

TRAFFIC PROCEEDINGS

August 2016



TRAFFIC
the wildlife trade monitoring network



WORKSHOP PROCEEDINGS

First National Workshop on Capacity Building for Combating Wildlife Crime in India

Coimbatore, Tamil Nadu

4-6 February, 2016

Compiled and Produced by
TRAFFIC India



TRAFFIC
the wildlife trade monitoring network



WORKSHOP PROCEEDINGS

First National Workshop on Capacity Building for Combating Wildlife Crime in India

Coimbatore, Tamil Nadu

4-6 February, 2016



**Compiled and Produced by
TRAFFIC India**

Cover photo

© Dipankar Ghose/WWF-India

Inset cover photo

© TRAFFIC

Contents

Foreword	i
Message	iii
Preface	v
Executive Summary	vi
Inauguration of the National Workshop	1
: Demonstration by TRAFFIC India's sniffer dog squads	2
II. Proceedings	3
1. Illegal Wildlife Trade	4
Overview on the nature of illegal wildlife trade in India and South Asia - Dr. Shekhar Kumar Niraj, IFS, Head, TRAFFIC India, New Delhi	4
Trade in non-flagship species in India	5
- Trade of reptiles, marine and coastal species- Dr. Chandan Jani, Scientist, Odisha	5
- Trade of birds- Rajat Bhargava, Scientist, Bombay Natural History Society, Mumbai	6
Wildlife Crime Investigation-using internet as a tool- case study of Melghat Tiger poaching case - Mr. Vishal Mali, Assistant Conservator of Forests, Melghat Tiger Reserve, Maharashtra Forest Department	8
Panel Discussion: Trade in non-flagship species in India	9
Suggestions from the sessions	10
2. Strategies and methodologies in combatting illegal wildlife trade	11
Identification of species and specimen in trade and formation of strategies in combating crime - Mr. Kamal Datta, IFS, Joint Director, Wildlife Crime Control Bureau and Mr. S.V. Sheshadri, Asst. Director, Wildlife Crime Control Bureau, New Delhi	11
Intelligence collection and collation and methodologies of cyber tracking - Mr. Manish Shankar Sharma, IPS, Inspector General, Intelligence, Special Armed Forces, Madhya Pradesh Government	13
Techniques of investigation and prosecution to combat illegal wildlife trade - Mr. Vivek Kishore, IPS, Joint Director, Wildlife Crime Control Bureau, New Delhi	14
Patrolling methods in the field for better surveillance - Mr. Rohit Singh, Enforcement & Capacity Building Specialist, WWF-Tigers Alive Initiative	15
Demonstration of remote surveillance of Protected Areas using infrared sensors - Mr. Tim, Technical Expert, Coimbatore assisted by Mr. Mohan Raj, Technical Advisor, WWF-Western Ghats Programme, Coimbatore	16
Suggestions from the sessions	17

3. Law and legal procedures in investigating and prosecuting wildlife crimes	18
Bail and cancellation of bail in the context of wildlife offences and its impact on trials - Mr. Kartik Shukul, Advocate, Supreme Court, New Delhi and Bombay High Court	18
Improving investigation in wildlife cases (case studies) - Mr. Sanjay Upadhyay, Advocate, Supreme Court, New Delhi	19
Panel Discussion: Successful application of laws in curbing wildlife crime	20
Suggestions from the sessions	20
4. Wildlife forensics in dealing with wildlife crime	21
Applications of forensics, DNA techniques and standardising forensic based protocols in wildlife crime investigations - Dr. S. P. Goyal, Scientist Emeritus, WII, Dehradun	21
DNA profiling and wildlife forensics in curbing wildlife crime - Dr. Sunil Verma, Principal Scientist, CCMB, Hyderabad	22
Suggestions from the sessions	23
5. Role of different agencies in combating illegal wildlife trade	24
Panel Discussions: Role of Inter-agency coordination for combating wildlife trade	24
Identification of problems in inter-agency cooperation	24
Role of NGOs and scientific institutions in combating wildlife crime	25
Role of common man in combating wildlife crime	26
Panel discussion: Role of media and communications in wildlife crime control	27
Combating wildlife crime in South East Asia through inter-country collaboration and role of ASEAN-WEN - Ms. Onkuri Mazumdar, Director, Freeland Foundation, Bangkok	28
India's role in South Asia's fight against wildlife crimes through SAWEN - Ms. Tilotama Varma, IPS, AD, WCCB and Dr. Shekhar Kumar Niraj, IFS, Head, TRAFFIC India, New Delhi	28
Suggestions from the sessions	30
6. Field Exercises	31
Hands-on exercises in intelligence collection, prosecution and investigation	31
Scene 1: Market investigation and surveillance scene	31
Scene 2: Intelligence collection and surveillance methods	31
Scene 3: Poaching in the forest: Search and seizures, sample collection, drafting and investigation	31
Demonstration on Deep Search Metal Detectors	32
Detecting and dismantling hunting equipments	33

7.	Panel discussion: Discussing the development of a national level strategic vision of protocols for combating wildlife crime	34
I.	Recommendations	37
	Appendix A - Agenda	43
	Appendix B - List of participants	49
	Appendix C - Gallery: Moments from the workshop	54
	Appendix D - Media Coverage	60
	Appendix E - Glossary	61

Foreword

विनोद रंजन
VINOD RANJAN



सत्यमेव जयते

अतिरिक्त वन महानिदेशक
भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
ADDITIONAL DIRECTOR GENERAL OF FORESTS
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FORESTS &
CLIMATE CHANGE

FOREWORD

India, like many other nations, is experiencing an unprecedented increase in wildlife poaching and illegal wildlife trade, threatening the very existence of many wildlife species. The rate of exploitation seems to have reached an alarming level undermining past conservation and protection efforts.

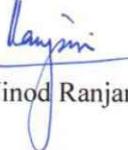
Wildlife trade has evolved itself into an organized and a lucrative wildlife crime activity with relatively low detection and conviction rates. Globally, illegal wildlife trade is the fourth largest global crime after drugs, arms and human trafficking. By its very nature, it is almost impossible to obtain reliable & accurate estimates for the value of illegal wildlife trade; however experts suggest that it runs into hundreds of millions of dollars every year globally.

India is a biodiversity-rich country and therefore on the radar of wildlife poachers and smugglers. While a portion of poached wildlife may be consumed directly in the country, a large part of it is plundered mainly to cater to international demands for illegal wildlife products. The current wildlife law enforcement practices have proved insufficient and ineffective in tackling this growing menace.

Strengthening and upscaling efforts of wildlife law enforcement agencies, increasing collaboration among various conservation bodies, securing cross-border cooperation, raising knowledge of wildlife crimes and their evolving nature (including latest tools and techniques available to curtail this threat), and securing public support, are some of the immediate steps required to stop poaching and illegal wildlife trade. For this, TRAFFIC has been extremely supportive in providing assistance on these various aspects of wildlife law enforcement over the years.

One of the important programmes of TRAFFIC that has proved beneficial for various stakeholders is the capacity building programme to strengthen wildlife law enforcement in India. The National Workshop on Capacity Building for Combating Wildlife Crime in India, organised by TRAFFIC with support from the Government of Tamil Nadu and WCCB from 4-6 February 2016 in Coimbatore, Tamil Nadu, was India's first national workshop with participation from various wildlife law enforcement agencies across the country. The proceedings of this important workshop have been captured in this document with the endeavor that it will set course for future development of a national-level strategy for combating wildlife crime.

31 May 2016
New Delhi


Vinod Ranjan



J-505, जल विंग, इंदिरा पर्यावरण भवन, जोर बाग रोड, नई दिल्ली-110 003
फोन : 011-24695416, फैक्स : 011-24695417

J-505, Jal Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110 003
Ph. : 011-24695416, Fax : 011-24695417 E-mail : adgwl-mef@nic.in

Message

India, like many other nations of the world, has been plagued by extensive poaching and illegal wildlife trade. The threat is so severe and immediate that many wildlife species may be on the verge of extinction. Tamil Nadu government remains alerted of this emerging crisis and has thus undertaken measures to tackle this. Latest of the initiatives has been the successful organisation of India's first National Workshop on Capacity Building for Combating Wildlife Crime in collaboration with TRAFFIC India programme of WWF, a part of the global wildlife trade network, the Wildlife Crime Control Bureau, Tamil Nadu Forest Academy and others in Coimbatore from 4-6 February 2016. The programme was designed and aimed at enhancing the knowledge and skills of enforcement officers across the country, conducting research and providing analysis of various wildlife trade trends to the policy makers, educating and creating general awareness about this issue, and involving other agencies such as various paramilitary forces, Indian Coastguard, Police, and the Railway Protection Force whose roles are vital in combating illegal trade. The programme itself reflected a unique example of combined thoughts and multiplied forces in writing a new chapter in collaborative strategic approach to combating wildlife crime in India.

The workshop offered a unique forum where representatives from various state wildlife law enforcement agencies from 20 states in India and those from ITBP, SSB and other paramilitary forces underwent training to enhance their knowledge and skills for curbing poaching and illegal wildlife trade. The workshop was also an opportunity to lead discussions on the development of a national level strategy and protocols for combating wildlife crime.

I take this opportunity to complement TRAFFIC and all other partnering organizations for working meticulously with the Tamil Nadu Forest Department and Tamil Nadu Forest Academy in organizing the workshop at such a great scale. The proceedings of the workshop are detailed in this document and will give an insight into overview of illegal wildlife trade, strategies and methodologies in combating illegal wildlife trade, law and legal procedures in investigating and prosecuting wildlife crimes, wildlife forensics in dealing with wildlife crime, role of different agencies in combating illegal wildlife trade and more related issues. We are resolute that the proceedings of the combined thoughts and results of various discussions and deliberations would be translated into action so that menace of poaching and illegal wildlife trade could be eliminated from India in an irreversible manner.

31 May 2016

**Hans Raj Verma, IAS
Principal Secretary,
Government of Tamil Nadu,
Fort St George, Chennai,
Tamil Nadu**

Executive Summary

In the midst of a near global crisis involving several wildlife species, where the existence of many of them are now challenged due to their excessive exploitation in illegal international trade, TRAFFIC India, in association with WWF, Tamil Nadu Government, and Wildlife Crime Control Bureau, conducted the first National Workshop on Capacity Building for Combating Wildlife Crime at Coimbatore from 4-6 February 2016. The workshop was sponsored by the MoEFCC and hosted and supported by the Tamil Nadu Forest Department. The workshop was attended by above 120 senior officials of the Forest Departments from 20 states, from Police, and several Central enforcement and paramilitary agencies, e.g., DRI, Customs, BSF, ITBP, Indian Coast Guards, and SSB. Various reputed media personnel and NGO Groups also attended various sessions to consider how they could be effective stakeholders in the mission of combating wildlife crimes across India and in the trans-border regions.

This workshop was the first ever initiative at the national level. Many nationally and internationally known subject experts, including Supreme Court lawyers, engaged in various sessions on trade, intelligence collection, and information management, cyber tracking of crimes, law and legal procedures application of modern tools and techniques in multiple capacities on several aspects of dealing with wildlife crime. Various panel discussion sessions comprising of domain experts discussed new strategies for combating wildlife crime and illegal trade and worked on strategic solutions.

For the first time ever, the workshop had a live demonstration of the work of sniffer dogs that is being pursued by TRAFFIC and WWF in India to combat wildlife crime. TRAFFIC's film on sniffer dogs highlighting this modern innovative method of fighting wildlife crime was launched at the occasion. The meeting emphasised the important role of all stakeholders to fight wildlife trade, with the role of the media being inclusive of the effort to promote conservation of India's biodiversity.

It is important to mention that India is at a critical juncture where wildlife conservation has become critical. We face the threat of losing our precious wildlife due the rampant poaching and growing illegal wildlife trade. There has been a loss of over 120 elephants between 2008 and 2011. During the same period, there was seizure of 781 kg ivory and 69 tusks. Further, 66 tigers were found dead and 12 instances of seizure were reported around the country in 2014 and 57 in 2015. The value of such workshops which offer significant fora for thinking and sharpening skills for combating wildlife crime cannot be more emphasized. The challenge of saving wildlife has become a global one and calls for a global solution and commitment. The successful

Preface



Ravi Singh
Secretary General & CEO

WWF-India Secretariat :
Pirojsha Godrej National
Conservation Centre
172-B, Lodi Estate,
New Delhi-110 003
India

Tel: +011-41504777/4778
Fax: +011-41504779
www.wfindia.org

PREFACE

Each year, millions of plants and animals are exploited for illegal wildlife trade, protected and endangered wildlife is captured from the wild and then sold as food, pets, leather, tourist curios, and medicine. This overexploitation is reported to be the second-largest direct threat to many species after habitat loss, and therefore WWF-India addresses illegal and unsustainable wildlife trade as a priority issue.

WWF-India, through its TRAFFIC India programme, a part of the global wildlife trade network, works toward mitigating the threat from illegal wildlife trade by undertaking various capacity building programmes to enhance the knowledge and skills of enforcement officers across the country, conducting research and providing analysis of various wildlife trade trends to the policy makers, educating and creating general awareness about this issue, and supporting the South Asia Wildlife Enforcement Network (SAWEN) for regional cooperation and collaboration.

India's first National Workshop on Capacity Building for Combating Wildlife Crime was organised at the Tamil Nadu Forest Academy, Coimbatore, Tamil Nadu from 4-6 February 2016 by TRAFFIC India and WWF-India, in partnership with the Tamil Nadu Forest Department, Tamil Nadu Forest Academy (TNFA), and Wildlife Crime Control Bureau (WCCB). At the workshop representatives from various wildlife law enforcement agencies from all over India underwent training to enhance their knowledge and skills for curbing poaching and illegal wildlife trade. The workshop was also an important forum where development of a national level strategy and protocols for combating wildlife crime were discussed in detail. The event paved way for the beginning of a new chapter where WWF India and TRAFFIC India will like to encourage and support.

The proceedings of the workshop are detailed in this document and will give an insight into overview of illegal wildlife trade, strategies and methodologies in combating illegal wildlife trade, law and legal procedures in investigating and prosecuting wildlife crimes, wildlife forensics in dealing with wildlife crime, role of different agencies in combating illegal wildlife trade and more related issues. We are hopeful that the National Workshop has helped consolidating thoughts into new strategies in the fight to combat wildlife crime and to secure long term conservation of species in the wild. I take this opportunity to thank Tamil Nadu Forest Department, Wildlife Crime Control Bureau, and Tamil Nadu Forest Academy for their proactive association in conducting the event.

Ravi Singh

Mr. Jamshyd N Godrej, President
Mr. Arvind Wable, Vice President & Trustee Treasurer
Mr. Shyam Saran, Trustee
Mr. Arun Maira, Trustee
Mr. N. Kumar, Trustee
Ms. Chanda Singh, Trustee

conservation of wild tigers and the natural capital that sustains them are among the key indicators of sustainable development and require greater global resources and attention. Among many factors, poaching for illegal trade has taken precedence over the others, if we carefully consider a certain rise in the number of illegal takes from the wild in the last two years.

The wildlife protection system in India for tiger or any other economic wildlife species does not have adequate capacity to combat the emergent situation at the current investment and management level. The most challenging, and often an ignored aspect, is poor human resource development, which may even be non-existent, in forest and wildlife departments across India. There is a serious lack of planning and strategies in fighting poaching in India. As a result most tiger reserves or the national parks close to the borders perhaps witness the most negligence, be it Buxa or Valmiki- each of them with above sixty percent vacancies in frontline enforcement staff. Analysis suggests that the border region protected areas are the most vulnerable ones due to the impact of the international borders. In the present scenario, an alternative answer could be joint combative missions with the paramilitary forces guarding the borders and other enforcement agencies that have presence and often more combative capacities. However, any such strategies will require sustained efforts on their capacity building for wildlife law enforcement as much as an effort of mainstreaming control of poaching and illegal wildlife trade in their own mandates.

The slow rate of prosecution in wildlife offences is not only a detriment to the vanishing species of wildlife flora fauna but is also a factor leading to proliferation of illegal trade in wildlife species which is a threat to global peace and security as well. Researches show that low risk of detection, relatively small penalties, and minimal consequences of perpetrating wildlife crimes are attractive incentives to participate in illegal trade in wildlife. In light of the above, it is crucial that the enforcement officials, particularly those involved in seizure and prosecution be exposed to model jurisprudence processes and them to be thorough with various wildlife laws in India and other procedural laws, e.g., Code of Criminal Procedure; Wildlife (Protection) Act, 1972; the Prevention of Cruelty to Animals Act, 1960; as well as individual state laws that deal with specific areas of wildlife, such as the Andhra Pradesh Forest Act, 1967.

Use of intelligence is nearly non-existent in forest departments and presently supported by the non-governmental organizations in this respect. Intelligence collection and timely use of the same is critical in detection of wildlife crime and is best for preventing one happening. Many developed countries and the countries where wildlife crime investigation is at fairly advanced level, e. g., South Africa, modern tools and techniques are used extensively in crime detection and maintaining a robust surveillance system in forests. SMART technology has helped wildlife rangers and managers in various countries improve their efficiency by tracking and analyzing signs of noteworthy or illegal activities observed during patrols. Using this data,

SMART lets managers assess current threats, locate crime hotspots, focus limited resources and adapt enforcement approaches, making frontline conservation more effective. It empowers rangers, managers and law enforcement to improve governance and help conserve threatened species such as elephants, dolphins and tigers.

There are many other essential requirements for officials to be capable of preventing wildlife poaching and illegal trade. One such is the understanding of linkages between poaching and domestic and international trade, data analysis and assessing trends, hotspots and trade hubs. Optimizing resources and applying them to the critical sites would be strategic. Currently, planning for management of wildlife protection lacks a strategic approach. This has to change. There are enough resources available in India that could help filling up many of gaps stated above. Not an easy task, as it requires a tough, consistent approach, a force multiplier by involving various enforcement agencies, scientific institutions of high capabilities, e.g., Wildlife Institute of India and Centre for Cellular and Molecular Biology, and the army, Indian Tibetan Border Police, Border Security Force, Indian Coast Guards, and Sashtra Seema Bal among others would be intensively helpful in strengthening the security infrastructure or setting up a new one for saving the wildlife from increasing illegal market demands. Not to discount the intrinsic role of the media and communications, presence of several prominent and local media was overwhelming and reassuring. With these issues in the backdrop, TRAFFIC took the initiative of bringing all major and potential role players over three days in the salubrious climes of the Tamil Nadu Forest Academy, Coimbatore for strategic introspection to prepare the country to fight the growing menace of wildlife crime. The support from Tamil Nadu forest department and the Wildlife Crime Control Bureau couldn't be more phenomenal. This was beginning of a new journey, but this time with many partners and accomplices. This was a indeed whole in itself.

10 June 2016



Dr. Shekhar Kumar Niraj, IFS
Head, TRAFFIC India,
WWF-India Secretariat
New Delhi

Inauguration of the National Workshop

Based on an initiative of Tamil Nadu government, spearheaded by Mr Hans Raj Verma, IAS, Principal Secretary to Government of Tamil Nadu, TRAFFIC India, a programme division of WWF-India and the country office of the Global Wildlife Trade Network (TRAFFIC), took up the challenge to organise the first National Workshop on Capacity Building in Combating Wildlife Crime in India over three days. The Wildlife Crime Control Bureau (WCCB) joined hands with the TRAFFIC for organising and conducting the national workshop, which was inaugurated on 4 February 2016 at the Tamil Nadu Forest Academy (TNFA) in Coimbatore by Mr. N. Krishnakumar, IFS, Principal Chief Conservator of Forests (PCCF) and Head of the Department, Government of Tamil Nadu in the presence of Dr. V.K. Melkani, IFS, Principal Chief Conservator of Forests (Wildlife) and Chief Wildlife Warden (CLWL), Government of Tamil Nadu; Ms. Tilotama Varma, IPS, Additional Director of the WCCB, New Delhi; Dr. Rajeev Srivastava, IFS, Director, TNFA, Dr. Shekhar Kumar Niraj, IFS, Head, TRAFFIC India. Amongst about 150 participants for the Inaugural, included senior level officials representing 20 States and Union Territories that included nine wildlife law enforcement agencies such as the State Forest Departments, WCCB, Border Security Force (BSF), Police, Sashastra Seema Bal(SSB), Indo-Tibetan Border Police(ITBP), Customs, Indian Coast Guard, and Directorate of Revenue Intelligence(DRI); representatives of media agencies, scientific organisations, non-governmental organisations (NGO), workshop resource personnel, and from civil society. The event began with the lighting of the lamp and a devotional song. The National Workshop began with a message from the Hon'ble Minister of Forests, Government of Tamil Nadu, Thiru S. Anandam.

Dr. N. Krishnakumar, IFS, PCCF and Head of Department, Tamil Nadu had taken keen interest in organising the National Workshop and provided his full support. During the inauguration he said, "Wildlife crime cannot be dealt with in isolation and requires involvement of various stakeholders and enforcement agencies. Local communities living around the forest areas have a strong potential of becoming the game changers in our efforts to stop wildlife crime. It is important that they are sensitized and involved with strong incentives for combating poaching and smuggling of wildlife".

Another important aspect stressed by Dr. Krishnakumar was the involvement of judiciary at various levels. He stated that effective and timely prosecution of wildlife cases can prove to be an important deterrent in curbing wildlife. The conviction rate of wildlife cases in our country is extremely low putting all efforts of the enforcement agencies in vain. Therefore it is important to strengthen the judicial system of the country.

Dr. V. K. Melkani, IFS, PCCF (Wildlife) and CWLW, Government of Tamil Nadu further added, "Wildlife crime has grown to become one of the largest well organised crimes in the world and therefore needs an organised response. Therefore, it is important for law enforcement officers to learn and use the latest tools and

techniques available to fight wildlife crime. We are hopeful that the participants will take back from this workshop, knowledge and skills that are needed to curb this growing menace”.

Ms. Tilotama Varma, IPS, Additional Director of the WCCB, New Delhi, said, “WCCB is a nodal agency for fighting wildlife crime in India. However, it is important to secure co-operation and participation of other law enforcement agencies such as the Police, Railway Protection Force, Customs, and BSF among others. This workshop provided a significant platform for WCCB to share its experience and learning on techniques which have proved effective in nabbing poachers, conducting wildlife seizures and other aspects of wildlife law enforcement.”

Dr. Rajeev Srivastava, IFS, Director, TNFA, while welcoming the participants to the Academy spoke about the important role played by the Academy in training forest officials for combating wildlife crime. He shared his experience as a senior forest officer about dealing with wildlife crime issues across India. He spoke about the need to highlight more on poaching of lesser known species such as the monitor lizard, pangolin, turtles, tortoises and many others and implementing robust conservation and protection plans to safeguard the future of such species. .

Dr. Shekhar Kumar Niraj, IFS, Head of TRAFFIC India said, “Keeping in view the global crisis of wildlife trade that has also engulfed India, the National Workshop in Tamil Nadu is an appropriate initiative to provide much needed coordination among key law enforcement agencies and a platform for knowledge and skill sharing. At this crucial juncture, improvised skills and protocols need to be provided to all the relevant officers so that they employ best practices to combat wildlife crime and contribute to the global effort to save rare and endangered species from threats of poaching, trafficking and illegal consumption.”

The inauguration included launch of TRAFFIC's latest film on its sniffer dog training programme in India titled “TRAFFIC's Super Sniffers”. The film showcases the need for raising dog squads by training dogs and their handlers to make them effective instruments in operations against wildlife crimes. The film covered various aspects of training and process of deployment of trained sniffer dogs in the field. The film was produced in partnership with a well known wildlife filmmaker, Mr. Himanshu Malhotra.

Demonstration by TRAFFIC India’s sniffer dog squads

Shortly after the release of film “TRAFFIC's Super Sniffers” TRAFFIC India’s sniffer dog squads also showed their skills through demonstration especially organised for the participants of the workshop. The dog Rana with his handlers Prakash Somaning Honnakore and Kalaklakar Mage from Karnataka and dog Shini with her handler V Periasamy and K Jayaveerapandian from Tamil Nadu participated in the demonstration where the dogs exhibited their skills for scent dissemination, tracking the culprit, and searching human, vehicle and luggage for illegal wildlife products and derivatives.

The Sniffer and Detector Dog Programme was introduced to wildlife crime investigation in different countries including USA and South Africa during 1990s. In India, this programme was started by TRAFFIC in 2008 with training and deployment of two dog squads for the state of Haryana and Uttarakhand. In the second phase from 2009 -10, five dog squads were trained for the states of Jharkhand, Madhya Pradesh and Maharashtra. During the third phase from 2011 – 12, six dog squads were trained for the state of Bihar, Maharashtra and Uttarakhand. In the fourth phase from 2014- 15, 14 dog squads were trained for the states of Assam, Bihar, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu and Uttarakhand, taking the total number of India's wildlife sniffer dog squads to 27. The fifth phase of the programme is currently underway where 16 sniffer dog squads are under training and will be deployed in the states of West Bengal, Chhattisgarh, Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, and Madhya Pradesh by October 2016.

The dogs trained and deployed are German Shepherds but in the fifth phase of the programme, Belgian Malinois along with German Shepherds are also being trained. There are three basic elements which distinguish these sniffer dogs from their less illustrious counterparts that is focus, discipline and total obedience. These attributes have vital role in making a perfect sniffer dog. From the very beginning these animals develop a special bond with their handlers, who are also trained to handle these animals with care and discipline. The training period is rigorous and lasts for nine months, beginning with simple obedience commands like training a dog to sit down, stand up, fetching a bone or a piece of cloth. The second part of the training involves around accepting food or water only from a respective trainer/handler and no one else. This is important as a potential smuggler can attempt to distract an animal by feeding it. The most vital part of the training includes firstly familiarizing the dog with wild animal parts and derivatives like tiger or leopard skin and bones, and bear bile. The next step involves learning to sniff out these wild animals parts and derivatives as hidden in suitcases, vehicles including cars, buses and railway carriages. Capability to trace wildlife products buried in the ground is also developed. The animals are rewarded through special gestures of encouragement on successful detection.

TRAFFIC India's sniffer dog training programme has received overwhelming response from various stakeholders across India and has had many early successes. So far, these dog squads have led to detection of more than 150 wildlife cases, arrests of about 100 persons and recovery of body parts including skins and bones of tiger, leopard, bear bile, ivory, star tortoise, deer antlers, skins and meat, live birds, porcupine, pangolin scale, snares, traps, weapons etc.

Use of sniffer dog squads has proved to be an effective tool in the sensitive areas where poaching and illegal wildlife trade has become a very serious concern. Further with shortage of manpower, sniffer dog squads can become extremely helpful in strengthening wildlife law enforcement and combating wildlife crime.

Proceedings

Illegal Wildlife Trade

Overview on the nature of illegal wildlife trade in India and South Asia

Dr Shekhar Kumar Niraj, IFS, Head, TRAFFIC India, New Delhi

Dr. Shekhar Kumar Niraj delivered a presentation on the overview of wildlife trade in India and explained different contours of the wildlife trade, especially touching on an interesting and lesser known aspect of the correlation between growing economy and illegal wildlife trade.

Dr. Niraj also spoke about trends in wildlife crime, giving examples of trends in Rhinoceros poaching, importance of analysis of wildlife trade, data and information and that of trans-border cooperation in curbing wildlife crime in India and South Asia. A corollary was made between rhinoceros poaching in other parts of the world and India where Rhinoceros poaching was highest in the world and in India in 1991. An anti-rhino poaching task-force was finally initiated in 2014 which made a series of arrest of poachers with the proactive support from TRAFFIC India. Poaching figures declined in July 2014 but later increased in December 2014 due to unseen pressure of international illegal wildlife trade. Parallels were drawn between the figures and it was stated that poaching happening anywhere globally, will also have an impact on wildlife in India, as well.

Dr. Niraj encapsulated the problem of illegal wildlife trade across the country giving a historical perspective, as well as, defining the status quo. He also highlighted the importance of tackling trade in lesser known species like pangolins, bird, tortoises burgeoning non native animals traded as pets and plant trade. Lack of awareness, especially in identification of species, was touted as an emergent trend while combating the illegal trade of wildlife species. He discussed some key species in trade that includes Tiger (*Panthera tigris*), Indian Elephant (*Elephas maximus indicus*), pangolins, langurs, macaques, owls, parakeets, Star Tortoise (*Geochelone elegans*), Red Sand Boa (*Eryx johnii*), Red Sanders (*Pterocarpus santalinus*), wild plants, molluscs and sharks. A socio-economic analysis was also deemed necessary to understand the true drivers of the trade, especially in lesser known or non-flagship species. His presentation and consequent discussions also focussed on why enforcement efforts in some areas become more critical than others especially given their proximity to international border. Therefore, states from north to northeast are very sensitive to smuggling of wildlife contraband. He also stated that how seizure rates of various wildlife species alone can not be indicative of poaching levels.

Dr. Niraj also explained how new trends are emerging of using cyberspace and code words for trading in wildlife species. He explained how there is a direct correlation between growing economies and illegal wildlife trade and poaching. Dr. Niraj concluded with the statement that a global approach with enhanced national investments is required to help change mindsets, arrest the increasing illegal trade, and bring about policy changes for curbing wildlife crime.

Dr. Niraj recommended

1. Systematic data collection on illegal wildlife trade, poaching and data analysis to understand emerging trends, hotspots, geographical aggregations of illegal trade, spatio-temporal trends for an optimum allocation and deployment of anti-poaching and anti-illegal trade resources.
2. Adequate spending on intelligence collection and collation. Considering intelligence a priority and key element in strategy for combating wildlife crime.
3. Enhancing trade research on species and on linkage of economic development and its impact on wildlife trade and poaching. Such research works will be conducted with view to reorient policy, resource allocation and strategy development.
4. Strengthening wildlife surveillance and security system in and around inaccessible areas such as transborder regions, high altitude regions, trans-Himalayan regions, marine areas by involving Army, Para Military Forces, Central Armed Forces, Customs, DRI, Indian Coast Guards, Navy and others.
5. Strengthening SAWEN and intensifying demand reduction campaigns.

Trade of non-flagship species in India

Trade of reptiles-marine and coastal species

Dr. Chandan Jani, Scientist, Odisha

Dr. Chandan Jani's presentation and discourse largely concentrated on snakes, marine and freshwater turtles and tortoises and their importance in the ecosystems. He also gave a background to illegal trade in reptiles including freshwater turtles and tortoises both for domestic markets and international trade. He also focussed on the lack of awareness and knowledge among various enforcement agencies in identification of various reptile species as one of the major gaps.

Dr. Jani's presentation included tips for easy identification of various reptile species. For example, snake species can be identified by checking the scales, hoods, colour, bands, prenasal, dorsal and ventral markings. He

presented examples of various species like the Common Cobra (*Naja naja*), King Cobra (*Ophiophagus hannah*) and Rat Snake (*Ptyas mucosa*).

Dr. Jani also presented similar tips for identification of 29 species of freshwater turtles and tortoises recorded in India. He emphasised on the need for a better understanding of their identification and the indicators of illegal wildlife trade. He described the shell top pattern - reticulated, rings, solid, spotted or stripes; head and neck patterns; colour of the head-orange, red, yellow, green or other; shell bottom scales for identification of the turtles and tortoise species. The gender of the turtles can be found by inverting the shell and if the shell is concave- it is a male and if it is flat then it is a female, Dr. Jani said. He described the use of turtles and tortoises in illegal wildlife trade and, also, described other threats including habitat loss, flood, illegal sand mining, and change in land use pattern affecting turtles populations all over India.

Marine species in trade- Dr. Jani demonstrated that out of approximately 9000 marine species found in India only 441 are protected under the Wildlife (Protection) Act (WPA) 1972. He said that some of the issues which impede effective enforcement and protection of marine species include large expanse of marine areas, weak patrolling systems, lack of infrastructural facilities (e.g., speed boats) and lack of identification skills of the field staff and lack of adequate trained staff. Some of the common species exploited in the trade are sea turtles (Green Turtle (*Chelonia mydas*) and Olive Turtle (*Lepidochelys olivacea*)), molluscs, sharks, rays, and skates. He mentioned that Tamil Nadu is one of the major marine trade hotspots in India.

He recommended training in species identification, upgrading the species into conservation priorities, DNA profiling, greater vigilance on rail and road, border check points, cooperation among neighbouring countries for coordinated enforcement action, prompt judicial assistance and extensive education and awareness campaigns for conservation and protection of various reptiles and marine species affected by illegal wildlife trade.

Trade of birds

Rajat Bhargava, Scientist, Bombay Natural History Society (BNHS), Mumbai

Mr. Rajat Bhargava highlighted the gravity of the illegal bird trade in India stating that almost every town and city has a bird shop and turnovers are high considering the demand and trade in rare and endangered birds including several non- native birds, mostly imported illegally into India.

Mr. Bhargava stated that India is home to more than 1300 bird species, with domestic trade in birds thriving through extensive poaching, and smuggling mainly for illegal pet trade, zoos, meat, bird release, black magic,

medicinal value, sport, and taxidermy. Mr. Bhargava mentioned that 200 surveys have been undertaken by him covering at least 900 bird markets over the past 20 years across India where he has documented 450 species in bird trade. Mr. Bhargava reiterated Dr. Niraj's statement that India globally stood 3rd highest in illegal/legal bird trade. He reiterated that at least 176 species in India are threatened due to large scale illegal trade, while approximately 3300 bird species are globally traded in the world.

Mr. Bhargava also described about the growing trade in non native species and various legal loopholes that allow illegal trade in non native species to thrive in India. He said that the concealment methods for various protected Indian bird species actually involve altering the appearance of the bird species to make it look 'exotic'/non native. Mr. Bhargava focussed on the need for better identification as well as better understanding of the trade dynamics of a few highly traded Indian species which included parakeets, munias, mynas, falcons and owls.

Mr. Bhargava spoke about the need for increased awareness about the trade coupled with actions at the grass root level, as he strongly feels that there are more birds for sale than there may be in the wild. According to him, enforcement officials needed to be more vigilant and take offences of bird trade more seriously which included, visiting the location where the report of trapping of the birds has been mentioned about. Special measures have to be taken to prevent robbing of nests. He reported many instances where information was provided on the public domain but was not followed up with appropriate enforcement action. This is the case with the Indian Peafowl (*Pavo cristatus*), our national bird, whose numbers, in Rajasthan forests, have dwindled down to almost nothing due to off-season poaching. Despite being caught, poachers went unpunished. A case finally made it to the Delhi District Court in *Wild Life vs Bholu* (<http://admin.indiaenvironmentportal.org.in/content/judgement-delhi-district-court-regarding-peacock-hunting-30042016>). Wildlife jurisprudence does not take bird crime seriously. There is hardly any conviction related to bird crime in India.

He recommended greater focus on bird conservation, regular training in species identification, regular market surveys and monitoring, DNA profiling of seized birds, review of WPA 1972, review of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) appendices with reference to Indian bird species, revision of penal provisions for bird related crimes, extensive public awareness and education programmes conducted with help of NGOs and civil society groups.

Wildlife Crime Investigation-using internet as a tool- case study of Melghat Tiger poaching case

Mr. Vishal Mali, Assistant Conservator of Forests, Melghat Tiger Reserve, Maharashtra Forest Department

Mr. Vishal Mali presented details of the Dhakna tiger seizure case which he and his team pursued in 2013. Mr. Mali stated that the Dhakna case involved arrest of tiger traders and subsequent trails in which three prime accused were sentenced to seven years rigorous imprisonment in tiger poaching case of Melghat Tiger Reserve. The investigation greatly focused on DNA analysis, which could establish that a tiger was poached even though the body of the tiger could never be found. The accused were part of an international racket, which hunted tigers and transported body parts to middlemen located in other states in India with linkages to China. Dhakna Tiger poaching case had set an example of the use of forensic and intelligence networks in effective wildlife case investigation. The Forest Department had worked intensively to expose the racket, arresting over 30 persons who were found to be involved in killing of more than 15 tigers, many of the cases are still under trial. The biggest problem in this context is that the ground staff was very reluctant to issue Preliminary Offence Reports. They feel that registration of an offence would reflect badly on them and their management skills. This has been observed regularly in and around the Nagzira - Navegaon Tiger Reserve where Baheliya and Pardhi communities are still very active.

Using Dhakna Tiger poaching as a case study, Mr. Mali spoke about the use of internet tracking in wildlife crime investigation. Internet tracking can also give evidences of linkages in the case. As one of the more successful methods of building and following evidence, Mr. Mali talked about the importance of using Call Detail Record (CDR) analysis. In case of arrests, proper procedures and protocols need to be followed and the accused has to be booked according to the legal provisions in order to ensure that the prosecution of case is not stalled. Evidence collection and information received from the accused were stated in the light of Section 27 of the Indian Evidence Act 1872.

Mr. Mali cautioned that the fundamental rights of a citizen can be invoked in poaching prosecution cases in court as stated in Article 20 of the Indian Constitution. He emphasised on a need for proper protocols for primary and secondary crime scene investigations. He also addressed the issue of filing a complaint and filling a charge sheet, in case is filed under the Indian Penal Code, as these are major concern for bail applications.

Panel Discussion: Trade in non-flagship species in India

Panellists: Mr. Rajat Bhargava (Scientist, BNHS, Mumbai), Dr. M. K. Ranjitsinh (Former Member Secretary, Project Tiger Task Force and formerly Addl Secretary to Government of India), Dr. Chandan Jani (Scientist, Odisha), Dr. Dipankar Ghose (Director, Species and Landscapes programme, WWF-India), Ms. Uttara Mendiratta, (Director, Freeland Foundation-India), Mr. S. K. Sisodia (CCF Wildlife, Gujarat) and Dr. Sunil Verma (Principal Scientist, Centre for Cell and Molecular Biology, Hyderabad)

Moderator: Dr. Shekhar Kumar Niraj, IFS (Head, TRAFFIC India)

Talking about India's success in stopping poaching of Amur Falcon in Nagaland as a victory for non-flagship species, the panel spoke at length about the illegal bird trade in the country highlighting the secretive nature of the trade and the need for better enforcement actions as well as need for an increased awareness to combat the growing illegal trade.

The emphasis on tiger, rhinoceros and elephant protection was seen to overshadow the conservation of other species. Even now, most discussion with respect to CoP17, scheduled from September 24th to October 5th 2016, is largely focused around these three species. With respect to elephants, it might be due to consistent attempts at the engaged African states (Namibia, Zimbabwe and South Africa) to kick start an Elephant Action Plan, and the general lackluster response that was received (<https://cites.org/sites/default/files/eng/cop/17/WorkingDocs/E-CoP17-84-03.pdf>).

Andaman and Nicobar islands, rich in wildlife biodiversity, was discussed as an example of an area which needed increased focus in terms of protection and conservation. It was further pointed that most of the species sent for wildlife forensic examination to various labs in India belonged to cases mostly involving charismatic species whereas efforts to forensically examine the non-charismatic species were mostly non-existent. It was also agreed that the trade in plants is an un-investigated area with little focus on understanding the plant trade and trade versus conservation issues. It was recommended that species level studies, related analysis and capacity building exercises are carried out, to enhance the understanding of the trade.

The panel further discussed proper handling of consignments of seizures, especially of live animals. Handling of live animals during seizures is a matter of concern as high mortality rates are reported. It was agreed that the rehabilitation of confiscated wild animals in the natural habitat was rare. Species such as turtles, butterflies, birds, geckos were reported in high numbers in live animal trade. Lack of identification skill, poor knowledge of procedures in laws concerning wildlife species, were marked as major bottlenecks in implementing wildlife laws by enforcement officials.

Curbing demand and not just curbing the supply was identified as a major step which could be achieved by considerable increase in consumer awareness. It was mentioned that some state forest departments have been taking active steps in training and increasing awareness among locals. In this regard, role of NGOs is specifically recognised. They need to be encouraged by the government agencies in carrying out the mission.

SUGGESTIONS FROM THE SESSIONS

The panel brought out the following recommendations.

- Collective action through data collection and dissemination for assessing the species conservation status and if required upgrading the conservation priority of the species
- Need for identification guides for various groups of species
- Species upgradation for lesser known species to make them a conservation priority
- DNA profiling of the marine and plant species
- Stronger forensic examination facilities for specimens
- Stricter punishments to act as deterrents for traders especially for marine species where for, e.g., cancelling licenses of fishermen if boats are seized with wildlife contraband
- Increased vigilance on rail and road, especially at border check points with neighbouring countries
- Prompt judicial assistance
- Improved rescue and rehabilitation protocols, including creating and improving infrastructure for confiscated animals
- Improved enforcement measures especially in the marine ecosystems.
- Increasing intelligence collection and information sharing through more active involvement of police forces.
- Planning strategic awareness campaigns at national, state and local levels especially involving the youth
- Sensitisation of the judiciary and the media
- Building a database of non-flagship species which have been sent for wildlife forensics. Creating reference library at designated specialized labs.
- Strictly implementing banning of marine activities during monsoons to protect breeding populations of turtles and other species
- Banning pesticides in and around protected areas so as to minimize retaliatory killings and consequences on other wildlife species

Strategies and methodologies in combating illegal wildlife trade

Identification of species and specimen in trade and formation of strategies in combating crime

Mr. Kamal Datta, IFS, Joint Director, Wildlife Crime Control Bureau and Mr. S. V. Sheshadri, Asst. Director, Wildlife Crime Control Bureau, New Delhi

Wildlife trade and strategies to combating wildlife crime

Mr. Kamal Datta, IFS, Joint Director, Wildlife Crime Control Bureau

Mr. Kamal Datta began his presentation by pointing out that the metropolitan cities such as Mumbai, Kolkata, Delhi, and others are important transit points for wildlife products intended for the international markets. Demand for these illegal wildlife products vary from food, falconry, medicines, feathers, furs, trophies, ivory carving, to fashion accessories etc. He spoke about the legal nuances of trade in live animals and derivatives, by referencing particular sections of the WPA 1972, regarding implications of accepting wild animal /plant or any animal article or any part or derivative without permit used by the Chief Wildlife Warden and other notifications and Acts, e.g., as the Foreign Trade Policy (2009-2014), which prohibits the export of all Indian wild animals and their part and derivatives.

Based on his experiences and learning of working with India's nodal agency for wildlife crime prevention and detection, the WCCB, Mr. Datta stated that strategies to conquer wildlife crime would include development of capability for intelligence gathering, analysis of samples, rehabilitation of poaching communities, increasing public awareness regarding illegal wildlife trade and its impacts on conservation, systematic collection of wildlife crime data and its analysis and dissemination. He also spoke about building capacity of various enforcement agencies through regular training of enforcement officials. Such training should be collaborative and should bring together officers from various enforcement agencies such as Customs, Police, Railways, Border Security Forces and others and wherein the participants of such trainings can have joint sessions, aimed at experience and skill sharing, sessions leading to development of mutual understanding of mechanisms for wildlife crime control. He emphasised on development of forensics and identification facilities at regional and state levels. He further stressed upon the need to have greater assistance and cooperation of various investigation agencies for efficiency and prosecution, and increased coordination between state, central enforcement agencies that are, otherwise keen to associate themselves in combating wildlife crime. He also

spoke about the growing market on cyber space for illegal wildlife products and mentioned that cyber patrolling must be done to check online trade and these efforts need to be combined in day to day monitoring exercise of the state forest departments.

Identification of specimens in trade

Mr. S. V. Sheshadri, Asst. Director, Wildlife Crime Control Bureau, New Delhi

Mr. S. V. Sheshadri shared with the participants important tips for identification of various wildlife products involved in illegal wildlife trade. Some of the insights as shared by him are given below:

- **Tiger skin and claws:** To identify fake and counterfeit skins from real one, one should look for ocular spot, ear lobes, cheeks and the rear of the ear lobe which is black and has a white spot for a real skin. He pointed that a fake fur does not have the look, feel, sheen or other qualities of natural fur. The hair is angular and not in a natural direction. The border areas should be very light and the colour should not be bright yellow as in case of a fake and painted tiger skin. Length of a tiger skin should be at least 1/3rd of the length from the skull centre to the bottom of the body where the tail begins. Mr. Sheshadri informed that the trade of tiger claws is also very high, has strong demand in domestic markets, and showed the methods of distinguishing a fake claw from a real one.
- **Rhinoceros horn:** A fake Rhinoceros horn could be created with Plaster of Paris, fibre and similar materials. In a genuine horn if the bottom of the rhino horn can be seen, there should ideally be a pit formation which will be absent in a fake horn. Some handy tools in the field which can be used to in differentiating between a fake and a real horn would include a lighter, penknife, torch, and a magnifying glass.
- **Ivory:** If the seized ivory is fake, then at the bottom there will be no cavity or cross hatching. Ivory can be derived from an elephant or other animals such as walrus, whale, wild pigs etc. Ivory from an elephant is identified by the presence of Schreger lines which make distinctive angles which are absent in ivory from other animals or in animal bones.
- **Shahtoosh:** DNA profiling is an easy way of differentiating if the shawl is shahtoosh. One has to look for the Guard hair which is present in the wool and is distinctive. A simple magnifier can be used to observe the Guard hair.
- **Bear bile:** In addition to establishing the identity of the bile, chemical analysis can prove the origin animal from whose gall bladder the bile is derived.

- Musk pod: The original pod is hollow and if asafoetida is put on the fur then the fur's smell will dominate over the smell of asafoetida.
- Badger hair: Often used for shaving brushes, make up brushes, paint brushes, the hair will have a different gradation than synthetic brushes.
- Birds: For testing between a real feather or a painted one, saline water or an organic solvent is used as this will make the colour to come out. In case of mutants, the species will be considered as the original species from legal angle or as opined by certain judicial judgements.
- Turtle/tortoise shells: They are often used in making spectacles frame and parts of musical instruments. If the fake is made of plastic, then on burning it will melt and a smell of burning plastic will emerge. On the other hand, the real turtle shell will not melt. It will produce a burning odour of an animal product.
- Python skin: The pattern depends on the type of cutting. A ventral/dorsal or belly cut/back cut will give different patterns from each other. A fake skin will have a repeated pattern of the spots.
- Crocodile, alligator skin: Patterns are to be checked meticulously to differentiate a fake from a real skin, especially since their skins are used for making expensive and fancy items.
- Lizard skin (Monitor lizard): As in the case of python, Varanus skin will have different patterns depending on the cut.

Mr. Sheshadri also spoke about other species requiring attention in illegal trade which included sea horses, butterflies, spiders, corals, and sea shells, which when converted into finished products often pose challenge in identification

Intelligence collection and collation and methodologies of cyber tracking

Mr. Manish Shankar Sharma, IPS, Inspector General, Intelligence, Special Armed Forces, Madhya Pradesh Government

Mr. Manish Shankar Sharma gave a detailed insight into the importance of intelligence collection and collation and how it can prove to be an important tool for combating wildlife crime in India. He shared his experience of using actionable intelligence for nabbing criminals and how it can be used in a similar method for nabbing

wildlife poachers in order to prevent wildlife crime and bring the criminals to logical conclusion of conviction.

He said that advanced level of information management, analysis and collation lead many enforcement agencies to prevent poaching, conduct seizures, make arrests, and break illegal trade chains involving wildlife in India. It will be important for the systems to make greater investments in collecting actionable information through a network, analysis of information and collation if poaching and illegal wildlife trade has to be controlled.

Mr. Sharma, also pointed the need to analyse intelligence provided and see which is useful and which is not by giving a syllogism that “all intelligence is information but not all information is intelligence”. He emphasised on the various pros and cons of overt and covert collection of intelligence and information and that the modus operandi should be according to the case in hand. He emphasised on the need to have community involvement for effective intelligence collection.

An important part of his presentation included an overview of wildlife cyber crime. He said that nowadays cyber crime has evolved itself into an organised and large scale activity, mainly due to the number of people and devices that are connected to each other. This arena is open for wildlife trafficking with a greater potential to find new suppliers and buyers across international borders. Wildlife trading mainly uses code words for various wildlife products, and continues in cyber space, hence there is a need to increase and strengthen cyber vigilance in order to curb the online wildlife trafficking.

The growing online trade of wildlife articles is both in live wild animals and their derivatives. In such cases and even otherwise, having a dedicated database of criminals helps especially in the case of inter-state and repeat offenders, and such information should be readily shared. He also made an important suggestion about creating regional crime control units through representation from the Police, Customs and Forest Department.

Techniques of investigation and prosecution to combat illegal wildlife trade

Mr. Vivek Kishore, IPS, Joint Director, Wildlife Crime Control Bureau, New Delhi

Mr. Vivek Kishore presented on the organised nature of wildlife crime stating that it is widespread, trans-border with a complicated network and speedy communication system, making it a highly technical and well planned industry with high profits and low risk. Transportation and smuggling are two primary stages after an animal has been poached using various methods.

The general *modus operandi* of wildlife smuggling includes:

- Concealment – where exotic/non native birds are mixed with prohibited Indian birds; the wood of red sanders being concealed in fruit or a cavity in the truck body; red sanders is also checked in baggage, courier and parcels etc.
- Mis-declaration – some animal produce are processed such as ivory used in handicrafts mixed with plastic pieces, pangolin scales as dog food, ivory as plastic pieces, etc.

Mr. Kishore talked about important provisions within the WPA 1972 in Chapter 3, which prohibited hunting, entry into Protected Areas (PA), Wildlife Sanctuaries etc. Chapter 5 dealt with trade in trophy and animal articles without licenses. He also spoke about the provisions given in Chapter 6 of WPA 1972 for seizures, detention, entry, search, arrest, and declaration. He outlined the actions that should be kept in mind during an operation including pre-seizure action, post seizure, scene of crime, search and seizure, collection of evidence, arrest and filing of complaint. He also suggested considering a respected citizen as an independent witness whose credibility can not be questionable in court. For the same, he suggested seeking the help of NGOs and/or having a tie up with a government service or wildlife wardens. This has been done from time to time on a domestic scale, such as public prosecutors who tie up with organisations such as Blue Cross of India locally to fully prosecute sellers of exotic birds, monkey trainers, illegal cattle slaughterers, etc. He described the procedures defined under the Criminal Procedure Code (Cr.Pc.) which needed to be used for taking control of the SOC and in taking cognizance of a wildlife crime and in collecting evidences for supporting prosecution.

While concluding his presentation, he talked about one major difference between a Indian Penal Code (IPC) criminal case and WPA 1972 case, where he stated that in general criminal cases, the burden of proof is on the prosecution where there is a high rate of failure. But as per section 57 of WPA 1972, the onus of burden of proof of innocence in a wildlife case lies on the accused. Hence, it is important that due diligence is applied while seizure and arrest is made as the provision under section 57 can be applied with the evidence collected on the scene of crime and the onus would be on the accused to prove his innocence.

Patrolling methods in the field for better surveillance

Mr. Rohit Singh, Enforcement & Capacity Building Specialist, WWF-Tigers Alive Initiative

Mr. Rohit Singh presented on the need and use of Spatial Monitoring and Reporting Tool (SMART) in forest and fringe areas, for effective enforcement, which fills in gaps caused by lack of information on spatial and non-spatial data. He said that with the unprecedented increase in wildlife crime witnessed across the world, conservation agencies across the globe are embracing a different approach that aims to incorporate new technologies to combat wildlife crime. One such technology steered by several organisations including the CITES, UNODC, and the WWF is the SMART a site-based approach to monitor, evaluate and improve the

effectiveness of conservation management.

He said that SMART focuses on ranger patrols and utilises data on wildlife encounters, poaching encounters and other threats to biodiversity, collected by the rangers as part of their daily work routine. While adding that with the assistance of this technology site managers will have quantified data on areas patrolled and under pressure on a daily basis and thus assist in planning ways to combat the same. He also stated that SMART is a free, open source tool which was made through collaboration of different agencies like CITES, WWF, Wildlife Conservation Society (WCS), Frankfurt Zoological Society, North Carolina Zoo, Zoological Society of London and Monitoring of Illegal Killing of Elephants (MIKE).

Mr. Singh emphasised that data entry and database management in this system is secure, customisable with an easy interactive interface, which facilitates full standardised reporting through text and visuals. The efficacy and usefulness of this has been shown by more than 200 PAs and 15 countries have already adopted this program. Mr. Singh clarified that while the software might be open-source, the ownership of the data procured once the tool is operational rests with the agency using it.

Mr. Singh reiterated that a Global Positioning System (GPS) is required for SMART and the rangers and forest guards should ideally be literate to handle the equipment and data. With the tool, the agency gets a rugged phone (GPS with calling facility) at a discount of 25%. Mr Singh mentioned that a second version of the software- SMARTER (Spatial Monitoring and Reporting Tool Ecological Recorder) - is also being developed.

Demonstration of remote surveillance of PAs using infrared sensors

Mr. Tim, Technical Expert, Coimbatore assisted by Mr. Mohan Raj, Technical Advisor, WWF-Western Ghats Programme, Coimbatore

Mr. Tim, assisted by Mr. Mohan Raj, demonstrated how infrared sensing technology and video monitoring of wildlife populations along with thermal images and drone technology have proved to be effective in monitoring and surveillance of wildlife and its habitats.

The presenters reported that using these technologies which are fairly accurate and cost effective provide wildlife researchers with data that can be used to estimate population of a specific species, proof of presence in an area and trends in population change due to anthropogenic pressures, among other data. Such data when derived systematically and in scientific manner helps conservationists in taking management and policy decisions.

Over the past few years, WWF-India in partnership with National Tiger Conservation Authority (NTCA) and different state forest departments have been deploying camera traps across India towards estimating tiger numbers, estimating the presence of specific species, and understanding human-wildlife conflict. These camera traps used in varied and diverse habitats, from the forbidding heights of Kargil to the dense forests of Western Ghats, have revealed rarely recorded behaviour and activities of wild animals. The video feed for these can be accessed from anywhere in the world, in real time through internet. The tools including the thermal imaging sensor, camera trap, acoustic traps and drones could be effectively used for detecting fire, presence of ballistic materials in the forest, presence of poachers in a wildlife habitat, tracking a trail of poacher, surveillance, evidence collection in a wildlife crime case.

SUGGESTIONS FROM THE SESSIONS

- Forensic institutes must be encouraged and enforcement agencies must consistently send in seized articles and samples for identification and forensic analysis
- Maintaining a dedicated database of wildlife criminals
- Capacity building for better investigation and intelligence collection
- Inter-agency cooperation must be increased
- CDR data should be accessible by the relevant people investigating wildlife cases
- Trial run of SMART patrolling
- Need for better facilities and technologies for forest rangers
- Need for more effective patrolling and data entry systems in India
- Cost benefit analysis of IT software for wildlife enforcement

Law and legal procedures in investigating and prosecuting wildlife crimes

Bail and cancellation of bail in the context of wildlife offences and its impact on trials

Mr. Kartik Shukul, Advocate, Supreme Court, New Delhi and Bombay High Court

Mr. Kartik Shukul began his presentation by pointing out that although the Wildlife Protection Act, 1972 was brought into force way back in 1972, the judgments/precedents under the Act are far and few between. This is primarily because very few cases in fact make it to the High Courts or the Supreme Court where the courts declare precedence. This is in addition to the fact that most cases under the WPA 1972 are not even registered, and those that are, do not necessarily reach their logical end due to weakness usually in prosecution.

He said that bail in cases under the WPA 1972 must always be opposed since more often than not, once released on bail; the poachers usually do not appear before the courts. Many, if not all, of the accused lead a nomadic life; and have no permanent address or immovable property. It is therefore impossible to track them once they start avoiding the trial. They also use their freedom to tamper with the evidence and witnesses thereby adversely impacting the trial. He further added that perhaps the biggest setback of their release is the fact that they commit similar crimes once they are out on bail and regularly engage themselves in illegal criminal activities. Hence it is important to oppose bail pleas.

Mr. Shukul laid emphasis on the powers under the WPA 1972 and their exercise. He elaborated at great length the powers under Section 50 of WPA 1972 dealing with the recording of confessional statements. He quoted various judgments of the Hon'ble Supreme Court as well as the Hon'ble High Courts that deal with the subject. Certain noteworthy cases that he discussed were that of Sansar Chand and Chacha (alias - Suraj Pal). He also explained in detail the process of corroboration of confessional statements and how they can be used to establish *prima facie* evidence.

Perhaps the most important aspect of his lecture was the issue of quantum of punishment under the WPA 1972 and its relation to the gravity of the offence. He stressed on the fact that the gravity of the offences cannot be gauged only by the punishment prescribed under the WPA 1972 and that it has to be understood by the impact that the crime has and its ramifications on the environment. He buttressed these propositions with the judgment of the Hon'ble Bombay High Court – Nagpur Bench in the case of State of Maharashtra Vs Chacha (Suraj Pal) that he had argued seeking cancellation of bail of the kingpin of an illegal syndicate.

Mr. Kartik Shukul also explicated various provision of the Cr.PC. pertaining to bail and cancellation of bail. He elaborated on the difference between section 437 and 439 of the Cr.PC. and the different situations in which they can be invoked.

Improving investigation in wildlife cases (case studies)

Mr. Sanjay Upadhyay, Advocate, Supreme Court, New Delhi

Mr. Sanjay Upadhyay mentioned the landmark judgement of the Hon'ble Supreme Court on the famous Poonawalla case in which the Hon'ble Supreme Court and the Maharashtra High Court discussed CITES implementation for years in succession. The final judgement came in March 2015. Mr. Upadhyay emphasised on the need to have holistic knowledge on the prevalent national wildlife and environment laws in India and related international treaties and conventions. He pointed out that there should be a platform for coordination which will enable inter-departmental and inter-state cooperation and instill smooth processes.

Mr Upadhyay admitted that one of the real challenges of wildlife conservation law was in integrating strengths of WPA legislations, under which he cited the examples of using Customs Act 1962, Foreign Trade Act 1992, Forest Conservation Act 1980, Forest Rights Act 2006, ecological sensitive area concept under the Environment Protection Act 1986, and other marine and coastal laws of the states. Mr. Upadhyay said that under the WPA 1972, cases should be prioritised for quick and successful prosecution. Mr. Upadhyay stated that Category II offences do not match up to CrPC and there is a need to have a distinction between CrPC and WPA 1972 an in fact it needs to be streamlined in accordance with CrPC to avoid confusion. Also, the role of the police is limited to arrest only unless authorized by the State. The role of other related players need to be clarified in the law.

Mr. Upadhyay lamented about the general apathy of the judiciary towards animals owing to lack of knowledge as well as adequate orientation especially in the lower judiciary, resulting in leniency in judgments in many cases or lack of prioritisation. He mentioned that the very definition of a wild animal is restricted in the WPA 1972, and the section that defines hunting has loopholes which have been and can be potentially misused. Mr. Upadhyay insisted that there should be more clarity in the process and procedures for handling wildlife offences within the WPA 1972, along with clear guidelines on what can be compounded and step wise preparation of strong cases along with evidences. He stated that the completion of settlement proceedings under the WPA 1972 is statutorily complete after two years, which has been a failure on part of the system and needs redressal and completion soon. Further there is also need to address non-native or 'exotic' species in the country.

Panel Discussion: Successful application of laws in curbing wildlife crime

Panelists: Mr. Kartik Shukul (Advocate, Supreme Court, New Delhi and Bombay High Court), Mr. Sanjay Upadhyay (Advocate, Supreme Court, New Delhi) and Dr. M. K. Ranjitsinh (Former Member Secretary, Project Tiger Task Force)

Moderator: Dr. Shekhar Kumar Niraj, IFS (Head, TRAFFIC India)

The panel discussed the proposed amendments to the WPA 1972 and the need to strengthen the Act to increase enforcement efficacy and greater deterrents keeping in mind the present provisions and special wildlife laws for the state of Jammu and Kashmir. There was consensus among the panelists on the lack of adequate facilities with the forest rangers, often hindering them from pursuing cases, and therefore equipping Rangers Office should be a priority for the State Forest Department, along with equal distribution of workforce across the country. Another important issue was the lack of environment and wildlife advocates available to the forest department and NGOs to assist with cases. The need for more information by the states for data input to be used by forest departments and enforcement agencies across the country was also highlighted. When discussing on the basic definitions of wildlife, the panelists mentioned that there is no judicial precedent on what comes under wildlife. In conclusion, they also pointed out that the burden of proof in wildlife cases, unlike other criminal cases, lies on the accused which should be effectively used along with Section 50 for adducing evidence by forest officers which are admissible.

SUGGESTIONS FROM THE SESSIONS

- Seminars like this should also be extended to lower judiciary and the judicial officers should be sensitised about WPA 1972 and other related laws. It must be brought to their notice that various general propositions of criminal jurisprudence do not apply to this special act and cases under the WPA 1972 must be considered as serious offences and prioritised.
- Efforts must be taken to exhaustively educate the Government Pleaders/Prosecutors in courts (JMFCs&CJMs) around National Parks and Sanctuaries regarding the WPA 1972. It must be brought to their notice that various general propositions of criminal jurisprudence do not apply to this special act and cases under the WPA 1972 must be considered as serious offences. This will enable them to represent the prosecution in the most productive manner.
- Wildlife laws need to be added to the curriculum of law schools.
- Enhancing databases, centrally and regionally, to track information on wildlife cases. Previous convictions and past conduct of the accused are important parameters that must be brought to the notice of the courts. All states must share information (including but not limited to names and photographs of the accused) regarding poaching cases with central agencies such as WCCB, which can in turn provide this information to Forest-Departments/prosecutions throughout India as and when required.
- Awareness workshops on wildlife laws not just for wildlife workers but also for animal welfare workers who might deal with wildlife in captivity such as elephants.

Wildlife forensics in dealing with wildlife crime

Applications of forensics, DNA techniques and standardising forensic based protocols in wildlife crime investigations

Dr. S. P. Goyal, Scientist Emeritus, Wildlife Institute of India, Dehradun

Dr. S. P. Goyal explained in detail the important role played by forensic science in combating wildlife crime. He said that forensic science is the application of science to criminal and civil laws wherein the scientists collect, preserve, and analyse scientific evidence during the course of an investigation. In addition to their laboratory role, forensic scientists can also testify as expert witnesses and can work for either the prosecution or the defense.

Dr. Goyal also said that the continued development and integration of wildlife forensic science as a field will be critical for curbing illegal wildlife trade and strengthening wildlife law enforcement. Under Dr. S. P. Goyal, the forensic lab at WII has handled approximately 3000 wildlife forensics cases during 2005-2015. He mentioned that despite a large database on tigers, leopards, musk deer, bears and elephants at WII there will be regional variations in the species for which samples have been submitted for forensic examination and hence there is a need for expansion of forensic analysis and DNA mapping facilities and laboratories.

Dr. Goyal stressed that genetic identification of wildlife should be made into a priority for bolstering efforts to handle wildlife crime. One of the major causes in failure of proper implementation of wildlife laws has been the lack of facilities for properly identifying species specimens of parts and derivatives drawn from wild animals. The situation prevails not only within India but also across South East Asia. Dr. Goyal stated that at least 65% of wildlife forensic cases in India can be dealt with morphometry based techniques in which the principal items needed for testing are hair, skin, claws, antlers, bone and musk pods and that there are reference manuals available for species found in India.

Dr. Goyal highlighted the need for standardising protocols for extracting DNA from wildlife forensic material, proper preservation and storage of samples. He also mentioned that more than 300 wildlife offence cases related to tissues were found to lack reference samples. Improper preservation of samples is a serious issue. He said that the future of forensic research lies in forensic toxicology, ballistics, forensic entomology and use of stable isotope facilities.

He also stated the need for further development of research in feather characteristics for species identification of Indian birds and developing protocols for identifying shed versus plucked feathers of peafowl or other

pheasants is needed. Sometimes, the applied science of forensics faces serious challenge as it happens in case of identifying the origin of a peafowl tail feather (or other pheasants' feathers) to establish whether it was from a plucked origin and from a shed origin. Poachers and traders have ideas about legal implications and therefore in order to obliterate the evidence they chip off the tips of the feathers. Forensics and DNA technology is trying to evolve some full proof methods to combat such situations in order to assist the investigations process. He also emphasised on need for enhancement in the field of marine forensics.

Use of DNA is also crucial in handling cases related to man-animal conflict, for eg in United States, where the National Park Service rangers are using DNA evidences and modern forensic technology, to reduce conflict with problematic bears. Packaging of samples is crucial step in the line of forensic and DNA tests and therefore regular training must be imparted to the enforcement officials in every state of India. TRAFFIC and WII have jointly produced sample collection kits that could be very handy for scientific collection of evidence samples from the scene of crime. He demonstrated the method of collection of samples using a sample kit.

DNA profiling and wildlife forensics in curbing wildlife crime

Dr. Sunil Kumar Verma, Principal Scientist, Centre for Cell and Molecular Biology, Hyderabad

Dr Sunil Kumar Verma gave a historical perspective to DNA based wildlife crime investigation and forensic case work done in CCMB during last 16 year, since his discovery of "Universal Primer Technology" (Verma and Singh, 2001; US Patent 7141364 and 11 other patents). This invention of Dr Verma has been used to solve more than 1500 cases pertaining to wildlife crime in India. Currently, the Laboratory for Conservation of Endangered Species (LaCONES) of CCMB is providing wildlife identification services to nation based on this technique.

Other than presenting some interesting cases solved in CCMB, Dr Verma also gave few important technical tips to the forest officers for better sampling techniques in the field. He suggested to use saline water or alcohol instead of formalin since formalin preserved samples are not good for DNA analysis. He also suggested that a minute amount of meat sample, or few hairs, or just a tiny blood stain etc is sufficient for the DNA case work, therefore, if a bucket full of meat is seized, this all should not be sent to CCMB. Dr Sunil Verma gave a historical perspective to DNA sampling, reiterating its important role in solving criminal cases. This is also applicable and useful in case of wildlife cases since every animal has a unique DNA. He cited examples of cases dating back to 1999 where DNA profiling was used for the first time in India. He mentioned the use of Wildlife Training Net for Species Signature (WITNESS).

Dr. Verma also said that the present scenario has many pending wildlife cases as there are few accredited labs that handle such cases and there is a need to expand and create regional facilities for faster disposal of cases.

Based on his extensive experience of working in the area of Wildlife Forensics, Dr Verma also recommended that a single laboratory (CCMB at present) is not sufficient to fulfill the wildlife identification and wildlife forensics needs of entire nation; therefore, there is an urgent need of establishing at least four such laboratories, one in each corner of the country for faster disposal of cases. The use of wildlife forensics is also reiterated by CITES, and has been reviewed by the Secretariat of CITES in preparation for CoP17 (<https://cites.org/sites/default/files/eng/cop/17/WorkingDocs/E-CoP17-25-A4.pdf>)

SUGGESTIONS FROM THE SESSIONS

- All police personnel, foresters and range officers, including senior officers of Forest should be given a minimum hands-on training to understand the implication of advance DNA based technique in their routine job, with special emphasis on sample collection, handling, packaging, storage and transport.
- There is a severe lack of trained prosecution and defense lawyers who could understand and efficiently present the DNA reports in the court of law, ask the questions and analyses the consequences, specially for the DNA based species identification reports. In order to empower the justice system, and ensure the efficient enforcement of Wildlife (Protection) Act, such hands-on training must also be introduced in judicial sector at various levels, from public prosecutor to Judges.
- While this training should be introduced for selected officers in various sector, in order to maintain a continuity, such hands-on training on advance DNA based interventions should be provided to these officers at the early stage of their career as a mandatory skill development program.
- CSIR-CCMB, Hyderabad is working to establish a dedicated Hands-on-Training Laboratory in Hyderabad for the above purpose under the skilled India Mission of Government of India. The Hands-on-sessions would be for 1-5 days for various level officers. The officers, who will undergo such training, will also receive a formal certification from CSIR-CCMB on such achievement.
- CCMB is now open to sign MOUs with various state forest department, judiciary and police on such collaborations. It has been resolved that TRAFFIC India would also be one of the strategic partner with this endeavor of CSIR-CCMB and Government of India.
- We strongly recommend that every state forest department, police and judiciary sector must sign such MOU with CCMB as a matter of priority. A letter of intent to Director, CCMB (director@cmb.res.in) with a copy to Dr. Sunil Kumar Verma (Sunilverma@cmb.res.in), can be sent for necessary follow up.

ROLE OF DIFFERENT AGENCIES IN COMBATING ILLEGAL WILDLIFE TRADE

Panel Discussions: Role of Inter-agency coordination for combating wildlife trade

Identification of problems in inter-agency cooperation

Panellists: Dr. Rajeev Srivastava, IFS (Director, TNFA), Mr. Shankar Jiwai, IPS, Dr. V. K. Melkani, IFS (PCCF (WL) and CWLW, Government of Tamil Nadu), Mr. Donny Micheael (DIG, Indian Coastguard), Dr. Balachandra Gaikwad (Commandant, ITBP)

Moderator: Ms Tilotama Varma, IPS, AD, WCCB, New Delhi

The panel discussed a myriad of strengths and weaknesses in cooperation between different agencies dealing with wildlife enforcement and mitigation of the identified problems. The panellists agreed that there is a need for better collaboration and one of the possible ways could be through institutionalisation of the process. In order to augment networking among individuals in the agencies, there is no alternative to institutionalised coordination. They emphasised that it was necessary to take stock of the current situation and identify gaps in enforcement efforts in combating wildlife crime.

An intensive discussion pinpointed the necessity of a thorough knowledge of the patrolling area. There is a need to increase enforcement in the Postal and Custom sector especially via scanning of wildlife goods to detect contraband. A proper handling of seized wildlife contraband, both live and derivative, was talked about. The importance of monitoring coastlines was also discussed and an instance was cited of the work of Coastguards in monitoring sea turtle nests in Odisha. The role of the police in effective investigation of wildlife crime was discussed and it was unanimously agreed upon that the police departments and the forest departments have to work in close coordination, including conducting joint patrolling on a regular basis.

For increasing collaborative efforts between them, as well as other relevant wildlife enforcement agencies, maintaining, analysing and sharing databases with vital information about wildlife crimes were considered important steps, along with digital mapping of areas of wildlife crimes. Sharing information on wildlife crime cases after convictions or acquittals was also considered vital to increasing the knowledge base of different enforcement agencies. The role of police divisions such as the Special Task Force was discussed and it was concurred that emergency operations can be assisted by them. It was agreed upon that a high level officers' meeting should be held regularly.

Role of NGOs and scientific institutions in combating wildlife crime

Panellists: Mr. S. K. Sisodia, IFS (CCF, Wildlife, Gujarat), Dr. S. P. Goyal (Scientist Emeritus, WII), Ms. Onkuri Mazumder (Managing Director, Freeland Foundation), Mr. Rohit Singh (Enforcement & Capacity Building Specialist, WWF-Tigers Alive Initiative), Mr. Joydeep Bose (Coordinator, Eastern Himalayas Programme, WWF-India), Mr. S. V. Sheshadri (Asst. Director, WCCB)

Critical role of an NGO was considered in helping the government in tackling wildlife crime and the scope for improvement and strengthening their functioning was also discussed. NGOs, tying up with the government and conducting operations in collaboration with them, were considered important for increasing transparency and accountability, as well as, maintaining ethics. Issues currently plaguing the status of NGOs, in light of certain recent incidents including allegations of NGOs instigating poaching were also discussed. It was felt that the focus needed to shift from a 'seizure-only' *modus operandi* employed by some NGOs to more towards capacity building and equipping of forest departments and other enforcement agencies, and supporting efforts in enforcing law and policy. It was felt that generalising NGOs based on the deeds of a few was harmful and that instead there should be better cooperation between the governmental and non-governmental organisations in order to multiply forces for an overall gain in tackling wildlife crime. It was considered vital that NGOs help sensitise the media as well as the masses on every aspect of wildlife crime, including the hard work put in by the forest guards and other rangers. Double checking facts and their authenticity was considered important and the need to filter information before reporting to the user agency and media is important. It was acknowledged that there is a need for wide publicity in order to secure funding for activities and hence a donor centric approach has been observed with some institutions. It was pointed that even the government of India has acknowledged the role of the NGOs in combating wildlife trafficking and crime. The cohesion of the above along with the subsequent involvement of the common man is what has made many conservation campaigns successful.

A seeming disconnect was identified between wildlife forensic institutions and NGOs and a need was felt was felt for a portal of communication between the two, which could involve in the creation of a standard operating procedures. Involvement of NGOs in prosecution and conviction of wildlife crimes and positive role in legal matters was also discussed by the panellists.

Role of common man in combating wildlife crime

Panellists: Mr. Kamal Datta, IFS (JD, WCCB), Mr. Marimuthu, IFS (DFO, TNFD), Mr. Saleem, Mr. Udyan

The discussion centred around the level of awareness about wildlife crimes in general and identifying the gaps. Discussions also focused at evaluating methods of communication with the public in order to increase their sensitivity towards the same. It was agreed that the common man has the potential to fill in the gaps left by the enforcement agencies and at the same time it was also felt that a general lack of empathy existed about wildlife and related crimes, which results in not considering wildlife crime as a serious offence. A necessity to bring about change from within was discussed to motivate citizens so that they get more involved and report wildlife crime. The role of NGOs as well as the government can help facilitate the same. The integral involvement of the media was talked about as well as the need to shift from a flagship species centric conservation and protection to include other lesser known species. Collaborative efforts, between different enforcement agencies and NGOs, to spread awareness were discussed. The example of the WCCB volunteer system was cited, where the crucial role of civilians in a tightly supervised system was touted as one of the methods of receiving vital wildlife crime related information. Involvement of different civic bodies such as the Panchayats was discussed as a possible way of a large scale reach. Creation of hotlines, where people can anonymously give information was considered as a means of encouraging more leads without the fear of getting caught up in legal matters. The security and safeguarding of sources was discussed, along with the need to vet every single informant/volunteer to authenticate information. Sharing such information between different enforcement agencies through a fluid communication portal was talked about with the WCCB, the Forest Department and the Coast Guard agreeing on its importance.

While it was considered that wildlife awareness and education should start from a school going age, practical difficulties in spreading awareness such as poor socio-economic conditions were also talked about where rights of wildlife ceased to be a priority. Possibilities of increasing economic activities in those regions to decrease dependency on forests and wildlife were discussed.

Panel discussion: Role of media and communications in wildlife crime control

Panellists: Dr. N. Krishnakumar, IFS (PCCF and HoD, Tamil Nadu), Ms. Maya Sharma (Resident Bureau Editor NDTV), Mr. Abhishek Madhukar (AFP), Mr. Himanshu Malhotra (Filmmaker), Mr. Aravind B Kumar (Hindu), Mr. C. S Koteeswaran (Deccan Chronicle), Dr. Shekhar Kumar Niraj, IFS (Head, TRAFFIC India)

There was a concurrence of opinions at the outset of the session about the importance of media in spreading crucial awareness about wildlife conservation and the need for more wildlife coverage across print, television and digital media. The panellists expressed the need to have ethical and responsible reporting on wildlife crimes. It was generally acknowledged that in current times priority was always given to political and general crime reporting than to wildlife crime reporting. It emerged that in the pattern of current coverage which mostly focussed on species and no coverage was made on habitat issues. There was a unanimous view that the need of the hour suggested there should be much greater focus on forests than just the tiger or a few other flagship (charismatic) species.

The need for more dedicated wildlife reporting was discussed along with gaps in communication between the forest department and the media. Sensitisation of editors of the national and regional media was considered important to help with a thorough, ethical and truthful portrayal of wildlife matters, rather than just a production of headline grabbers which might deploy fabricated quotes and facts. At the same time, increase in communication between forest department and the reporters, and the ability of the former to provide all relevant information, especially in times of a sensitive incident, was discussed.

The panellists suggested need for capacity building and sensitisation programmes for the media to create a balance in knowledge and delivery. It was also felt that lack of sufficient sponsorship of money in wildlife reporting could be instigating the headline grabbers and there was a general consensus on an increase in budgets across media outlets to enable passionate reporters to do in depth reporting as well as to have dedicated columns for the same. Easing of restrictions on part of the forest departments for the media personnel in terms of access to forest sites or to a scene of crime was discussed for balancing the reporting. Involvement of both governmental and non-governmental organisations in such efforts was considered important, with the media considered as an important stakeholder in wildlife conservation and issues pertaining to their protection.

Combating wildlife crime in South East Asia through inter-country collaboration and role of ASEAN-WEN

Ms. Onkuri Mazumdar introduced the issues of the ASEAN-WEN (Association of South East Asian Network-Wildlife Enforcement Network) to the participants. It is the world's largest wildlife law enforcement network that involves police, customs and environment agencies of all 10 ASEAN countries – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Vietnam and Thailand. ASEAN-WEN is a regional Intergovernmental law-enforcement network designed to work for combating the illegal wildlife trade; a proactive response to Southeast Asia's alarming levels of wildlife trafficking and loss and a mechanism by which countries could share information and learn from each other's best practices.

Ms. Mazumdar outlined the strategies for combating illegal wildlife trade with reference to the consortium of ASEAN-WEN and the work accomplished by the Freeland Foundation- a global network for addressing illegal wildlife trade and capacity building of the enforcement officials. She said that NGOs such as the Freeland Foundation could work closely with such networks through anti-poaching training, wildlife crime investigation training, and mobilizing legal help to the enforcement, organising seminars on the matters of improving enforcement actions, prosecution and jurisprudence matter for the enforcement and legal agencies of the member countries. She mentioned that the Foundation also ran an online and on call wildlife legal help centre which provided free advocacy assistance to the enforcement.

Ms. Mazumdar mentioned that in trans border centred work, there should be a permanency in staff hired to assure continuity in efforts. She also emphasised that public-private partnerships can help wildlife, while suggesting that rise in smart phone applications may have an adverse effect on action for wildlife protection if not checked and monitored strategically.

India's role in South Asia's fight against wildlife crimes through SAWEN

Ms. Tilotama Varma while speaking on South Asia Wildlife Enforcement Network (SAWEN) to the participants said that at the 11th Meeting of the Governing Council of the South Asia Cooperative Environment

Programme (SACEP) organised in Jaipur, India, in May 2008, Environment Ministers of the eight South Asian countries announced their support for the formation of SAWEN along the line of ASEAN-WEN.

In addition, a meeting of representatives from South Asia's Tiger Range Countries (Bangladesh, Bhutan, India, and Nepal) held during the Kathmandu Global Tiger Workshop in October 2009 also acknowledged the urgent need to establish SAWEN. The First Meeting of the South Asia Experts Group on Illegal Wildlife Trade held in Kathmandu in May 2010 developed a road map for the establishment of SAWEN. The same was also expressed at a workshop session during the first Asian Ministerial Conference on Tiger conservation, held in HuaHin, Thailand in January 2010

SAWEN was formally launched during the Second Meeting of the South Asia Experts Group on Illegal Wildlife Trade held from 29-30 January 2011 in Paro, Bhutan. The SAWEN Secretariat was formally established on 20 April 2011 at the Department of National Parks and Wildlife Conservation, Government of Nepal and the Director-General of the latter serves concurrently as the "Chief Enforcement Coordinator" of SAWEN.

Ms. Varma shared the mission of SAWEN with the participants and said that SAWEN aims to strengthen, promote and co-ordinate regional co-operation for curbing illegal wildlife trade that threatens the wild flora and fauna of South Asia. At the first regional meeting of focal persons of SAWEN that was held on 4-6 November, 2015 in Kathmandu, discussions were held on various emerging wildlife crime issues, update on the national initiatives to combat wildlife crime, and to discuss on the institutionalisation of SAWEN including early endorsement of the SAWEN Statute from the member countries. Ms. Varma said that India is already on the verge of ratifying the SAWEN Statute, adopted and signed at the second Annual Meeting of the SAWEN at Kathmandu during August 2014.

Dr. Shekhar Kumar Niraj who has been leading this initiative on behalf of TRAFFIC India spoke about the recent international developments on wildlife conservation like the US Department of State, DEFRA and UN resolutions on wildlife and how they could have a bearing on saving wildlife in India. He also mentioned that 3rd March has been declared as World Wildlife Day by the United Nations. The relevance of international treaties in saving wildlife was pointed out. The presenters acknowledged that acceptance and implementation of SAWEN statutes will help immeasurably in strengthening efforts for wildlife conservation in the region and that regionally collaborative efforts like SAWEN should promote a structuring and identity regional efforts in formulating strategies for combating illegal wildlife trade emanating from the regions and promoting illegal international trade. They also stated that recruitment for staff positions at SAWEN Secretariat should be made open to members of all SAARC countries. They concluded saying that all efforts within SAWEN have to consider wildlife as the primary client.

SUGGESTIONS FROM THE SESSIONS

- Establishment of database management system portals for sharing information and data between among different enforcement agencies
- Standard Operating Protocols for collaboration between forensic institutions and NGOs
- Increased efforts in capacity building and equipping different enforcement agencies with modern tools and techniques by NGOs and other expert organisations
- Regular sensitisation workshops between the media and forest departments
- Creation of hotlines to facilitate anonymous reporting
- Developing force multiplier in strengthening SAWEN
- Advocacy with governments in SAWEN countries for governmental accord for SAWEN statutes
- Developing a robust 5 year or 10 year action plan for SAWEN
- Mobilising resources for facilitating SAWEN functioning
- Rationalizing laws and legal procedures in SAWEN countries for coherence in enforcement actions for for eliminating illegal wildlife trade
- Advocacy for mainstreaming of wildlife protection and conservation in SAWEN countries. India to take a lead and set up an example for others to emulate

FIELD EXERCISES

Hands-on exercises in intelligence collection, prosecution and investigation

Crime investigation exercises were carried out in the field on the morning of 6 February, 2016.

Three separate field exercises for wildlife crime investigation were organised at the workshop, where the participants were divided into three groups that investigated the distinct scenarios, meant to expose to cases and their effective tracking and conditions that might be encountered by officials handling wildlife crime. The purpose of these exercises was to get hands-on experience about how to conduct proper investigations including intelligence collection, methods of search and seizures, interrogation, and in gathering evidence to enable successful prosecution.

Scene 1: Market investigation and surveillance scenario

The first field exercise was a market investigation and seizure case in which a seller with marine and other wildlife products was openly selling his wares and the participants were meant to deal with this scene in a proper and standard manner to apprehend the trader and seize the items, investigate further and reach the root of the case.

Scene 2: Intelligence collection and surveillance methods

The second field exercise involved monitoring and surveillance skills wherein the participants had to track a poacher whose car was spotted in the forest. The car was to be searched and evidence collected for its involvement in the crime.

Scene 3: Poaching in the forest: Search and seizures, sample collection, documentation and investigation

The third field exercise involved investigating an animal poaching case in the forest which needed to deploy tactics of search and seizures, sample collection, documentation of case papers, preparing various memos and applications and conducting investigation of poaching cases. The leftover material on the crime site would be collected and preserved for identification and as evidence to be examined by the prosecution.

Based on how the exercises were completed by the groups, the experts shared their detailed feedback. They also raised a few salient points that are important for any effectively led wildlife crime scene investigation. These are:

- Collecting intelligence and classifying
- Planning search and seizures- forming search team
- Conducting thorough search following procedures, techniques (e.g., grid search, block search, transect search, circular search)
- Cordoning off the scene of crime (SoC)
- Necessity of having independent witnesses.
- Proper documentation
- Collection of sample and packaging scientifically and in sound legal manner
- Thorough search of accused
- Ensuring that no human rights are violated
- Not leaving the scene of crime unmanned before the items are seized
- For any crime scene outside the forest/PA, the police must be contacted
- Approximate values of measurements should be given instead of precise measurements in documentation
- Media should be contacted directly by the responsible authorities so that no incorrect information is published
- Looking at property aspects in terms of violation of Chapter VI of WPA 1972 and from the angle of the Enforcement Directorate Guidelines and Income Tax Act and Rules.

Demonstration on Deep Search Metal Detectors

A demonstration on the use and benefits of Deep Search Metal Detector (DSMDs) was given by Mr. Dhruva Jyoti Dutta of TRAFFIC India.

TRAFFIC in co-operation with the NTCA is using this novel method to locate metal snares, traps set to catch tigers and other wild animals. The traps and metallic snares are often camouflaged and hence very difficult to detect with bare eyes while patrolling dense forest areas. However, by using DSMDs or a hand held metal detector forest guards can easily find even the most stringently hidden traps. The DSMDs are also used effectively in locating the ballistic materials used in commissioning the crime.

The detectors, especially modified in collaboration with TRAFFIC, are very handy for remote field operations because they are robust, simple to assemble and use, and do not require complicated maintenance or handling. The detectors can also be used during post-mortem examinations to see if snared animals have bullets pierced in their bodies if they were killed by bullet hit. This helps strengthen legal follow up and should lead to more effective prosecutions for poaching.

The detectors are fitted with sensors which could give signals from a distance of as much as two metres from the hidden objects. The detector can also locate the hidden metal object if it is hidden below the ground level and covered with soil or other materials. The hand held detectors are easy to carry long distances along the edges where chances of hidden snares are very high.

TRAFFIC is providing full scale training in the use of detectors and has developed a bilingual manual in English and Hindi to help field personnel. The use of metal detectors is likely to have a deterrent effect in the long run, simply as poachers become aware that new technology is in place to stop their efforts. TRAFFIC has provided nearly 100 metal detectors to various tiger reserves and PAs across India so far.

Detecting and dismantling hunting equipments

Depending on the targeted species, traps and snares could be modified. Many, traps particularly for carnivores are made of metal with a single entry point, and are baited to lure the species. At the entry point there is a lever mechanism which operates the gate while a snare is made to restrain the species when caught, depending on the species the material varies from metal for mammals to plant materials and nylon thread for bird, reptiles and amphibians. Snares are deployed on various levels in the forest from ground to the canopy depending on the targeted species. For the field exercise 25 different types of traps were deployed in the field by the team from Special Task Force of Police, Tamil Nadu led by Mr. Suresh, Inspector of Police. The police officials demonstrated how to detect and identify these traps that are in use by poachers for trapping and killing different species. The participants were given demo on how to dismantle and neutralise them. The participants were then informed on the functioning of each trap and unique characteristics of the trap and snare.

Panel Discussion

Discussing the development of a national level strategic vision of protocols for combating wildlife crime

Panelists – Mr. Ravi Singh (SG & CEO, WWF-India), Dr. V. K. Malkani, IFS (PCCF (WL) and CWLW, Government of Tamil Nadu), Dr. M. K. Ranjitsinh (Former Member Secretary, Project Tiger Task Force), Dr. Raghuram Singh, Dr. Rajeev Srivastava, IFS (Director, Tamil Nadu Forest Academy (TNFA))

Moderator: Dr. Shekhar Kumar Niraj, IFS, Head, TRAFFIC India, New Delhi

Each panellist spoke on the important aspects of combating wildlife crime. Mr. Ravi Singh said that while more emphasis should be given to combating wildlife crime, regulating trade in wildlife species where permissible under the law through licensing can be explored as a strategy. He spoke about the importance of collecting, collating and analysing poaching and trade data of wildlife species, particularly in different seasons in a year to understand trend of poaching and transport. This information will prove beneficial to policy makers and wildlife managers for planning protection and conservation. Mr. Singh emphasised on the role of certain sectors such as transportation, postal services, logistics, which play a big role in facilitating or encouraging illegal wildlife trade most of the time inadvertently. These sectors must be involved in forming strategies to eliminate wildlife crime. He also spoke about the increasing nature of cyber crime and need for increased monitoring. Mr. Singh said that more economists should be brought to this field, who could offer their expertise in various matters such as the study of demand and supply of traded animals with respect to the pricing theory and in demand that would fuel illegal trade. He said that another meeting such as this one could be held soon to follow up of the National Workshop. Mr. Singh spoke about a WWF scheme, which gives awards to people who have performed exceedingly well in the field of conservation and urged the participants to inform WWF for nominating them for the award. Recognition of outstanding contribution to conservation and protection by nominating for national level award could be one good way to encourage individuals and enlist their support.

Ms. Tilotama Varma mentioned the need for providing more support to scientific institutions, especially wildlife forensics. She said that there is a need to increase international collaboration and information sharing for a more effective fight against wildlife crime. She informed that WCCB has embarked upon holding series of training programmes aimed at improving capacities of enforcement agencies especially in more remote regions, eg, North East India.

Dr. Melkani spoke about short term and long term visions in combating illegal wildlife trade. Short term plans could include mapping resources for high risk or threatened species. He also spoke about the creation of crime control cells and said that Tamil Nadu has taken steps to create a state level crime cell where the forest department, police force and railway agencies would collaborate to detect and neutralise wildlife crime.. He emphasized on the need for special focus to increase surveillance at airports, sea ports and railway stations, calling such inter-departmental cooperation a dynamic process.

Dr. Ranjitsinh spoke about the semantic of power in illegal wildlife trade and said that the trade of birds and other non-flagship species has not decreased. He said that there is no substitute for manual patrolling and groundwork by the forest guards and there should be less reliance on media to get information. Motivating the forest guards, according to Dr. Ranjitsinh should be of a high priority for the department. He emphasised on the important role that NGOs could play in combating wildlife crime, and in conservation in general, as they have a greater rapport with the public. Dr. Ranjitsinh also said that inter-regional meetings between different departments to share information should be held. He lauded TRAFFIC, WCCB and TNFD for holding this important workshop and consultative process at this crucial juncture.

Dr. Raghuram Singh lamented on the lack of intelligence partaking by the different departments, including the media, with no nodal agency tracing the information anyway. He said that these agencies should have presence at regional, state and district level. He spoke about increasing capacity building workshops and training for the forest department, as well as other enforcement agencies. Dr. Singh spoke about the importance of having Standard Operating Procedures for joint border patrolling and for sound recording of the findings. Seconding Ms. Varma's stance on support to scientific institutions, Dr. Singh spoke about the need for more forensic centres which can carry out practical forensic examinations and, if needed, could also carry out sophisticated DNA profiling.

Dr. N. Krishnakumar, while leaving for an urgent meeting in Chennai, had sent a message that said that livelihood security was dependent on ecological security and that ecosystem threat alert systems were needed.

Dr. Rajeev Srivastava emphasised the need of collating information on communities involved in trade, such as in the studies carried out by WWF, must be communicated to the state governments for further action. He said that a wildlife crime database can be developed at district and state levels.

Dr. Niraj summarised the main points that were discussed during the three day National Workshop:

- Concern over security around the borders which are hotspots for inter-state, intra state/ inter country wildlife

smuggling and trade

- Lack of identification knowledge and skills of species, its derivatives and other specimens in illegal wildlife trade.
- Understanding drivers of wildlife trade
- Identifying hotspots and trade hubs for highly traded species, especially non-flagship species such as pangolins, monitor lizard etc.
- Targeted campaigns for demand reduction, at both national and international levels
- Simplifying presentation of research findings on trade issues and making them easy to understand
- Human resource management and capacity building of the forest department
- Improved role of judiciary in curbing wildlife crime and the need for regular sensitisation programmes for the judicial institutions
- Enhancement of legal knowledge of the enforcement officials including the effective use of different sections within WPA 1972 and the Indian Forest Act 1927, CrPc, Indian Evidence Act, Income Tax Act, Money Laundering Act etc.
- Recognition of and collaboration between stakeholders – media, NGOs, government agencies, forest department
- Effective and increased use of modern tools and techniques including cyber patrolling, i2, sniffer dogs, DNA and wildlife forensic protocol
- Intelligence collection and collation – improving effectiveness
- Enhancement of regional initiatives such as SAWEN

He facilitated the feedback session that involved all the participants and various agencies which had represented participation in the national workshop.

Recommendations

The National Workshop was attended by nearly 150 participants that included senior level officials representing 20 States and Union Territories and nine law enforcement agencies and security agencies such as the State Forest Departments, WCCB, BSF, Police, SSB, ITBP, Customs, Indian Coast Guard, and DRI; representatives of media agencies, TRAFFIC resource persons and many others. The workshop was spread over three days where issues such as enforcement, investigations, intelligence networking, international initiatives, wildlife laws, communications and other topics related to effective wildlife law enforcement were discussed. The participants agreed on many issues and actively discussed possible solutions in mitigating the same to ensure an effective fight against illegal wildlife trade.

The recommendations from the three day National Workshop were grouped under capacity building, enforcement; law and policy; and communication sections and are produced below.

CAPACITY BUILDING

Concerns

- A strong need was felt by all for a collective approach towards effective human resource management and empowerment in the forest departments, especially focussing on frontline staff. As the frontline staff are at the forefront of the fight against wildlife crime, a forest guard centric HR management would be crucial.
- Improving capacity and investments to enhance intelligence collection across forest departments of the country in order to improve the fight against wildlife crime, especially the growing illegal trade on the web portals.
- Species identification was another area highlighted where establishing the precise taxonomy from a seized animal (live, part, derivative or processed) was an absolute necessity. Absence of such protocols on ground was a concern. Taxonomists have to be encouraged by employing them in forest departments.
- Limited capacity in a few centres across the country to handle wildlife forensic cases that sometimes leads to delays in processing of samples and communicating findings required for building evidence in poaching/seizure cases.

Recommendations

- **Specialised capacity building programmes for enforcement agencies on tackling wildlife crime**

The programmes should include but not limited to:

- a. Identification of protected species in trade
- b. Laws and legal procedures and incorporation of other laws to boost up prospects of punishments and penalties for wildlife crime
- c. Investigation techniques
- d. Intelligence collection and
- e. Cyber patrolling and cyber tracking
- f. Cyber laws
- g. Medicinal and aromatic plants trade
- h. CITES provisions and other international conventions

In addition to the Forest Department, these capacity building programmes should be held for border security agencies that come across inter-border wildlife crime and smuggling and important among them are the Army, ITBP, SSB, BSF, Indian Coastguard, besides the state and central enforcement agencies, e.g., Police, Customs, DRI, Railway Protection Force, . Special awareness and capacity building programmes should be conducted for agencies in the transport and freight sector such as Railways, Postal, Logistics and Private Freight companies at a greater scale than what is being conducted currently. The programmes need to be specialised and targeted at higher and cutting edge level officials of various agencies for a collaborative approach.

• **Consistent update on legal precedents and cases of wildlife in India:**

Landmark judgments on wildlife cases should be regularly circulated to the state Chief Wildlife Wardens across the country and Police Heads of Department for further dissemination. In addition, progressive lawyers should be engaged in disseminating the judicial interpretation of laws and implication to cutting edge level officials.

• **Enhancing use of modern tools and techniques and resource mobilisation for scientific advancements in efforts to combat wildlife crime:**

This includes:

- a. Increased funding to scientific institutions, especially those working on forensics and DNA profiling for assisting wildlife crime investigations
- b. Increased funding for technology which will aid in better patrolling and detection of crime, which may include drones, camera traps, acoustic traps, softwares for cyber tracking, crime mapping, data management and analyses, sniffer and detector dogs and deep search metal detectors
- c. Creating Centre for Excellences in wildlife forensics at state and regional levels, with nodal agencies

supervising as the Apex body

- d. Increased efficacy of use of modern tools and techniques in wildlife law enforcement be examined and applied. Modern tools and techniques, though cannot substitute human force, can strongly supplement the efforts while improving the efficiency many times. Some of the tools, e.g., sniffer dogs, deep search metal detectors and I2 based data mining and analysis can be examined to pre-empt attempts of poaching, illegal trade and use of routes to cater to illegal trade chains.

e. Plants

- Developing special protocols for documentation of plants and their products in trade through survey.
- DNA profiling
- DNA protocol for identification
- Formation of molecular herbarium
- Manual on plant trade

ENFORCEMENT

Concerns

- Strengthening the security around the borders, both at state and national borders, as these areas are hot spots and conduits for illegal trade.
- The illegal trade in non-flagship species and lack of information was also a major issue discussed during the workshop, where a strong need to understand trade hotspots and trade hubs. Determining and confirming the same for non-flagship species to enable better enforcement action.
- A need was felt to comprehensibly understand drivers of trade, at the local, national, and international levels.
- Understanding trade issues and various nexuses.
- Regional initiatives such as SAWEN were seen as important instruments which need to be adopted at a much larger scale to lead to improved enforcement in the Indian sub-continent.
- Absence of effective rescue and rehabilitation protocols.
- Poaching for illegal trade is one of the most serious threats to environmental security of the Himalayas sub-regions as most major species, e. g., Snow Leopard (*Panthera uncia*) and other Asian Big Cat (ABCs) and their prey are poached for deriving their parts and derivatives, e.g., skins, bones, and other parts. Himalayan Brown Bear (*Ursus arctos isabellinus*) and Himalayan Black Bear (*Ursus thibetanus*) are taken from the wild for large scale international trade in their body parts and derivatives. The Indian Musk Deer (*Moschus leucogaster*) is one of the highly poached and endangered animals. Similarly, the Tibetan Antelope locally called as Chiru (*Pantholops hodgsonii*) is poached heavily for extracting its wool to produce and trade shahtoosh shawls that sell at phenomenal price in international markets. Such large price tags can become

formidable drivers. Strengthening SAWEN would be the most strategic step in controlling poaching and illegal trade of the high range Himalayan species and conserve them.

Recommendations

- **Mapping resources:**

This entails making a comprehensive database of the species and landscapes which are at risk and threatened by wildlife trade. This can be done at both state, national, and transnational levels.

- **Creation of wildlife crime control cells at state and regional levels:**

It has been proposed that each state should have a specialised wildlife crime control cell, which directly coordinates with the regional and national teams of the Wildlife Crime Control Bureau. The cell should involve officials from all the main enforcement agencies including the Forest Department, Police, Customs, Coast Guard, Postal Department and Railway Police Force. NGOs can perform a supportive role at a serious level, lending their expertise on the same.

Within this the following has been proposed-

- a. Creation of specialised teams which deal exclusively with cyber crimes.
- b. The crime cells continuously monitor and collect data on wildlife crimes within the states and in the border region, analyse the data to assess trends of illegal trade and impact of other legally permitted trade on species. Inter-agency exchange of information and data

- **Creation of a common platform for multiple enforcement agencies and border forces:**

Such a platform can be an effective force multiplier. This will involve the Army, BSF, ITBP, SSB, Indian Coastguard, Police, Customs and Forest departments. Army is a highly professional organization and is present throughout the upper Himalayan region. They can be effectively conjugated to protect species obligated to high altitudes.

- **Rescue and rehabilitation protocols:**

Developing species-wise detailed rescue and rehabilitation protocols. Establishing state managed specialized rescue centres for different species as per their biological needs.

- **Drivers of wildlife crime:**

Long term studies on communities living within the near vicinity of a PA to understand drivers of trade. Need to undertake a study on the demand of wildlife produce, use of products and derivatives prevailing in the national and international markets.

Concerns

Lack of adequate knowledge of laws and legal procedures among forest officials. While it was acknowledged that there might currently be gaps either in the law itself or its implementation, creative use of the different sections, within WPA 1972, e.g. Chapter VI, and the Indian Forest Act, 1927, to help fight wildlife crime was encouraged by the legal experts. Knowledge of other laws and procedures that could strengthen the applications of sections of WPA for wildlife prosecution, e. g., Money Laundering Act, Income Tax Act, Cr.PC, Indian Penal Code, Biodiversity Act 2002, Indian Arms Act, Indian Evidence Act is essential for wildlife officials and other officials prosecuting wildlife crime. Also such acts as the Nuclear Liability Act and the Atomic Energy Act, around which much of the discussion has followed a general standard that right to life, under the constitution include the right to a healthy ecosystem, an important principle in wildlife protection and conservation (Refer to Keshavananda Bharti case, Sacchidanand Oandey vs State of West Bengal, MC Mehta vs UOI, and Subhash Kumar vs State of Bihar – case briefs in : <http://www.legalservicesindia.com/article/article/right-to-clean-environment-a-basic-human-right-1509-1.html>).

When discussing the crucial role of law in combating wildlife trade, especially pertaining to current prosecution rates, the Judiciary's sensitivity was highlighted. Sensitising the Judiciary was considered a very important step for successes in getting right punishments and penalties.

Recommendations

- **Consultative workshops with the Judiciary:**

Considering the importance of successful prosecution of wildlife crime cases, especially to act as deterrents for future crimes, it is imperative to involve the judiciary

- **Increasing outreach and awareness of relevant laws:**

Translating the relevant laws for wildlife cases into local languages for enhanced understanding, as well as making a regular bulletin which shares the latest wildlife crime reports for increasing awareness.

- **Financial investigations:**

This should be a mandatory in course of investigating a wildlife crime with several linkages. Such investigations should involve all possible subjects. The financial investigations should be linked to i2 outputs or other links-detecting programme outputs.

- **Course on legal provisions:**

Incorporating a semester course on necessary legal provisions and acts necessary for filing of cases and prosecution for officers of Rangers and higher category at the state wildlife training centres and national wildlife training centres.

Concerns

- Social awareness campaigns that mentioned demands and monetary benefits were concerns expressed by different agencies. The agencies strongly feel that irresponsible campaigns particularly mentioning the price tags, reporting and publicity will impact the demand for various wildlife products adversely, which could further lead to a considerable increase on the supply end of the spectrum both nationally and internationally.
- The media was recognised as an important stakeholder in the mission to combat wildlife crime and can play a crucial role in creating wide awareness about wildlife crime and illegal wildlife trade. Media is an important communication tool between to spread awareness on issues related to wildlife conservation and protection and must be used by different agencies including the forest departments for the same without reservation.
- Responsibility on part of media to report the acts of wildlife crime with sensitivity and objectivity to help society in positive manner and not for commercial gains
- Communication gap between the wildlife enforcement agencies and the media
- Adequate research by media in context of reporting and balancing of facts

Recommendations

- **Rolling out special awareness campaigns**

The campaigns ideally designed and carried out in collaboration by multiple stakeholders, should be oriented towards demand reduction among the consumer sector as well as creating awareness to curb supply of the wildlife as well. For the same, there should be a comprehensive understanding of the trade dynamics which should include what the drivers of the trade are, who the target audience is, what the best mediums of communication (visual, audio, print, audio-visual, digital, interactive) should be. The media can play a very important role in advancing these missions.

While journalism is recognised as an important medium in reaching out to the masses, a special need has been felt in sensitising different agencies within the industry which included print, television and digital media to not only ethically report the crime news but also to help curb demand by helping spread awareness. Reaching out to regional and local media becomes imperative as they are normally the first responders on the scene and, can also help build important bridge between the enforcement agencies and the people through their focussed reporting. Media should be held an important stakeholder, through policy, in campaign against wildlife crime. Communication gaps with media to be bridged by institutionalising media-government agency interaction for encouraging responsible journalism and a balanced review of enforcement action by the media. On the other hand government agencies need to be sensitive to media's social role.

Appendix A - Agenda

Day 1: 4 February, 2016				
Time	Session		Theme	
0830 hrs - 0832 hrs	Lighting of lamp			
0832 hrs - 1000 hrs	<p>Welcome Welcome and general introduction to Workshop by Dr Shekhar Kumar Niraj, IFS, Head TRAFFIC India (0832 hrs - 0840 hrs) Welcome address by Ms Tilotama Varma, IPS, Additional Director, Wildlife Crime Control Bureau, New Delhi (0840 hrs - 0850 hrs) Welcome to TNFA by Dr Rajeev Srivastava, IFS, APCCF and Director, Tamil Nadu Forest Academy, Coimbatore (0850 hrs- 0900 hrs)</p> <p>Addresses Dr V K Melkani, IFS, PCCF (WL) & CWLW, Government of Tamil Nadu on importance of addressing Wildlife Crime (0900 hrs - 0910 hrs) Address on combating wildlife crime by Dr N Krishnakumar, PCCF (HoD), Government of Tamil Nadu (0910 hrs - 0920 hrs)</p> <p>Introduction to sniffer dog (0920hrs-0930)</p> <p>Launch and screening of TRAFFIC's film on the sniffer dog programme by Chief Guest (0930 hrs - 0940 hrs)</p> <p>Demonstration by sniffer dog squads (0940 hrs - 1000 hrs)</p>			
1000 hrs - 1020 hrs	Tea/Coffee Break			
1020 hrs - 1220 hrs	Technical Session 1 - Illegal wildlife trade scenario in India	Presentation 1 (1020 hrs - 1120 hrs)- Overview on the nature of illegal wildlife trade in India and South Asia by Dr Shekhar Kumar Niraj, Head, TRAFFIC India, New Delhi		
		Presentation 2 (1120 hrs - 1220 hrs) - Identification of specimens in trade and strategies in combating crime related to these species by Mr Kamal Dutta, IFS, and Mr S.V. Sheshadri, AD, WCCB, New Delhi		
1220 hrs - 1315 hrs	Panel Discussion 1 - Role of Inter-agency coordination for combating wildlife trade	<p>Room 1 (A) Identification of problems in interagency cooperation</p> <p>Panelists : DRI representative, Police- DIG, Dr Rajeev Srivastava, Representative MP Forest Department</p> <p>Moderators : Ms Tilotama Varma, Mr Sankar Jwal</p>	<p>Room 2 (B) Role of NGOs and scientific institutions in combating wildlife crime</p> <p>Panelists : Dr Dipankar Ghosh, Onkuri Majumadar, Freeland Foundation, Dr Surendra Verma, Dr. S. P. Goyal</p> <p>Moderator: Dr S.K Niraj</p>	<p>Room 3 (C) Role of common man in combating wildlife crime</p> <p>Kamal Dutta, WCCB Marimutthu-ZOO Outreach Karnataka FD</p> <p>Moderator: Dr. Sudhanshu Gupta</p>
1315 hrs- 1415 hrs	Lunch			

Note: The flow of the programme varied slightly from the agenda circulated before the workshop as the flow of the programme was dependent on the availability of resource personnel during the workshop.

1315 hrs- 1415 hrs	Lunch		
1415 hrs-1530 hrs	Technical Session 2 - Wildlife forensics in dealing with wildlife crime	<p>Presentation 1 –Applications of forensics and DNA techniques in wildlife crime investigations by Dr S. P. Goyal, WII, Dehradun (1415 hrs - 1500 hrs)</p> <p>Presentation 2- Standardising forensic based protocols for investigating wildlife crimes by Dr S. P. Goyal, WII, Dehradun (15 :00 to 15:30 hrs)</p>	
1530 hrs-1545 hrs	Tea/Coffee Break		
1545 hrs-1615 hrs	Launch of Wildlife Enforcement Training Manual		
1615 hrs-1715 hrs	Panel discussion 2 - Role of media and communications in wildlife crime control	<p>Room 1- (TBD) Mr Jagdish, Dr Rajeev Srivastava, Ms. Maya Sharma, Resident Bureau Editor, NDTV, Himanshu Malhotra, CS Koteeswaran, Deccan herald, Dr Shekhar Kumar Niraj, TRAFFIC</p> <p>Moderator s. Prerna Bindra, Trustee, Bagh Foundation</p>	<p>Room 2 - (TBD) Abhishek Madhukar, AFP, Mr Arvind Kumar, The Hindu,,Times of India, Dr Dipankar Ghose, WWF India; Ms TilotamaVarma, Forest, Department of Tamil Nadu Moderator: Sanjay Kapoor, Editor, Hard News</p>
1715 hrs-1730 hrs	Tea/Coffee Break		
1730 hrs-1800 hrs	Technical Session 3 - Combating wildlife crime through strategic regional cooperation in South Asia	<p>Presentation 1 - India's role in South Asia's fight against wildlife crimes through SAWEN by Ms TilotamaVarma, IPS, AD, WCCB (1730 hrs - 1740 hrs)</p> <p>Presentation 2 - Combating wildlife crime in South East Asia through inter-country collaboration and role of ASEANWEN by Ms Onkuri Mazumdar, Director, Freeland Foundation, Bangkok (1740 hrs - 1750 hrs)</p> <p>Presentation 3 - Implications of international developments and treaties on illegal wildlife trade and the role of NGOs in tackling cross border wildlife crime by Dr Shekhar Kumar Niraj, IFS, Head, TRAFFIC India (1750 hrs - 1800 hrs)</p>	
1800 -1805	Break-in session		
1805hrs - 1900 hrs	Panel discussion 3 - Strategic initiative in South Asia to combat wildlife crime through the South Asia Wildlife Enforcement Network (SAWEN)	<p>Panel members : Ms TilotamaVarma, IFS, ADG WCCB, Dr Shekhar Kumar Niraj, IFS, Head, TRAFFIC India, Onkuri Majumdar, Freeland Foundation, Uttara mehendirata, Mr Rohit Singh Moderator : Dr M K Ranjitsinh</p>	
1900 hrs- 1930 hrs	Film on Closing the Deadly Gateway		
1930 hrs onwards	Cultural Programme and Dinner		

Day 2: 5 February, 2016

Time	Session	Theme	
0830 hrs - 1015 hrs	Technical Session 4 - Intelligence collection, Investigation prosecution and cyber tracking	Presentation 1 - Intelligence collection and collation and methodologies of cyber tracking by Mr. Manish Shankar Sharma, IPS, IG, SAF (0830 hrs - 0930 hrs) Presentation 2 - Techniques of investigation and prosecution to combat illegal wildlife trade by Mr. Vivek Kishore, IPS, JD, WCCB, New Delhi (0930 hrs - 1015 hrs)	
1015 hrs - 1100 hrs	Technical Session 5 - Laws and legal procedure in prosecuting wildlife crimes	Bail and cancellation of bail in the context of wildlife offences and its impact on trials by Mr. Kartik Shukul, Advocate, Supreme Court, New Delhi and Bombay High Court	
1100 hrs - 1115 hrs	Tea/Coffee Break		
1115hrs - 1130 hrs	Break-in session		
1130 hrs - 1230 hrs	Technical Session 6 - Laws and legal procedure in investigating wildlife crimes	Improving investigation in wildlife cases (case studies) by Mr. Sanjay, Advocate, Supreme Court, New Delhi	
1230 hrs - 1330 hrs	Panel Discussion 4 - Successful application of laws in curbing wildlife crime	Room 1 - (A) Identifying current problems in investigation of wildlife crimes with Mr Sanjay, Adv., Supreme Court	Room 2 - (B) Identifying core strengths and weaknesses of wildlife crime prosecution in India with Mr Kartik Shukul, Advocate, Supreme Court and Bombay High Court
1330 hrs - 1430 hrs	Lunch		
1430 hrs - 1605hrs	Technical Session 7 - Patrolling methods	Presentation 1 : Patrolling methods in the field for better surveillance by Mr Rohit Singh, WWF, Malaysia (1430 -1545 hrs) Presentation 2 : Remote surveillance of PAs using infrared sensors by Mr Mohan Raj, WWF (1545 - 1605hrs)	
1605 hrs - 1620 hrs	Tea/Coffee Break		

1620 hrs- 1835 hrs	Technical Session 8 - Trade of non-flagship species	Presentation 1 (1620 hrs - 1705 hrs)- Trade of reptiles by Dr Chandan Jani, Scientist, Odisha
		Presentation 2 (1705 hrs - 1750 hrs)- Trade of birds by Dr Abrar Ahmed, Scientist, BNHS, Mumbai
		Presentation 3 (1750 hrs - 1835 hrs) - Trade of Marine and coastal Species by Dr Chandan Jani and Dr Shekhar Kumar Niraj ,
1835 hrs - 1920 hrs	Panel Discussion 5 - Trade in non-flagship species	Panel:Dr Shekhar Kumar Niraj, Dr Chandan Jani , Onkuri Majumdar, Dr Dipankar Ghose, , Mr S V Seshadri. Moderator : Dr M K Ranjitsinh
1920 hrs onwards	Dispersal for dinner	

Day 3 : 6 February, 2016

Time	Session	Theme of the Scenes		
07:30 hrs - 0800 hrs	Assembly and debriefing on the field exercises			
0800 hrs - 1100 hrs	Field exercise: Intelligence, prosecution and investigation	Scene 1 Market investigation and surveillance scene Facilitators WCCB, TRAFFIC and Freeland Foundation Mr S P Seshadri, WCCB, Dr S P Goyal and Mr Ritwick Dutta	Scene 2 Intelligence collection and surveillance methods Facilitators Mr. Manish Shankar, TRAFFIC and Freeland Foundation	Scene3 Poaching in the forest: Search and seizures, sample collection, drafting and investigation of poaching cases Facilitators by Dr S P Goyal , Mohan Raj and Freeland Foundation
Note: Lawyers and forensic experts to assist in Scene 1 and 3all three sessions				
1100 hrs-1130 hrs	Field exercise: Detecting and dismantling hunting equipments	Identifying traps and eliminating them in field by team from STF, TN led by Mr. Suresh		
1130 hrs-1200 hrs	Tea/Coffee Break at the Academy lawns			
1200 hrs - 1205 hrs	Break In Session			
1205hrs- 1305 hrs	Technical Session 9 -	Sunil Verma, Scientist Vishal Mali, ACF, Melghat Tiger Reserve		
1305 hrs - 1400 hrs	Lunch			

Appendix A - Agenda

1400hrs- 1445hrs	Plenary 1 – Feedback session on the exercise	Five minute presentations + 10 minute panel discussion for each group Panel- Dr S.P. Goyal, Dr Sunil Verma, Mr Ritwick Dutta, Ms Tilotama Varma, , Uttara Mehendirata, Freeland, CCFE Crime Gujarat, Vishal Mali, DRI representative Moderator: Dr Shekhar Kumar Niraj
1445 hrs - 1530 hrs	Plenary 2 – Discussing the development of a national level strategic vision of protocols for combating wildlife crime Panel: Mr Hansraj Verma, Dr N. KrishnaKumar, Mr Tilotama Verma, Dr Shekhar Kumar Niraj, BSF representative, Vishal Mali, DRI representative Moderator- Mr Ravi Singh	
1530 hrs - 1615 hrs	Training report presented by Dr Shekhar Kumar Niraj Valedictory and feedback session- conducted by Mr Hansraj Verma, IAS, Principal Secretary, TN, Dr N. Krishnakumar, IFS, PCCF (HoD), TN, and Dr. V.K Malkani, IFS, PCCF and CLWL, TN Facilitator: Dr Shekhar Kumar Niraj Vote of Thanks by TRAFFIC, WCCB and TNFD	
1615hrs	Tea and Dispersal	

Appendix B - List of participants

S.No.	Names	Designations	Organisations	Tel. No.	Email
1	Mr S Jagdish	DFO	Chhattisgarh Forest Department	8349076519	dfokondagaon@gov.in
2	Mr Bhanu Pratap Singh,	DFO	Chhattisgarh Forest Department	9424147877	pbhanuuz@yahoo.com
3	Mr. M Kirupasankar	DFO	Himachal Pradesh Forest Department		
4	Mr Satish Gupta	DFO	Himachal Pradesh Forest Department	9418471037	satishgupta23461@yahoo.com
5	Mr Ananad Jadhav	CF	Goa Forest Department	7798986135	annu-jadhav@rediffmail.com
6	Mr S K Sisodia	CCF	Gujrat Forest Department		
7	Mr Shivashankarswamy	ACF	Karnataka Forest Department		
8	Mr P.K.Patagar	ACF	Karnataka Forest Department	8197291183	parsukml@gmail.com
9	Mr K.J. Chandra	ACF	Karnataka Forest Department		
10	Mr Ramesh Kumar P	DCF	Karnataka Forest Department	8762801602	rameshifos@gmail.com
11	Mr Siva Shankar S	DCF	Karnataka Forest Department	8762414672	sivaforester@gmail.com
12	Mr Chandrakumar	RFO	Karnataka Forest Department		
13	Mr Prakash Somaning Honnakore	Dog Handler	STF, Karnataka Forest Department		
14	Mr Kalaklakar Mage	Dog Handler	STF, Karnataka Forest Department		
15	Mr R Keerthi	Asst. DCF	Kerala Forest Department	9446953801	keerthijathishifs@gmail.com
16	Mr Narendra Babu. S	Asst. DCF	Kerala Forest Department	8547768805	narendrababuifs@gmail.com
17	Ms Shilpa V Kumar	DCF	Kerala Forest Department		
18	Mr B. N. Anjan Kumar	DCF	Kerala Forest Department		
19	Mr. Karthikeyan	DFO	Kerala Forest Department		
20	Mr K. Vijayananthan	DFO	Kerala Forest Department	9447979053	anandkifs@gmail.com
21	Mr M Bimal	DFO	Kerala Forest Department		
22	Mr Ritesh Sarothiya	ACF	Madhya Pradesh Forest Department	9424791452	riteshsarothiya@gmail.com
23	Mr N.Nigam	RO	Madhya Pradesh Forest Department	9424797032	nitinkumar.manit1947@gmail.com
24	Mr Ashish Khare	AIG	STF, Madhya Pradesh Police	942531010	ashishkhare100@yahoo.in
25	Mr. Manish Shankar Sharma	IGP	Special Armed Force, Madhya Pradesh		
26	Mr Vishal Mali	ACF	Maharashtra Forest Department		
27	Mr S Madbhushi	DFO	Maharashtra Forest Department	9422835056	smadbhushiforest@gmail.com
28	Mr A.K. Badkelwar	DFO	Maharashtra Forest Department	9423115733	abhayb59@gmail.com
29	Mr. S.K. Gehra	DFO	Odisha Forest Department		
30	Mr. Santosh Joshi	DFO	Odisha Forest Department		
31	Mr Chandan Jani	Scientist	Odisha		
32	Ms C Vidhya	ACF	Tamilnadu Forest Department	9445212989	vidhyaifstn@gmail.com
33	Mr JR Samartha	ACF	Tamilnadu Forest Department	7708324267	samartha.jr@gmail.com

sessions while a few missed out on registering at the registration desk. This list also does not include the large number of volunteers who had participated and helped in organisation of the workshop.

Appendix B - List of Participants

S.No.	Names	Designations	Organisations	Tel. No.	Email
34	Mr A Pushpakaran	ACF	Tamilnadu Forest Department	9443759789	apushapakaran@gmail.com
35	Mr S Arokiyaraj Xavier	ACF	Tamilnadu Forest Department	9443241771	arokiyarajxavier@gmail.com
36	Mr V A Saravanan	ACF	Tamilnadu Forest Department	9585038328	saravananfro@gmail.com
37	Mr S Balasubramanian	ACF	Tamilnadu Forest Department	8807431833	balagis52002@gmail.com
38	Mr N Natarajan	ACF	Tamilnadu Forest Department	9443815783	natrajan.acf@gmail.com
39	Mr AS Mohan Ram	ACF	Tamilnadu Forest Department	9840794251	mohanram1133acf@gmail.com
40	Mr S Thangapazham	ACF	Tamilnadu Forest Department	9994449057	-
41	Mr AJ Rajasekar	ACF	Tamilnadu Forest Department	9442971409	a.rajasekarfro@gmail.com
42	Mr V Subbaiah	ACF	Tamilnadu Forest Department	9626267771	vallivel.subbiah@gmail.com
43	Mr PM Rajkuma	ACF, Forest Protection Squad, Madurai	Tamilnadu Forest Department	9498106781	1982rsekar@gmail.com
44	Dr Prabhakaran	APCCF	Tamilnadu Forest Department		
45	Mr K Sudhagar	Asst. Director	Tamilnadu Forest Department	9942991511	k.sudhagar72@gmail.com
46	Mr Vijendra Singh Malik	CCF (P & V- SG), Group Leader	Tamilnadu Forest Department		
47	Mr V. Thirunavukarasu	CF (Genetics) Coimbatore	Tamilnadu Forest Department	9443153200	vrevthiru@gmail.com
48	Ms R Kanchana	DD, KMTR	Tamilnadu Forest Department	9442358205	drkanchanaraju98@yahoo.co.in
49	Mr Nihar Ranjan	DFO	Tamilnadu Forest Department		
50	Mr N. Satheesh	DFO	Tamilnadu Forest Department	9442611476	nsatheeshifs@gmail.com
51	Mr K. Tirumal	DFO	Tamilnadu Forest Department	9626212412	kthirumalifs@gmail.com
52	Mr T Ritto Cyriac	DFO	Tamilnadu Forest Department		
53	Mr V C Rahul	DFO	Tamilnadu Forest Department		
54	Mr A S Marimuthu	DFO	Tamilnadu Forest Department	9445468522	asmarimuthuifs@gmail.com
55	Mr D Venkatesh	DFO	Tamilnadu Forest Department	9442527576	venkatforest@gmail.com
56	Mr S Gurusamy	DFO	Tamilnadu Forest Department	9443143388	gurudfo@gmail.com
57	Mr K Rajkumar	DFO & DD STR	Tamilnadu Forest Department	9994339765	rajkumar7771@gmail.com
58	Mr G Sivamani	Forestry Extension officer Nilgiris	Tamilnadu Forest Department	9442136324	gsivamani.ganpathy@gmail.com
59	Mr V Naganathan	GM, Arasu Rubber corporation, Nagarcoil	Tamilnadu Forest Department		
60	Dr V K Melkani	PCCF (WL) & CWLW	Tamilnadu Forest Department		
61	Dr N Krishnakumar	PCCF(HoD)	Tamilnadu Forest Department		
62	Mr K Geethanjali	WLW	Tamilnadu Forest Department		
63	Mr Deepak S Bilgi	WLW	Tamilnadu Forest Department	9787071067	deepakbilgi@gmail.com
64	Mr T K Ashok Kumar	WLW	Tamilnadu Forest Department	9486490064	tkashokacf@gmail.com
65	Mr A Udhayan	CCF	Tamilnadu Forest Department		
66	Mr Sudhanshu Gupta	CCF	Tamilnadu Forest Department		

S.No.	Names	Designations	Organisations	Tel. No.	Email
67	Raghuram Singh	APCCF (TRs)	Tamilnadu Forest Department	n/a	
68	Mr Sudhanshu Gupta	ADGP	STF, Tamilnadu		
69	Mr. J Suresh	Inspector of Police	STF, Tamilnadu	9498106779	jsuresh.best@gmail.com
70	Mr K Raja	Inspector of Police	STF, Tamilnadu		
71	Mr V Periasamy	Dog Handler	STF, Tamilnadu		
72	Mr K Jayaveerapandian	Dog Handler	STF, Tamilnadu		
73	Mr. Ravinder	DFO	Telangana Forest Department		
74	Mr. Joji	DFO	Telangana Forest Department	9440810117	maddelajoji@gmail.com
75	Mr P R Marak	CF	Meghalaya Forest Department	9436998822	probistinemark@yahoo.com
76	Mr Vidhyasagar	DCF	Mizoram Forest Department		
77	Ms Caroline	WLW	Nagaland Forest Department	9436019658	carolinekourinta@gmail.com
78	Mr. Ashish Tiwari DFO Katania	DFO	Uttar Pradesh Forest Department		
79	Mr. Manish Mittal	DFO	Uttar Pradesh Forest Department	9415074292	maneeshmittal@gmail.com
80	Mr S.Mehra	CF	Uttarakhand Forest Department	9458162276	surenmehra@gmail.com
81	Mr S. Badola	DD, CTR	Uttarakhand Forest Department		
82	Mr Raju Sarkar	ADFO	West Bengal Forest Department	9434868357	sarkar.raju078@gmail.com
83	Mr Satyamoorathi	DCF	Puduchery Forest Department		
84	Ms Shilpa	Asst. Commandant	Coast Guard	8424805754	shilpamalik14@gmail.com
85	Mr M Venkatesan	Commandant	Coast Guard	9445510820	cash2vekatesan@gmail.com
86	Mr PB Mandal	Commandant	Coast Guard	8130400339	pbm03395@gmail.com
87	Mr Donny Micheael	DIG	Coast Guard	9819811531	donnymyke@gmail.com
88	Mr C Sylendra Babu	ADGP	Coastal Security Group, Tamilnadu		
89	Mr M. Periasamy	DD, DRI-BZU	Directorate of Revenue Intelligence		
90	Mr P. Kannabiran	SIO, DRI-CZU	Directorate of Revenue Intelligence	9443005115	kannabi74@yahoo.com
91	Mr Balachandra Gaikwad	Asst. Commandant	Indo Tibetan Border Police Force	9890533555	underillusion@gmail.com
92	Mr. Kartik Shukul,	Advocate	Supreme Court of India, New Delhi		
93	Mr. Sanjay Upadhyay,	Advocate	Supreme Court of India, New Delhi		
94	Mr. Ritwick Dutta	Advocate	Supreme Court of India, New Delhi		
95	Mr Gururaj	Dy Commandant	Border Security Force		
96	Mr Anil Kumar	Dy Commandant	Border Security Force	7587223601	anilvats74@gmail.com
97	Mr MD Tamang	Dy Commandant	Seema Suraksha Bal	9475044212	mdtamang@yahoo.com
98	Mr BC Joshi	Dy Commandant	Seema Suraksha Bal	8004929001	joshibcllb@gmail.com
99	Mr IS Panmei	Dy Commandant	Seema Suraksha Bal	9434737596	dinniesamrow@yahoo.co.in
100	Mr Surendra Vikram	Dy Commandant	Seema Suraksha Bal	8761870500	vikramsurendrea@yahoo.com

Appendix B - List of Participants

S.No.	Names	Designations	Organisations	Tel. No.	Email
101	Mr D Madhu	SP & Asst. Director (Training)	Police		
102	Dr Rajat Bhargava	Scientist	BNHS		
103	Mr Sunil Kumar Verma	Scientist	CCMB		
104	Mr Surendra Verman	Sr Scientist	IISC Bangalore		
105	Ms Talish Ray	Advocate	Freeland Foundation		
106	Ms Uttara	Director	Freeland Foundation	9449008276	uttara@free-land.org
107	Ms. Onkuri Mazumdar	Managing Director	Freeland Foundation	9560482494	onkuri@freeland.org
108	Mr. Sanjay Kapoor	Editor	Hard News		
109	Mr Himanshu Malhotra	Wildlife Film Maker	Multi Media	9811184099	naturewatch69@gmail.com
110	Mr G Anand Krishnan	Journalist	Media		
111	Mr C S Koteeswaran	Journalist	Deccan Chronicle		
112	Mr Abhishek Mdhukar	Journalist	AFP		
113	Mr B Arvind Kumar	Journalist	Hindu	9840378627	ourwind@gmail.com
114	Mr R G Jagdish	Journalist	Dinamani		
115	Ms Maya Sharma	Resident Editor	NDTV, Bangalore		
116	Dr M. K. Ranjitsinh	Former Member Secretary Project Tiger Task Force	Project Tiger	9868888456	mkranjitsinh@gmail.com
117	Dr S. P. Goyal	Scientist Emeritus	WII	9410186496	goyalsp@wii.gov.in
118	Mr Rohit Singh	Enforcement & Capacity Building Specialist	WWF-Tigers Alive Initiative	85595202849	rsingh@wwfnet.org
119	Ms Akanksha Dilip Patil				
120	Ms Tilotama Varma, IPS	Additional Director	WCCB	8447716151	ashishtilotama@yahoo.com
121	Mr S.V.Sheshadri	Asst. Director	WCCB	7042516989	adalm@wccb.gov.in
122	Mr Vivek kishor	Joint Director	WCCB	8585959595	vivekkishore@gmail.com
123	Mr Kamal Datta, IFS	Joint Director	WCCB	9654281242	kamal.datt@gov.in
124	Mr Bhoominathan	Coordinator, WGNL	WWF-India		
125	Mr Ravi Singh	SG and CEO	WWF-India		
126	Mr Joydeep Bose	Coordinator, Eastern Himalayas Program	WWF-India		
127	Dr Dipankar Ghose	Director, Species and Landscapes Program	WWF-India		
128	Dr Shekhar Kumar Niraj	Head	TRAFFIC India	9868178927	shekhar.niraj@gmail.com
129	Ms Dilpreet Chhabra	Senior Manager-Communications	TRAFFIC India	9899000472	dchhabra@wwfindia.net
130	Ms Shaleen Attre	Programme Officer	TRAFFIC India	9818062986	shaleen.attre@gmail.com

S.No.	Names	Designations	Organisations	Tel. No.	Email
131	Ms Divyani Nag	Intern	TRAFFIC India	9818881992	divyani.nag13@gmail.com
132	Mr Shubhobroto Ghose	Sr. Program Officer	TRAFFIC India	9953965242	sgghosh@wwfindia.net
133	Mr Amar Nath Choudhary	Program Officer-Data Analysis	TRAFFIC India	9818392039	amar2390@gmail.com
134	Mr Dhruva Jyoti Dutta	Asst Manager-Admin and programme coordination	TRAFFIC India	9873579287	ddutta@wwfindia.net
135	Mr Balaji Seshan	Consultant	TRAFFIC India	9940073713	balasesh@gmail.com
136	Mr Vimal	Consultant	TRAFFIC India	7829437363	vimalraj29@gmail.com
137	Mr Sarath Babu	Consultant	TRAFFIC India	9880108801	sharathbabu@gmail.com
138	Mr Mohan Raj	Technical Advisor	WWF-India		
139	Mr G Madhankumar			8608134157	madhan8608@gmail.com
140	Ms Shriranjani L Iyer	OSAI		770800023	shriranjani8@gmail.com
141	Mr Subramaniya Rajha	W.A.R		9843839137	ksrajha@gmail.com
142	Mr R Mohammed Saleem	President	Environment Conservation Group	9787878910	ecgwild@gmail.com
143	Dr Kirpa Sarkar	DFO	Great Himalayan National Park, Himachal Pradesh	9418443600	kirupasha@gmail.com
144	Dr K Balakrishnan	ASP	Vellore District	948787101	vetsuki1975@gmail.com
145	Mr D Manikandan			8124846963	manikandan92kandan@gmail.com
146	Mr C Badrasamy	DFO	Nilgiris	9489115111	badrasamydcf2010@gmail.com
147	Mr Bharathi Dasam	Secretary		9843211772	arulagamindia@gmail.com
148	Mr Vinny R Peter	Animal Rescuer	Coimbatore	9943325271	vinnyrpeter@gmail.com
149	Mr V Augustine Peter	DSP		9498174668	
150	Dr KoKo Rose	DFO	Kalagarh Tiger Reserve, Uttarakhand	9456360728	kokorose1982@gmail.com
151	Dr N S Manohara	FVO	Comibatore	9443937554	manoharacoimbatore@gmail.com
152	Mr K K Kaushe	CCF	TNFA, Coimbatore	9159950185	kaushe64@gmail.com
153	Mr K kalidasan	Member	SBWT,OSAI, Tamil Nadu	9443022655	pasumaiosai@gmail.com
154	Mr Joseph Reginald	Animal Rescuer		986521276	josephreginald@gmail.com
155	Dr K bansi Jhann	APF		9894424686	brisbansi@yahoo.com

Appendix C - Gallery: Moments from the Workshop

Photo credit: All photos by TRAFFIC India













Appendix D - Media Coverage

The First National Workshop First National Workshop on Capacity Building for Combating Wildlife Crime in India was covered by print, online and electronic media. While there were over 12 media hits in print and online editions of prominent newspapers such as Press Trust of India, Business Standard, Hindu, Deccan Chronicle, The New Indian Express and Times of India, news television channels like Dinamalaar, Dina Tanthi, NDTV, Raj TV, Jaya TV and Sun TV also covered the workshop, highlighting various aspects and the need to combat wildlife crime in India.



THE HINDU

Home Coimbatore ▾ Subscribe

Coimbatore

Strong measures needed to combat wildlife crimes

Updated: February 5, 2016 05:32 IST | Staff Reporter



Principal Chief Conservator of Forests N. Krishnakumar speaking at the national workshop on capacity building for combating wildlife crime in India, in Coimbatore on Thursday.—Photo: M. Periasamy

Increasing per capita income due to the growing global economy could be a reason for demand for wildlife dead or alive as people like to find out more avenues for spending their additional income in a luxurious manner, said V.K. Melkani, Principal Chief Conservator of Forests (PCCF) for Wildlife and Chief Wildlife Warden.

He was addressing bureaucrats at the inaugural of the three-day national workshop on 'Capacity Building for Combating Wildlife Crime in India', on Thursday by TRAFFIC - India. Around 100 officers in the rank of District Forest Officers, Conservator of Forests and Chief Conservator of Forests from 18 States and personnel from six border security forces and other departments took part in the event at the Tamil Nadu Forest Academy.

Mr. Melkani said that wildlife crimes were among the three major crimes worldwide, next only to illegal arms and drug trades.



THE NEW INDIAN EXPRESS

Home ▾ States ▾ Tamil Nadu

Dog Squads Roped in to Fight Poaching

By S Seethil Kumar | Published: 05th February 2016 04:15 AM | Last Updated: 05th February 2016 04:15 AM



A sniffer dog demonstrating its abilities during a workshop on Wildlife Law Enforcement in Coimbatore on Thursday | PRKASHI CHELLAMUTHU

COIMBATORE: In an attempt to protect wildlife from poachers and other illegal crime activities in the forest areas in Tamil Nadu, the State forest department is planning to involve sniffer dog squads in a first kind of initiative the sniffer dogs squad would be engaged in crime detection activities in the forest areas in three tiger reserves soon.

According to sources, the three dogs squad likely to join the duty after completing nine months in Anamalai, Mudumalai and Kalokadu Mundanthural tigers reserves in the state. Currently, dogs were under going training at National training center for dogs at Gwalior.

Three tiger reserves shares borders with another states and there is high chance for poaching and smuggling. However engaging sniffer dog squad will be helpful to detect crime and conserve forest and protect wildlife, sources added. Dogs will be used for patrolling, detect wild animals skin being smuggled in vehicles, tracking humans who were smuggling Korja. Moreover the dogs have been given training to attack criminals and help to nab them. According to VJ Karadasamy, field director, Anamalai Tiger Reserve (ATR) 'our staff has been handling dog at Gwalior. As of now we have no spot to engage the dogs, we will decide on it later.'



THE TIMES OF INDIA Chennai

Home City Chennai Crime Civic Issues Politics Schools & Colleges Events More Cities ▾ Property

Training programme begins at Tamil Nadu Forest Academy

Pratiksha Ramkumar, TNN | Feb 4, 2016, 04:09 PM IST

COIMBATORE: Wildlife law enforcement agencies across the country began a three-day training programme at the Tamil Nadu Forest Academy here on Thursday to update their knowledge in and skills to curb poaching and illegal wildlife trade.

Organised by TRAFFIC, a global wildlife trade monitoring network, the Tamil Nadu Forest Department, Tamil Nadu Forest Academy (TNFA), Wildlife Crime Control Bureau (WCCB), and WWF-India, the workshop focuses on inadequacies faced by the agencies, measures taken so far and ways to identify original animal-based products.

They also intent to come up with a national-level strategy and new protocols to combat wildlife crime.

Appendix E - Glossary

Abbr.	Full Form
ASEAN WEN	Association of Southeast Asian Nations' Wildlife Enforcement Network
BNHS	Bombay Natural History Society
CDR	Call Detail Record
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
Cr.PC.	Code of Criminal Procedure, 1973
CWLW	Chief Wildlife Warden
DEFRA	UK's Department for Environment, Food & Rural Affairs
DGFT	Directorate General of Foreign Trade
DNA	Deoxyribonucleic acid
EPA	US Environmental Protection Agency
ESA	USA's Endangered Species Act
EXIM	Export and Import Policy of India
GDP	Gross Domestic Product
GPS	Global Positioning System
IFS	Indian Forest Service
IPS	Indian Police Service
IT	Information Technology
ITBP	Indo-Tibetan Border Police
IUCN	International Union for Conservation of Nature
MIKE	Monitoring the Illegal Killing of Elephants
MoEFCC	Ministry of Environment, Forests and Climate Change
NTCA	National Tiger Conservation Authority
PA	Protected Area
PCCF	Principal Chief Conservator of Forests
SAARC	South Asian Association for Regional Cooperation
SAWEN	South Asia Wildlife Enforcement Network
SMART	Spatial Monitoring and Reporting Tool
SMARTER	Spatial Monitoring and Reporting Tool Ecological Recorder
SOP	Standard Operating Procedure
UN	United Nations
WCCB	Wildlife Crime Control Bureau
WCS	Wildlife Conservation Society
WII	Wildlife Institute of India
WITNESS	Wildlife Training Net for Species Signature
WPA 1972	Wildlife (Protection) Act, 1972

TRAFFIC India is the country office of TRAFFIC, a global wildlife trade monitoring network and in India, it operates as a programme division of WWF-India. TRAFFIC is the leading non-governmental organisation working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

For more information contact:

TRAFFIC India Office
C/O WWF-India
WWF-India Secretariat
172-B, Lodi Estate
New Delhi-110003

Tel: +91-11-41504786/43516290

Email: trafficind@wwfindia.net

Website: www.trafficindia.org ; www.traffic.org

TRAFFIC

the wildlife trade monitoring network

is a strategic alliance of

