the officials to the latest tools and techniques available to support wildlife protection.

In light of this, the following two training programmes were organised.

Kalakkad Mundunthurai Tiger Reserve (KMTR); Tamil Nadu: TRAFFIC, with support from the Tamil Nadu Forest Department, organised a capacity-building training of forest officials from the Kalakkad Division of KMTR on 22-23 May 2023. The two-day training was attended by 35 forest officials, many of whom had recently joined the force. The training was designed to incorporate the latest wildlife trade trends and changing policies to freshen the officials' existing knowledge and skills.

TRAFFIC's India team conducted the training with support from wildlife experts such as Mr Rajmohan, IFS (expert on evidence collection,



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search, and seizure); Mr Ganesan, IFS, (expert on digital evidence collection), Advocate Geraj Wilfer (expert on wildlife laws); and Mr Sheshadri, a retired officer from the Wildlife Crime Control Bureau (expert on species identification).

The training focussed on providing insight into the commonly traded wildlife derivatives and their identification techniques, evidence collection through forensics, and other related subjects. A special session on the latest amendment to the Wild Life (Protection) Act 1972 was also included in the training to help the officials understand and implement the amended sections of the Act, including forest officers' powers, offences, and procedures. TRAFFIC also provided a wildlife crime forensic evidence collection kit, which could collect approximately 100 wildlife samples.

Dr Merwyn Fernandes, Associate Director, TRAFFIC's India Office, spoke about the use of the internet for illegal wildlife trade and emphasised the need to inculcate new skills to track and detect wildlife contraband on sale in virtual markets. These new skill sets will be helpful for enforcement agencies in their mission to protect and secure the future of wildlife.

Mr Rameshwaram, IFS, Deputy Director, Kalakkad Division, KMTR, appreciated the initiative by TRAFFIC to undertake this training focused on refreshing the forest officials' knowledge and skills.

Pench Tiger Reserve, Maharashtra: TRAFFIC, with support from the Maharashtra Forest Department, organised a two-day capacity-building training for the forest officials of the Pench Tiger Reserve, Maharashtra, on 26-27 June 2023. This training was attended by 30 officials representing Range Forest Officers and Foresters of Pench Tiger Reserve and the surrounding Forest Division of Umred and Khardandla.

TRAFFIC's India team conducted the training with support from Deputy Director Pench Tiger Reserve and Honorary Wildlife Warden Nagpur. Sessions were led by Mr C.P. Sharma, Senior Technical Officer, Wildlife Institute of India, Mr Sheshadri, a retired officer from the Wildlife Crime Control Bureau and now an independent consultant; and Ms Shubhra Sotie, Advocate.

Similar to the training organised by TRAFFIC at KMTR, Tamil Nadu, this training also focussed on sharing an insight into the latest illegal wildlife trade trends and the new tools and technologies available to combat this menace.

TRAFFIC also provided the forest department with a de-snaring kit, a wildlife crime scene, and a forensic evidence collection kit, which could collect approximately 300 samples.

Ms Sree Lakshmi, IFS, Field Director-Pench Tiger Reserve, Maharashtra, appreciated the initiative by TRAFFIC and WWF-India to undertake this training that will help refresh the forest officials' knowledge and skills.

B4. FOREST OFFICERS FROM TAMIL NADU FOREST ACADEMY ON A STUDY TOUR INTERACT WITH TRAFFIC AND WWF-INDIA TEAMS



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On 6 October 2023, over 45 forest officers from the Forest Departments of Tamil Nadu, Rajasthan, West Bengal, Meghalaya, and Himachal Pradesh visited the WWF-India Secretariat in New Delhi under the 'Study Tour Programme' organised by Tamil Nadu Forest Academy, Coimbatore. The purpose of the visit was to understand the role of TRAFFIC and WWF-India in wildlife conservation and protection in India.

Dilpreet B. Chhabra, Senior Manager, TRAFFIC's India Office, gave an insightful presentation on TRAFFIC, its role and structure, issues addressed, programmes and impacts made. The presentation also showcased many capacity-building tools developed by the organisation to strengthen wildlife law enforcement capacity in India. This included showcasing ID tools and the latest 3D replica shark fins. The participants were excited to learn about TRAFFIC and WWF-India's wildlife sniffer dog training programme in India.

Dr Joydeep Bose, Regional coordinator-CA/TS & Associate Ddirector, Wildlife & Habitats Division WWF-India, spoke about WWF-India's work regarding strengthening protection in the landscapes. He gave an insight into the initiatives that include strengthening ranger capacity in terms of training,

equipment and infrastructure support, ranger welfare and working conditions, strengthening equality in the ranger workforce and compliance with environmental and social safeguards.

This session was followed by a talk by Nitin Kaushal, Director- Rivers and Wetland programme of WWF-India. He spoke about issues related to the conservation and protection of rivers and wetlands in India. He gave an insight into the Rivers & Wetlands programme of WWF-India and the ongoing initiatives across critical landscapes/riverscapes in the country.

Dr Dipankar Ghose, Senior Director- Biodiversity Conservation, WWF-India, wrapped up the session by sharing interesting real-life examples of conservation challenges and successes. He also introduced handy guidebooks developed to meet conservation challenges in the field.

The session ended with a vote of thanks from Mr Sreevalsan S, Assistant Conservation of Forests, Tamil Nadu, who led the forest officers' team under the study tour.

B5. ADIEU SIMBA AND NERO: ACE WILDLIFE SNIFFER DOGS RETIRE



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TRAFFIC and WWF-India's wildlife sniffer dog training programme began in 2008 with two dogs, and since then, 94 wildlife sniffer dogs, popularly called as Super Sniffers, have been trained and deployed across 21 states and union territories in India. Twelve more are currently under training at BTC-ITBP, Panchkula.

These Super Sniffers have been making integral contributions and supplementing the efforts of forest departments and enforcement agencies in protecting India's wildlife. Their accomplishments are reflected in 500+ wildlife seizure-related incidents that these sniffers have assisted in alongside daily patrolling and awareness efforts done by the department. However, after years of dedicated service to their departments, many of our sniffers become entitled to a peaceful retirement.

This year, Simba and Nero from Achanakmar Tiger Reserve, after serving the Chhattisgarh Forest Department for eight years, have retired into the company of their caring handlers Ashish Khare, Kavita Bharadwaj, Suresh Kumar Navarang and Sarita Paikra.

Simba, a Belgian Malinois and Nero, a German Shepherd, were trained in 2016 as part of the fifth

batch of TRAFFIC and WWF-India's wildlife sniffer dog training programme at the National Training Centre for Dogs (NTCD) in Border Security Force Academy, Tekanpur, in Madhya Pradesh. During the nine-month-long training, these sniffers developed skills for detecting wildlife contrabands and tracking the ability to assist the forest departments in combating wildlife crimes. After completing their training, they were deployed by the Achanakmar Tiger Reserve in Chhattisgarh.

Achanakmar Tiger Reserve, notified in 2009, is spread across more than 900 sq. km from the Maikal hill ranges to the junction of Chhattisgarh's Vindhyan and Satpura hill ranges. This reserve is home to rich flora and fauna. Alongside Tiger *Panthera tigris*, it provides habitat to Leopard *Panthera pardus*, Sloth Bear *Melursus ursinus*, Chital *Axis axis*, Muntjac *Muntiacus* spp., Sambar *Rusa unicolor*, Dhole *Cuon alpinus*, wild cats, fox, hyenas and vultures, among many others (Nautiyal, *et al.*, 2023). The Reserve plays an important role in the Kanha-Pench-Achanakmar population block, representing the largest tiger population and the largest connected tiger population in the Central Indian landscape (Qureshi, *et al.*, 2023).

Protecting wildlife in the region is thus an important responsibility for enforcement agencies, reflected in daily patrolling and investigating wildlife crimes. The forest department also uses wildlife sniffer dogs to patrol and investigate wildlife crimes effectively to protect the region.

During the tenure of Simba and Nero with the Chhattisgarh Forest Department, they assisted in solving over 60 wildlife crime cases of Tiger, Leopard, Elephant, Indian Pangolin, bear, Gaur, Sambar, Chital, Four-horned Antelope, Nilgai, Wild Boar, Wild Hare, and snakes. In many cases, they helped recover poaching equipment and also assisted in cracking cases of hunting wild animals using firearms, electrocution, snaring and poisoning. They helped track culprits in poaching cases of wild animals and their derivatives, such as elephant tusks, leopard skin, and parts of tiger and bear. The

Super Sniffers have also assisted in tracking tigers and leopards to help address issues of human-wildlife conflicts in the area.

After a long journey working in strenuous conditions and areas over the years and fulfilling their duties, Simba and Nero have retired. TRAFFIC wishes them a healthy and happy retirement.

Reference:

- Nautiyal, J. P., Lone, A. M., Ghosh, T., Mallick, A., Yadav, S.P., Ramesh, C., & Ramesh, K. (2023). *An Illustrative Profile of Tiger Reserves of India*. EIACP Programme Centre, (MoEFCC), Wildlife Institute of India, Chandrabani, Dehradun-248001, Uttarakhand, India. pp – 314.
- Qamar Qureshi, Yadvendradev V. Jhala, Satya P. Yadav and Amit Mallick (eds) 2023. Status of tigers, co-predators and prey in India, 2022. National Tiger Conservation Authority, Government of India, New Delhi, and Wildlife Institute of India, Dehradun

B6. IN MEMORY OF SHRI MANOJ KUMAR MISRA



The passing of Shri Manoj Misra has left a great void in the conservation community of India and across the globe. For over two decades, he fought relentlessly to conserve the River Yamuna in India. As a convenor for the

unique 'Yamuna Jiye Abhiyan', a movement dedicated to the revival of the river, he brought together science, community engagement and legal recourse to bear on the conservation of the Yamuna – the freshwater lifeline of New Delhi – and its flood plains.

Shri Manoj joined the prestigious Indian Forest Service (IFS) in 1979 and served in various capacities in the States of Madhya Pradesh and Chhattisgarh till 2001, when he decided to take voluntary retirement from the service to devote his time to protecting the Yamuna river.

During his long IFS tenure, he joined TRAFFIC on secondment from the government in 1996, when he was appointed as the Director of the India office.

Shri Manoj led TRAFFIC's work on the sub-continent in a dynamic fashion. His quiet demeanour and infectious smile belied a fierce determination and focus, noticeable to all who passed through TRAFFIC's portals over the next five years.

His years of experience in forestry and wildlife brought new innovations and networks to the non-government work of TRAFFIC. While helming TRAFFIC in India, he focused on combatting wildlife trafficking by bringing on board law enforcement professionals to guide investigations and on-ground collaboration with government authorities, leading to some major seizures and the establishment of law enforcement deterrents on illegal commodities like shahtoosh shawls, woven from the finest threads of Tibetan Antelope *Pantholops hodgsonii* wool. His leadership enabled TRAFFIC to illuminate several other important trade dynamics, including shark fisheries and medicinal and aromatic plants.

TRAFFIC extends its sincere condolences to Shi Manoj Misra's family and friends through this memorial tribute.

<https://www.traffic.org/news/in-memory-of-manoj-kumar-misra/>

C

GLOBAL SCAN



C1. eCITES: TRANSFORMING GLOBAL WILDLIFE TRADE MANAGEMENT

Digitalisation has progressed in recent years, and CITES is embracing the digital age. Major progress has been made by the Parties, the Secretariat, and its partners on the electronic CITES permitting system (eCITES).

More than 97 per cent of species listed in the CITES Appendices can be commercially traded under a permitting system. Carrying the responsibility of regulating international trade in more than 40,000 species of plants and animals, CITES mandates that specimens of species listed in the CITES Appendices must have official trade documentation such as permits and certificates. Unfortunately, problems can arise with paper documentation, including fraudulent use, laborious manual permitting procedures, lack of access to trade and transaction information and weak collaboration between actors.

Complications in keeping track of documents during issuance, transportation, and verification could result in forged paper documents. This may involve declaring false information, altering documents, reusing them, or even theft. Corruption can play a role in the prevalence of forged documents. There also have been cases where lost paper permits were used illegally due to delays in reporting and the extended duration of subsequent notifications among Parties.

Fortunately, such problems are much less likely to happen when using eCITES. eCITES is more than

just turning paper documents digital. It encapsulates four distinct electronic elements – permit application and issuance, control of trade in CITES-listed species, reporting of CITES-trade statistics and exchange of permit information between Parties. eCITES has clear advantages in efficiency, transparency, and accountability when compared to traditional paper permits. Beyond being an environmentally friendly, paper-saving, and efficient solution, it is also a powerful tool for combating illegal trade. Government agencies can more effectively conduct inspections and identify individuals or entities engaged in unlawful activities. Implementing eCITES fosters collaboration and data sharing with Customs and border control agencies. This is why the Secretariat is dedicating energy to its promotion and seeking donors to support countries that need funding.

Sri Lanka was the first country to implement ASYCUDA eCITES Solution in 2020. The results were impressive: a 40 per cent boost in annual permit approvals, a drop from 19 cancelled permits to 0, and the average permit processing time has significantly reduced from 175 hours

to 36 hours, all between 2020 and 2022. These outcomes underscore its effectiveness in facilitating legal and sustainable wildlife trade and curbing illicit activities, thereby enhancing species protection in Sri Lanka. Moreover, eCITES can also automatically generate annual reports, providing valuable data for enhanced analysis and monitoring—a previously unavailable capability before its introduction in Sri Lanka in 2020.

So far, 31 Parties have made significant progress in implementing eCITES systems and the additional 12

Parties in the early planning stages. Their efforts have contributed significantly to increasing transparency, preventing the misuse of fraudulent permits, enhancing cross-border exchange, and strengthening international cooperation.

Learn more about eCITES here:

<https://cites.org/prog/eCITES>

C2. CITES EXPERTS DRAFT SUSTAINABILITY GUIDANCE

With global biodiversity projected to decline by 10 per cent by 2050, ensuring the sustainability of human activities, such as legal and traceable international trade in wildlife, is critical for safeguarding the survival of wild animal and plant species, as well as the benefits and ecosystem services they provide to humans, including food, medicine, shelter and cultural significance.

At the core of the CITES lies a fundamental process known as a Non-Detriment Finding (NDF): a pivotal science-based assessment that evaluates the sustainability of trade in specimens of species listed in the CITES Appendices by determining whether or not a trade activity will be detrimental to the survival of CITES-listed species in the wild. An NDF is an essential prerequisite for granting export permits for species listed in CITES Appendices I and II. The process involves assessments conducted by designated Scientific Authorities of Parties to the Convention (CITES Parties).

More than 150 experts and delegates from 42 Parties and 25 organisations attended the International Expert Workshop on CITES NDFs from 4-8 December 2023 in Nairobi, Kenya. Organised by the CITES Secretariat, the workshop discussed and refined 11 modules, with the objective of providing non-legally binding guidance to CITES Parties – primarily the CITES Scientific Authorities – on different aspects of making an NDF.

The modules covered various aspects including what an NDF is, the importance of adaptive management and practical guidance on how to make an NDF.

A key issue tackled at the workshop was the assessment of a species' role in its ecosystem. The roles of species in the ecosystems range from direct interactions (pollination, nutrition, herbivory, predation) and indirect interactions (habitat creation, ecosystem engineering, nutrient cycling and redistribution). CITES requires that Scientific Authorities in each Party monitor trade in specimens of species included in Appendix II. Scientific Authorities could limit trade in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I, in which case international trade in wild specimens for commercial purposes is prohibited.

The use of digital technology was discussed in regard to enhancing the process of making NDFs.

Read more at <https://cites.org/eng/news/cites-experts-draft-sustainability-guidance-ndfs-workshop-2023>

D

TRAFFIC ALERTS



D1. SMUGGLER HELD WITH RED SAND BOA SNAKES IN UTTAR PRADESH

In September 2023, the Uttar Pradesh Forest Department arrested a snake smuggler with five Red Sand Boa snakes from a Protected Area of the Kakraha Forest Range. The accused was nabbed by a patrol team from the reserve forest area in the Katarniaghat Wildlife Sanctuary. The accused was a resident of a village that lies close to the Indo-Nepal border. He was booked under the Wild Life (Protection) Act 1972.

TRAFFIC ADDS.....

Red Sand Boa *Eryx johnii*, commonly called the Indian Sand Boa, is a non-venomous species found throughout the dry parts of the Indian subcontinent. It is a primarily reddish-brown and thick-set snake that grows to an average length of 75 cm. Unlike most snakes, the tail is almost as thick as the body, making the reptile appear "double-headed".

Red Sand Boa is listed under Schedule I of India's Wild Life (Protection) Act, 1972. Despite the protection, India has recently witnessed a continuous demand for Red Sand Boas in its illegal domestic market.

New age superstitions are reported to be a significant driver of the illegal trade of the species. These range from the more common ones, such as bringing good luck to their keepers, to the more bizarre ones, like claiming that the snake contains rare elements that are highly expensive and have supernatural powers.

Due to its benign nature, Red Sand Boa is easy to collect and smuggle. The price is determined as per its weight. Smugglers have often been reported feeding this snake steel bullets or lead balls to increase its weight. The snakes are not just sold but also rented out for hefty sums. Furthermore, the demand for these snakes is so high that they are also reported to be stolen from zoos across India.

Cyberspace has further fueled its illegal trade, making it easier for buyers and sellers to connect. Posts related to the sale and purchase of Red Sand Boa have been observed on various online trading platforms, where it is popularly known as a 'double engine'.

Besides this, Red Sand Boa is also poached for its medicinal value.

SOURCES:

<https://theprint.in/india/smuggler-held-with-rare-red-sand-boa-snakes-in-ups-bahraich/1754557/>
<https://www.wwfindia.org/219742/TRAFFIC-urges-not-to-keep-legally-protected-wild-animals-as-pets>
https://www.wwfindia.org/about_wwf/enablers/traffic/red_sand_boa/#:~:text=Due%20to%20its%20benign%20nature,rented%20out%20for%20hefty%20sums.

D2. SEVENTY-TWO SNAKES SEIZED AT BENGALURU AIRPORT

Customs officials seized 72 snakes (55 ball pythons in different colour morphs and 17 king cobras) and six dead Capuchin monkeys stuffed inside baggage that arrived on a Bangkok flight at Kempegowda International Airport, Bangalore in September 2023. The live animals have been deported to the country of origin, and the dead animals were disposed of with proper sanitary measures.

TRAFFIC ADDS.....

This is one of the many incidents of trafficking of exotic wildlife species reported in India recently. In 2022, TRAFFIC observed 56 seizure incidents of exotic wildlife in India in open media sources. These incidents were reported in 10 states. About 4,000 (3951) exotic animals were recorded in these 56 seizure incidents, including broad groups of mammals, birds, reptiles, fish species, and insects. The detailed analysis was published in TRAFFIC's newsletter on wildlife trade in India – TRAFFIC Post, Issue 38, in the form of an article- *In Unfamiliar Lands: Trafficking of exotic wildlife species in India* (https://www.wwfindia.org/news_facts/feature_stories/trafficking_of_exotic_wildlife_species_in_india/) .

The article also highlighted the trafficking of non-native snakes, with snakes being the most reported group in seizure incidents among reptiles. Over half of the snakes seized were pythons, including species such as Ball Python *Python regius*, and Burmese Python *Python bivittatus*. Other species seized were kingsnake *Lampropeltis* spp., cobra, Mangrove Cat Snake *Boiga dendrophila*, Egyptian or Kenyan Sand Boa *Eryx colubrinus* and Red Cornsnake *Pantherophis guttatus*.

In India, the Wild Life (Protection) Act, 1972 prohibits the trade in wild animals (and their articles) specified in its various Schedules. In its latest amendment in 2022, the Act enlisted CITES-listed species in Schedule IV. Similarly, the export and import policy of the Directorate General of

Foreign Trade (DGFT) regulates, restricts or prohibits the trade of wildlife (and their article) through its guidelines.

Under the authority of the Foreign Trade (Development & Regulations) Act, 1992, trade in wild animals as defined under the Wild Life (Protection) Act, 1972 is prohibited, while trade in CITES-listed species is subjected to the provisions of the Convention. Trade in species not listed in the Wild Life (Protection) Act of 1972 is permitted only against a license on the recommendation of the Chief Wildlife Warden subject to the provision of CITES.

In many instances, the trafficking violates national legislation and international conventions, such as the CITES. In addition, it adversely affects the region/area from where the species has been extracted, resulting in a decline in species abundance (Morton, *et al.*, 2021).

Loss of biodiversity (Bush, *et al.*, 2014), and impact on ecosystem services and public health have also been identified as effects of the unsustainable and unregulated trade. Many exotic species have been identified as carriers of zoonotic diseases (Bernard & Anderson, 2006), carrying a risk of exposure to both humans and wildlife (Chomel, *et al.*, 2007) and causing disease outbreaks in destination countries (Karesh, *et al.*, 2005).

SOURCES:

<https://www.hindustantimes.com/india-news>

Bernard, S. M., & Anderson, S. A. (2006). Qualitative assessment of risk for monkeypox associated with domestic trade in certain animal species, United States. *Emerging Infectious Diseases*. 12(12):1827.

Bush, E. R., Baker, S. E., & Macdonald, D. W. (2014). Global trade in exotic pets 2006–2012. *Conservation Biology*. 28(3):663-676.

Chomel, B. B., Belotto, A., & Meslin, F. X. (2007). Wildlife, exotic pets, and emerging zoonoses. *Emerging infectious diseases*. 13(1):6.

Karesh, W. B., Cook, R. A., Bennett, E. L., and Newcomb, J. (2005). Wildlife trade and global disease emergence. *Emerging infectious diseases*. 11(7):1000.

Morton, O., Scheffers, B. R., Haugaasen, T., and Edwards, D. P. (2021). Impacts of wildlife trade on terrestrial biodiversity. *Nature Ecology & Evolution*. 5(4):540-548.

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WORKING TO ENSURE THE TRADE
IN WILD PLANTS AND ANIMALS IS
NOT A THREAT TO THE
CONSERVATION OF NATURE

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