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INTERNATIONAL CENTRE FOR ENVIRONMENT
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GREEN FILES

(Newsletter on Environment Audit and Sustainable Development issues)

EDITORIAL

New Year Greetings!

Green Files, a quarterly newsletter published by iCED features glimpses of recent environment news, events, publications, persons and environment projects in focus. Emerging trends, innovations, initiatives and efforts of different organizations to protect the environment also find reflection in this newsletter.

During the quarter October-December 2019, iCED organized the seventh edition of its flagship International Training Programme (ITP) on “Introduction to Environmental Auditing” as a Global Training Facility of INTOSAI Working Group on Environmental Audit (WGEA). Four National Training Programmes (NTPs) for Officers dealing with Legal and RTI cases, Audit of Sustainable Cities and Communities, Audit of Environment Management in Government Establishments and IA&AD and Tools and Techniques on Use of Environmental Data in Audit were conducted during October-December 2019.

iCED also conducted a four day Management Development Programme for officers from the Supreme Court of India during 19-22 December, 2019.

This newsletter includes articles on *Cruise Tourism* and *Bishnoi: a Belief System that Supports an Environmental Commitment* and brief about SDG Summit held in 2019 in addition to other features of Green Files.

We at iCED, look forward to your suggestions to make Green Files more useful and appealing. Contributions in any form within the broad scope of the newsletter are encouraged. These may be mailed to iced@cag.gov.in

With regards,

Manish Kumar
Director General, iCED

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I. iCED News

iCED conducted the seventh edition of its flagship **International Training Programme on Introduction to Environmental Auditing** as Global Training Facility of INTOSAI WGEA, from 25th November to 07th December, 2019.



Participants of ITP with Shri A W K Langstieh, Deputy Comptroller and Auditor General

There were 25 participants from 16 Supreme Audit Institutions (SAIs) across the world viz. Albania, Bhutan, European Court of Auditors, Egypt, Fiji, Finland, Ghana, India, Kuwait, Maldives, Sudan, Tanzania, Vanuatu, Vietnam, Zambia and Romania. Trainers for various modules were contributed by SAI Finland, European Court of Auditors, SAI Indonesia, SAI Estonia and SAI India. In addition to the subjects such as Audit of Water Issues, Waste Management, Biodiversity; other important subject such as “Greening SAIs”; “Market Based Instruments”; “Audit of SDGs”; “Environmental Impact Assessments and its Audit” and “Renewable Energy and Energy Efficiency” were also covered during this programme.

Field visit to Tarun Bharat Sangh (TBS), a non-governmental organization located at Kishori-



Visit to Keoladeo National Park

Bhikampura in Alwar district of Rajasthan was organised as a part of this programme to illustrate sustainable water conservation practices.

As a part of training on biodiversity, participants visited Keoladeo National Park, Bharatpur a world heritage wetland and a Ramsar site to



Visit to Tarun Bharat Sangh

understand its ecology and associated issues in biodiversity conservation. Mr. Mohit Gupta (IFS), Director, Keoladeo National Park briefed the participants about biodiversity and habitat



Visit to Taj Mahal

conservation measures undertaken by forest

department. The participants also visited Taj Mahal at Agra and were overwhelmed by craftsmanship.

Feedback from the participants was highly encouraging and indicated that the training aided in enhancing their understanding of various subjects and associated issues related to environment and sustainability.

Shri Venkatesh Mohan, Deputy Comptroller and Auditor General (C) cum Chairman Audit Board graced the valediction of this ITP. DAI while addressing the participants, emphasised on the responsibility of global SAI community for ensuring accountability in implementation agenda of Sustainable Development Goals. He also stated that capacity building initiative of SAI India with the partnership of INTOSAI WGEA is bearing fruits and iCED is proving to be an important instrument in this partnership. DAI expressed his happiness on witnessing the seventh edition of ITP.

A three day **National Workshop on Conservation and Sustainable use of the Oceans, Seas and Marine Resources** was held at iCED from 13th to 15th November, 2019. Total 35 participants from various field offices participated in this workshop.

iCED also conducted a **Management Development Programme for officers from Supreme Court of India** during 19-22 December, 2019. The objective of the training was to develop a professional, impartial and efficient

cadre that is responsive to the needs of the citizens. The programme was attended by 21 senior level officers of Supreme Court of India.



Supreme Court officers at iCED

In addition to above programmes, four National Training Programmes (NTPs) were also conducted during October-December 2020 on following subjects:

1. **Training Programme for Officers dealing with Legal and RTI cases**
2. **Audit of Sustainable Cities and Communities**
3. **Audit of Environment Management in Government Establishments and IA&AD**
4. **Tools and Techniques on use of Environmental Data in Audit**

One UN Audit Training Programme for teams assigned audit of UNOV, ICT, ECA and UNCC/ITC was also conducted during the quarter.

iCED hosted the 10th Indo-China Young Auditors' Forum delegation from 07 – 10 December 2019 comprising ten officers from SAI China and ten officers from the SAI India. During their visit, the delegation was also briefed about setting up of iCED, features, role and activities.



Members of the Indo - China Young Auditors' Forum with Shri Manish Kumar Director General, iCED

➤ **Ajit Singh Choudhary**

II. INTOSAI/ASOSAI News

EUROSAI-AFROSAI SDG- Seminar¹, Lisbon

The seminar on "Sharing experiences about auditing for SDGs – A view from different Regions", was organized by the *Tribunal de Contas of Portugal* on 22 - 23 November in Lisbon.

Around 150 representatives of INTOSAI's Regional Organizations (AFROSAI, EUROSAI and OLACEFS), global bodies (General Secretariat, IDI) and external stakeholders (government of Portugal, European Commission, UNDP², GIZ³) exchanged their experiences with regard to auditing the preparedness of national governments to implement the SDGs as well as auditing the implementation of concrete SDG targets. The Secretary General of INTOSAI presented lessons learned from SDG audits within the INTOSAI community and initiatives of

INTOSAI to support SAIs in their SDG-related work. Furthermore, she emphasized the importance of the cooperation between INTOSAI's Regional Organizations in this regard as well as the necessity for SAIs to integrate the SDGs in their daily work.

XXIII INCOSAI 2019, Moscow

XXIII INCOSAI⁴, was held in Moscow, Russian Federation in the last week of September 2019. The Moscow Declaration comprises the results of the comprehensive discussions on the two main Congress themes:

- Information technologies for the development of the public administration
- The role of the Supreme Audit Institutions in the achievement of the national priorities and goals

It also provides guidance for the activities and strategies of INTOSAI and its member SAIs for the upcoming years while, at the same time, taking account of the SDGs and the fundamental changes in public auditing and public policy worldwide.

In ten concrete theses, SAIs and INTOSAI commit themselves to provide independent external oversight on the achievement of nationally agreed targets including those linked to the SDGs, to respond effectively to opportunities brought by technological advancement and to enhance the impact of SAIs. Three side events on

¹ <https://www.intosai.org/news/euroesai-afrosai-sdg-seminar>

² United Nations Development Programme

³ German Corporation for International Cooperation

⁴ <https://www.intosai.org/news/xxiii-incosai-2019-in-moscow>

the role of SAIs in achieving the SDGs, gender equality and fight against corruption were held. In the framework of the side event on SDGs, the Secretary General of INTOSAI reported on the state of SAI activities with regard to the monitoring of SDG implementation. SDG-related audits were carried out by already more than 100 SAIs and numerous frameworks and guidelines have been prepared to support SAIs in this matter. IDI also presented an "SDG Audit Model", which attracted great interest. More than 650 delegates representing 168 Supreme Audit Institutions and international organizations attended the event.

➤ **Manoj Kumar**

III. State/UT in Focus: Lakshadweep

Lakshadweep ⁵ is India's smallest union territory. It is located in the west of the Indian mainland. It is an archipelago consisting of 36 islands with an area of 32 sq. km. All islands are in the emerald Arabian Sea almost 220 to 440 kms away from the coastal city of Kochi, Kerala. The natural landscapes, the sandy beaches, abundance of flora and fauna and the absence of a rushed lifestyle enhance the mystique of Lakshadweep.

Population (2011 Census)

Population	Male	Female	Total
Lakshadweep	33123	31350	64473

Forests

Lakshadweep islands have a forest cover of 27.07 sq. km which is 97.06% of Union Territory's geographical area⁶.

Flora

Coconut, Thenga (*Cocos nucifera*) is the only crop of economic importance in Lakshadweep. These are found in different varieties such as Laccadive micro, Laccadive ordinary, green dwarf etc. Two different varieties of sea grass are seen adjacent to the beaches. They prevent sea erosion and movement of the beach sediments. Some of the shrub jungles plant ⁷ are unevenly grown throughout the islands. The flora also include Banana, Vazha, Colocassia, Drumstick, moringakkai, Bread Fruit, Chakka and Wild Almond.

Fauna⁸

The marine life of the sea is quite elaborate. The commonly seen vertebrates are cattle and poultry. Oceanic birds generally found in one of the uninhabited islands known as *PITTI*. This island has been declared as a bird sanctuary.

Molluscs forms are also important from the economic view point. The money cowrie are found in abundance in the shallow lagoons and reefs of the islands. Among crabs, the hermit crab is the most common. Colorful coral fish such as parrot fish (*Callyedon sordidus*), Butterfly fish

⁵ <https://lakshadweep.gov.in/>

⁶ ISFR 2015

⁷ Kanni (*Scaevolakeeningil*), Punna, (*Calaphylluminophyllum*), Chavok (*Casurina equisetifolia*), Cheerani (*Thespesia Populnea*)

⁸ <https://lakshadweep.gov.in/about-lakshadweep/fauna-flora/>

(Chaetodon auriga), Surgeon fish (Acanthurus lineatus) are also found in plenty.

Environmental Concerns

Rapid erosion, turbulent seas and rising ocean temperatures brought on by climate change pose serious threats to the coral atolls. Coral reefs play an important role in island formation and providing a resource base for islanders. Coral islands the world over have a unique defense system in the form of reefs. They also act as wave breakers during storm surges.

However, degraded condition of coral system in Lakshadweep is not encouraging. As per scientists, water temperatures are increasing faster in the Arabian Sea than elsewhere in the world's oceans, often spikes in the sea temperatures lead to mass bleaching of corals. Major bleaching in 1998, 90% corals dies and in 2015, another bleaching resulted in 70% death of corals. Corals take 2-3 years to recover from bleaching event.

An island sank under the sea. The sinking of Parali I was noticed in the early years (2011-12) of this decade by researcher R. M. Hidaythulla, a doctoral student, Calicut University mapping biodiversity in the five small and uninhabited islands of the Bangaram atoll. Such incidents are a stark reminder of the clear and present danger that climate change poses to small islands worldwide.

➤ **Virendra Jakhar**

IV. Environmental News

Ministry of Coal to establish Sustainable Development Cell for Environmental Mitigation Measures⁹

Ministry of Coal, Government of India has decided to establish a 'Sustainable Development Cell' (SDC) in order to promote environmentally sustainable coal mining in the country and address environmental concerns during the decommissioning or closure of mines. SDC will advise, mentor, plan and monitor the mitigation measures taken by the coal companies for maximizing the utilization of available resources in a sustainable way, minimizing the adverse impact of mining and mitigating it for further ecosystem services. This cell will also formulate the future policy framework for the environmental mitigation measures including the Mine closure Fund. SDC will execute following tasks in a planned manner:

- Land amelioration and afforestation
- Air quality, emission and noise management
- Mine water management
- Sustainable Overburden Management
- Sustainable Mine Tourism
- Planning and Monitoring
- Policy, Research, Education and Dissemination

Water Quality Report for State Capitals & Delhi, Bureau of Indian Standards (BIS)¹⁰ released by Ministry of Consumer Affairs, Food & Public Distribution

⁹ <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1596526>

¹⁰ <https://pib.gov.in/newsite/PrintRelease.aspx?relid=194516>

Ministry of Consumer Affairs, Food & Public Distribution with its focus on providing quality products to consumers which includes providing clean and safe drinking water for all and in line with *Jal Jeevan* Mission, has undertaken a study through the Bureau of India Standards (BIS) on the quality of piped drinking water being supplied in the country and also rank the States, Smart Cities and even Districts based on the quality of tap water.

In the first phase, the samples of drinking water were drawn from various locations across Delhi and in the second phase samples were drawn from 20 State capitals and sent for testing as per Indian Standard 10500:2012 (Specification for Drinking Water) as set by the BIS.

Tests were conducted on various parameters such as Organoleptic¹¹ and Physical Tests, Chemical test, Toxic substances and Bacteriological tests in the first stage.

A vast majority of the samples have failed to comply with the requirements of IS 10500:2012 in one or more parameters. In Delhi, all the samples drawn from various places did not comply with the requirements. In the cities of Hyderabad, Bhubaneswar, Ranchi, Raipur, Amravati and Shimla, one or more samples did not comply with the requirements and none of the samples drawn from 13 of the State Capitals i.e. Chandigarh, Thiruvananthapuram, Patna, Bhopal, Guwahati,

Bengaluru, Gandhinagar, Lucknow, Jammu, Jaipur, Dehradun, Chennai, Kolkata complied with the requirements of the Indian Standard. All samples drawn from Mumbai were found to comply with the requirements

In the third phase, samples from Capital cities of North Eastern States and Smart Cities identified by Ministry of Housing and Urban Affairs have been drawn and are being tested. The result of these are expected by 15th January 2020. While in the fourth phase, it is proposed to test samples drawn from all the district headquarters of the country and their testing is planned to be completed by 15th August 2020.

NSSO Survey on Drinking Water, Sanitation, Hygiene and Housing condition in India¹²

The National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI) has conducted a survey on Drinking Water, Sanitation, Hygiene and Housing Condition as a part of 76th round¹³ of National Sample Survey (NSS) (July –December 2018).

The main objective of the survey was to collect information on facilities of drinking water, sanitation along with housing facilities available to the households and the micro environment surrounding the houses which are important determinants of overall quality of living condition of the people.

¹¹ the result of evaluating **water** based on smell, taste, color, and turbidity. If the **water** has an unusual taste or smell (or it is cloudy or colored), it can be interpreted as a health risk and a problem in the **water** source, its treatment, or in the **water** network

¹² <https://pib.gov.in/Pressreleaseshare.aspx?PRID=1593252>

¹³ [National Sample Survey \(NSS\) report no. 584](#)

Some important findings of the survey, were:

i. Drinking water facility

- a. The major source of drinking water was hand pump in the rural areas and piped water urban areas.
- b. About 48.6% of the rural and about 57.5% in the urban areas had exclusive access to principal source of drinking water.
- c. About 51.4% of the households in the rural and about 72.0% in the urban areas used improved source of drinking water, sufficiently available throughout the year located in the premises.

ii. Bathroom and sanitation facility

- a. About 50.3% of the households in the rural and about 75.0% in the urban areas had exclusive access to bathroom.
- b. About 71.3% of the households in the rural and about 96.2% in the urban areas had access to latrine.
- c. About 50.9% of the households in rural and 48.9% in urban areas used flush/pour-flush to septic tank type of latrine.
- d. Among the households which had access to latrine, about 3.5% of the household members in the rural areas and about 1.7% of the household members in the urban areas never used latrine.
- e. Among the households using latrine, about 4.5% of the households in the rural areas and about 2.1% of the households in the urban areas reported that water was not available in or around the latrine used.

iii. Tenurial status and household characteristics

- a. About 96.0% of the households in the rural and about 63.8% in the urban areas had their own dwelling unit.
- b. Among the households living in houses (i.e. households with dwelling units), about 96.7% of the households in the rural and about 91.5% in the urban areas used the house for residential purpose only.
- c. Among the households living in houses, about 89.0% of the households in the rural and about 56.4% in the urban areas had independent house.
- d. Among the households living in houses, about 76.7% of the households in the rural and about 96.0% in the urban areas had the house of pucca structure.
- e. Among the households living in houses, average floor area of the dwelling unit was about 46.6 sq. m. in the rural and about 46.1 sq. m. in the urban areas.

iv. Electricity for domestic use

Among the households living in houses, about 93.9% of the households in the rural and about 99.1% in the urban areas had electricity for domestic use.

v. Micro environment

- a. Among the households living in houses, about 48.3% of the households in the rural and about 86.6% in the urban areas used LPG as fuel for cooking.

- b. Among the households living in houses, about 48.1% of the households in the rural areas disposed-off household waste water without treatment to open low land areas/streets. In the urban areas, about 71.1% of the households disposed-off household waste water without treatment to drainage system.
- c. Among the households living in houses, about 80.4% of the households in the rural areas had no arrangement for collection of household garbage. In the urban areas, panchayat/municipality/corporation made arrangement for collection of household garbage for about 74.1% of the households.

Tiger corridors in Country¹⁴

The National Tiger Conservation Authority (NTCA) in collaboration with the Wildlife Institute of India (WII) has published a document titled “[Connecting Tiger Populations for Long-term Conservation](#)”. The document has mapped out 32 major corridors across the country, and management interventions operationalised through a Tiger Conservation Plan, mandated under section 38V of the Wildlife (Protection) Act, 1972.

Further, a three pronged strategy to manage human-tiger negative interactions has been advocated as follows:-

i. Material and logistical support: Funding support through the ongoing Centrally Sponsored Scheme (CSS) of Project Tiger for acquiring capacity in terms of infrastructure and material and to deal with tigers dispersing out of source areas.

ii. Restricting habitat interventions: Based on the carrying capacity of tigers in a tiger reserve, habitat interventions are restricted through an overarching Tiger Conservation Plan. Further, in buffer areas around tiger reserves, habitat interventions are restricted such that they are sub-optimal vis-à-vis the core/critical tiger habitat areas, judicious enough to facilitate dispersal to other rich habitat areas only.

iii. Standard Operating Procedure (SOPs): NTCA has issued SOPs which *inter alia* include the issue of managing dispersing tigers, managing livestock kills so as to reduce conflict as well as relocating tigers from source areas to areas where density of tiger is low, so that conflict in rich source areas does not occur.

NTCA in collaboration with the WII has also published a document titled ‘[Eco-Friendly measures to mitigate impacts of Linear infrastructure on wildlife](#)’. It aims to safeguard wildlife corridors from linear infrastructure development besides sensitizing user agencies.

Bird Deaths in Sambhar Lake, Rajasthan¹⁵

The incident of recent deaths of over 18,000 birds in Rajasthan’s saline - Sambhar Lake spread over

¹⁴ <https://pib.gov.in/PressReleaseDetail.aspx?PRID=1594508>

¹⁵ <https://www.conservationindia.org/gallery/thousands-of-birds-found-dead-around-sambhar-lake-rajasthan>

200 Sq. Km. area in Nagaur, Jaipur and Ajmer districts have been attributed to Avian botulism. Avian botulism is a neuromuscular illness caused by a toxin produced by a bacteria — *Clostridium botulinum*. It is a paralytic, often fatal, disease for birds. A potential cause of the presence of the bacteria could be toxicity of the water possibly due to excessive salt extraction by illegal salt units around the lake. In studies conducted by the USGS' National Wildlife Health Centre, several environmental factors, including pH, salinity, temperature and oxidation-reduction potential in the sediments and water column appeared to significantly influence the likelihood of botulism outbreaks in wetlands.

Activists have highlighted that for several years commercial and other activities detrimental to the eco-system of the wetland were being carried out contrary to the provisions of the Wetland (Conservation and Management) Rules framed under the Environment Protection Acts of 1986 and 2010. In 2016, the NGT ordered the Rajasthan government to cancel illegal salt pans in Sambhar Lake.

NITI Aayog Releases SDG India Index and Dashboard 2019¹⁶

NITI Aayog released the second edition of the [Sustainable Development Goals \(SDG\) India Index](#), which comprehensively documents the progress made by Indian States and Union Territories towards achieving the 2030 SDG targets. The SDG India Index has been developed

in collaboration with the Ministry of Statistics and Programme Implementation (MoSPI), United Nations in India and Global Green Growth Institute.

The SDG India Index 2019 tracks progress of all States and UTs on 100 indicators drawn from the MoSPI's National Indicator Framework (NIF). The process of selection of these indicators included multiple consultations with Union ministries/departments and States/UTs. The Index spans 16 out of 17 SDGs with a qualitative assessment on Goal 17. SDG India Index report has a new section on profiles of all 37 States and UTs, which will be very useful to analyse their performance on all goals in a lucid manner.

India's composite score has improved from 57 in 2018 to 60 in 2019, thereby showing noticeable progress. All three states that were in the 'Aspirant' category (with score/s in the range of 0–49)—Uttar Pradesh, Bihar and Assam—have graduated to the 'Performer' category (50–64). Five states—Andhra Pradesh, Telangana, Karnataka, Goa, and Sikkim—moved up from the 'Performer' category to the 'Front Runner' category (65–99). Kerala achieved the first rank in the composite SDG Index with a score of 70, followed by Himachal Pradesh at 69. Andhra Pradesh, Telangana, and Tamil Nadu ranked at the third position with the score of 67.

➤ **Vijendra Singh Tanwar**

¹⁶ <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1597981>

V. BISHNOI: A Belief System that supports an Environmental Commitment

The belief system of a small community, namely Bishnoi, spread over the [Western Thar Desert](#) and northern and central States (Rajasthan, Punjab, Haryana and Madhya Pradesh) of India has recognized and assimilated the natural co-existence among all the species. They have been conserving the flora and fauna for centuries even at the cost of sacrificing their lives to protect the environment. For these nature loving people, protection of environment, wild life and plants is a part of inherited parcel of their sacred traditions.

Who are Bishnois

Bishnoi (also known as Vishnoi) is a [Hindu](#) religious [sect](#), not a [caste](#). The sect was founded by Guru Jambheshwar (1451-1536), also known as *Jambhaji/ Jambhoji*, at Samrathal Dhora (Rajasthan) in 1485. Bishnoi is not just a community but it manifests itself in a simple and scientific way of living.

Jambhoji and his 29 principles/ commandments

Jambhoji, a resident of a village near Jodhpur, had a vision that the cause of the drought that had hit the area and hardship that followed was caused by people's interference with nature. Thereafter, he became a *sanyasi* or a holy man and came to be known as *Swami Jambeshwar Maharaj*. 'Bis' means 20 in the local dialect and 'noi' means nine in the local dialect. Any person who follows 29

principles/ commandments/ rules laid down by revered *Guru Jambheshwar* is Bishnoi. Out of 29 rules of Bishnoism, six rules are dedicated to environment namely:

1. *Be merciful to all living beings and love them.*
2. *Do not cut green trees, save the environment.*
3. *Provide shelters for abandoned animals to avoid them from being slaughtered in abattoirs.*
4. *Do not sterilise bulls.*
5. *Do not eat meat, always remain purely vegetarian.*
6. *Do not use violet blue colour extracted from the indigo plant.*



A member of the Bishnoi sect feeding milk to deer

The Bishnois and the Environment

Bishnoi understand the pivotal role nature plays in the subsistence of life on this planet. With their captivating culture and religious-ecological rules,

the Bishnois have been at the forefront of conservation for decades.

Known for their proclivity for letting bushes, shrubs and foliage grow in the fields, Bishnois manage to protect the desert sand from wind erosion. They provide the much-needed forage for cattle during the hot dry season or a famine. Bishnoism, despite its association with Jodhpur (the blue city of India), prohibits the use of blue colour to curb the overuse of indigo (made from cutting huge amounts of green shrubs) as well as in the belief that the colour absorbs the harmful rays of the sun. While crossing the Thar Desert in Rajasthan, one sees that areas inhabited by Bishnois have well-functioning traditional water harvesting systems. In areas where Bishnois inhabit, it is easy to find a variety of animals and birds including peacock, partridges, vultures and the endangered Great Indian Bustard roaming around freely without fear. The Bishnoi allows deer like Blackbuck, Cheetal, Nilgai to graze in their farm land as the community believes firmly that these animals have the first right to hold and use the land.

The Great Sacrifice at Khejarli

The ‘*Saga of Khejarli*’, tragic event of 11 September 1730 saw the massacre of 363 people of the Bishnoi community led by Amrita Devi. They all sacrificed their lives while protecting green *khejri* (*Prosopis cineraria*) trees, which were not only their only source of supplementary food but also were abundant fodder for their cattle.

Even preceding this event in 1600, 1603 and 1643 AD, there were recorded instances of Bishnoi men and women dying for wildlife and environmental cause. The Bishnois have indeed proved that human lives are a small price to pay to protect the wildlife and the forests around them.

Present Contributions

Presently, some silent caretakers from the community have shown their exceptional commitment to building and sustaining the wild life and environment.

Indian Government’s first Amrita Devi Bishnoi Wildlife Protection Award was posthumously presented in 2001 to a Bishnoi youth namely Ganga Ram Bishnoi killed by poachers. Forest Martyrs’ Day is marked annually on September 11, the day of the Khejarli massacre. Prime Minister Shri Narendra Modi gave the credit of Champion of Earth Award 2018 to Bishnoi *Samaj*.

Their lesson to the world

The love of Bishnois for nature has not only helped them survive the droughts of the Thar Desert but has also helped the inhabitant wildlife remain safe from poachers.

This remarkable environmental practice on the part of the community is in line with contemporary global demand that urges people to respect environment and all the life forms. There is much to be learnt from this resilient community, to grow-up as environmentally conscious people.

➤ **Anil Kumar Beniwal**

VI. International Event: SDG Summit 2019

On 24 and 25 September 2019, Heads of State and Government gathered at the United Nations Headquarters in New York to follow up and comprehensively review progress in the implementation of the 2030 Agenda for Sustainable Development and the 17 Sustainable Development Goals (SDGs). The event was the first UN summit on the SDGs since the adoption of the 2030 Agenda in September 2015.

The SDG Summit resulted in the adoption of the Political Declaration¹⁷, “*Gearing up for a decade of action and delivery for sustainable development*”. World leaders called for a decade of action to deliver the SDGs by 2030 and announced actions they are taking to advance the agenda. The General Assembly endorsed the Political Declaration on 15 October 2019. More than 100 acceleration actions¹⁸ have been announced.

Key Messages from Summit

- ❖ The commitment to the 2030 Agenda remains steadfast at the highest level of government and stakeholders. Yet it is clear that the world is not on track to meet the SDGs by 2030. The SDGs can still be achieved if the international community steps up the speed and ambition of its actions.

- ❖ Many countries have been proactively implementing the SDGs. However, the global response is not yet sufficiently transformative. Most of the 21 targets designated for achievement by 2020 will likely not be met and we are not on track for achieving many other targets by 2030.

- ❖ Governments are reaching out to forge new partnerships with civil society, business, and the scientific and technological community. National plans must reflect an increasingly interconnected world, and address complex flows of goods, capital, information and people.

- ❖ For such efforts to be effective, it is imperative that all countries pursue the SDGs as systems, fully recognizing the interconnections across sectors, countries and levels, from global to local. Positive synergies need to be harnessed and difficult trade-offs need to be addressed more quickly and effectively.

- ❖ The 2019 Global Sustainable Development Report (GSDR) identifies six entry points where interventions can have multiple impacts across the SDGs: human well-being and capabilities; sustainable and just economies; food systems and nutrition patterns; energy decarbonisation with universal access;

¹⁷ <https://undocs.org/en/A/RES/74/4>

¹⁸ <https://sustainabledevelopment.un.org/sdgactions>

urban and peri-urban development and global environment commons.

- ❖ Across those areas, governance, economy and finance, individual and collective action, and science and technology are important levers that can help countries to achieve positive synergistic impacts across the SDGs.
- ❖ Financing the 2030 Agenda remains a challenge. Promises on official development assistance (ODA) need to be kept, investments need to be increased and made sustainable, tax systems need to be improved, and illicit financial flows and unsustainable debt levels must be effectively addressed.
- ❖ Unequal access to scientific data and knowledge systems is a major obstacle to the universal implementation of the 2030 Agenda, particularly for the Least Developed Countries and Small Island Developing States.

The world is entering a decade that will be decisive for current and future generations, and for all life on the planet. Through the SDG Summit Political Declaration, Heads of State and Government Pledged to make the coming decade one of action and delivery.

➤ **Ajit Singh Choudhary**

VII. Critical discussion of Rules/Laws¹⁹: Remedial Action for Enforcement of Environmental Norms at Bharatpur, Rajasthan

In a writ petition before the Rajasthan High Court (the court) with reference to pollution of Sujanganga river which is surrounded by a historical Fort, the matter regarding enforcement of environmental norms at Bharatpur was raised before the court. The court transferred the writ petition to National Green Tribunal (NGT), Principal Bench, New Delhi.

Vide order dated 31.07.2018, the Tribunal directed the Collector and the District Magistrate, Bharatpur to take remedial action in areas such as encroachment, waste management, traffic plan, etc. The Tribunal also flagged other issues and required monitoring at the level of the Chief Secretaries and the District Magistrates.

The tribunal Vide order dated 12.09.2019, issued orders to compile information with reference to the following specific thematic areas viz.:

- Compliance to Solid Waste Rules including Legacy Waste.
- Compliance to Bio-medical Waste Rules.
- Compliance to Construction & Demolition Waste.
- Compliance to Hazardous Waste Rules.
- Compliance to E-waste Rules.
- 351 Polluter Stretches in the country.
- 122 Non-attainment cities.
- 100 industrial clusters.

¹⁹ Before the National Green Tribunal Principal Bench, New Delhi Original Application No. 360/2018, M.A. No. 823/2018) (SLP (Civil) No. 2959/2014).

- Status of STPs and re-use of treated water.
- Status of CETPs/ETPs including performance.
- Ground water extraction/contamination and re-charge.
- Air pollution including noise pollution.
- Illegal sand mining.
- Rejuvenation of water bodies.

Such information is to be furnished to the CPCB by the Chief Secretaries of all the States/UTs indicating:

- Current status
- Desirable level of compliance in terms of statutes.
- Gap between current status and desired levels.
- Proposal of attending the gap with time lines.
- Name and designation of designated officer for ensuring compliance to provisions under statute.

The Department of Environment of all States and Union Territories may collect such District Environment Plans of their respective States and finalize the 'State Environment Plan' covering the specific thematic areas referred above and template of Model/Models District Environment Plan provided by the CPCB. The action for preparation of State's Environment Plan shall be monitored by the respective Chief Secretaries of States and Administration of UTs.

The Tribunal further ordered that based on States and UTs Environment Plans, MoEF&CC and CPCB shall prepare country's Environment Plan accordingly. Secretary, MoEF&CC and Chairman, CPCB shall steer the preparation of country's Environment Plan and completed by

31.01.2020. The compliance shall be reported to the Tribunal by 15.02.2020.

Thus, the directions of the Tribunal is significant in tackling a number of environmental issues affecting quality of life in Indian cities and towns. In particular, it comprehensively covers the menace of waste and role of authorities at various levels in environmental management with specific focus on enforcement of rules and guidelines for waste management. Further, the directions of the tribunal is likely to intensify efforts for environmental planning at different levels and help in integration of efforts through proper planning and establishing synergy between the role of different stakeholders.

➤ **Pawan Meena**

VIII. International Audit Report: Joint Audit Report on Air Quality (*The Netherlands Court of Audit and the Supreme Audit Office of Poland*)

Air pollution is the biggest environmental risk to health in the world today. The EU's 2008 Ambient Air Quality Directive (AAQ Directive) sets air quality standards throughout the EU for concentrations of those air pollutants that have the biggest health impact. The European Commission can take legal action if it considers that a member state has failed to comply with the AAQ Directive. In order to better address the real risks to the environment and human health caused by air pollution, 15 national SAIs and the European Court of Auditors (ECA) joined forces in performing a joint audit of air quality in the

European Union (EU) and a number of countries outside the EU.

The aim of this joint audit was to broaden knowledge of how air quality policies are implemented at national level and to examine how effective and efficient these national policies are.

Audit Methodology:

It was decided to work with an audit framework consisting of one main audit question and six secondary questions. The main audit question was:

“What is known about the effectiveness and efficiency of measures taken by national and local governments to improve air quality, and are these measures compliant with international and national legislation?”

The six secondary audit questions were:

1. *What is the main problem in your country in terms of air pollution?*
2. *What governance system has been put in place; who is responsible for what?*
3. *What statutory rules and regulations have been enacted?*
4. *What policy is being pursued to tackle the problem(s)?*
5. *How is the policy funded; what is known about the cost of the measures taken and the measurable benefits?*
6. *How are trends in air pollution monitored and reported on?*

Overall conclusion:

- Most participating countries do not meet national and/or international air quality standards and still exceed limit values.
- Not all countries have adopted a national policy; not all have performance indicators
- Governments have limited information on budget spending and results. A lack of

information ultimately results in governments not knowing whether the measures funded are effective.

- Monitoring systems do not always function properly. As a result, participating countries do not have reliable and/or full data on air pollution. A lack of full and/or reliable data is a risk, in that it may ultimately cause governments not to take adequate and effective action to improve air quality. This may lead to the absence of approved national policies or to policies that are not implemented by the government, whether in full or part.
- There is scope for improving public information. The information that is available is not always reliable and/or complete. In some cases, it is unclear and not real-time information.
- Raising public awareness of air pollution and deciding how best to inform the public are both very important aspects of addressing air pollution.

Overall recommendations:

The detailed recommendations made by participating SAIs and ECA are grouped by topic below.

Prepare and implement air quality plans

- Establish acceptable limits for particulate matter and revise limits for other indicators in accordance with EU standards (Georgia);
- Update all relevant statutory and secondary legislation to achieve full harmonization of national legislation with the EU’s AAQ Directive (FYROM).

- Take measures to implement a national air quality strategy (Albania)
- Define uniform standards for the preparation of air quality plans (Poland)
- Complete and update key documents needed for safeguarding air quality, i.e. the law on air protection from pollution, the air quality strategy and the air quality action plan (Kosovo)
- Monitor compliance with the targets for reducing emissions of hazardous pollutants, as specified in the national plan, and take action to meet the targets (Israel).
- European Commission should assist member states in introducing relevant measures in their air quality plans to better tackle cross-border air pollution and to prioritise and mainstream air quality into EU policies (ECA).

Measure the effectiveness of action taken

- Prepare, approve and implement a national strategy and a national air quality policy (Georgia, Slovakia, Bulgaria and Moldova)
- Establish and adopt binding indicators for measuring the effectiveness and efficiency of measures taken to combat air pollution (Poland and Slovakia)
- Include information on the impact of action set out in development plans for protecting the public from pollutants and for reducing emissions of pollutants (Estonia)
- Carry out regular interim evaluations to generate information on the efficiency of measures and to be able to adjust policy during

the course of implementation (Slovakia, The Netherlands and Israel).

Improve coordination

- The governments should improve coordination
 - Among responsible entities (Georgia and Moldova)
 - Between activities planned and implemented under the air protection system (Poland)
- Relevant ministries to regularly inform government about the air quality (Slovakia)
- Establish an all-round system allowing for the comprehensive, unimpeded exchange of data (FYROM)
- Impose sanctions at central and local level for non-compliance with the goals of air quality (Bulgaria, Romania and FYROM)
- Designate a body for the national coordination of all activities in this field (Romania)
- Further strengthen federal enforcement with a high level of effectiveness and come with a healthy cost-benefit ratio (Switzerland).

Provide relevant data and perform a full cost-benefit analysis

- Provide budget for the O&M of all monitoring stations (FYROM and Moldova)
- Clarity about the financial resources for measures included in municipal air quality programmes (Bulgaria)
- Lay down rules and procedures for carrying out a cost-benefit analysis for all environmental policy and legislation prior to its adoption (Poland and Albania)

- Link funding to results. This would enable SAIs / Governments to express an opinion on the cost-effectiveness of individual government actions (The Netherlands).

Health gains and cost-effectiveness

- Carry out a full *ex-ante* social cost-benefit analysis, taking account of the non-financial health benefits of each measure. (Netherlands)
- Undertake a progressive review of the current reference indices for pollution concentrations as defined for assessing air quality. (Spain)
- Pilot study to assess the impact of air quality, WHO's air quality–health indicators (Albania).

Improve monitoring systems

- Adequate relocation of stations and the continuous servicing and maintenance of monitoring stations, set up a centralised system for the automated collection and processing of data, as well as real-time measurement and reporting on air quality (Kosovo, Georgia and FYROM),
- Establish an air quality dispersion modelling and forecasting system (Georgia)
- Timely submission and completeness of data from stationary sources of pollution in order to provide comprehensive information (FYROM)
- Improve air pollution modelling calculations so as to identify tailored measures (Slovakia)
- Set up quality control and assurance procedures specifically for the monitoring system (Albania)
- Improve reports on air quality (Romania)

Raise public awareness

- Plan and take appropriate action to raise awareness of the effects of air pollution and their mitigation tools (Georgia)
- Give every citizen access to real-time air quality data (Albania and Romania)
- Organise a national media information campaign. Governments should suggest forms of concrete action that the public could take, depending on the season, atmospheric conditions, sources of pollution and other factors affecting ambient air quality (Bulgaria)
- Continue to raise public awareness of ways and means of improving air quality (Estonia)
- Continue to improve the information on air quality provided to the public. (Spain).
- The European Commission should help member states to adopt best practices in terms of communicating with citizens; publish ratings of air quality zones, and seek to harmonise air quality indices in conjunction with the member states (ECA).

➤ **Gaurav Kumar**

IX. Article: The Real Cost of Cruises

Let me start this by saying something that we all can agree on, which is, the fact that people love vacations. But picking a vacation is hard. We all know we have to spend our money on a lot of things like rent, car insurance, dominos or KFC and many other important things. Apart from the jokes and realities, vacations are the one time you

get to choose how you want to spend your money. That is why cruises are so appealing. They are practically super convenient and promises non-stop fun.

Yes, the cruise line provides a great experience and promise different range of facilities. They provide a package of freedom and fun. In 2018, a seven day cruise with full room and board costs about \$1500 per person. All these boats have major facilities like decks, swimming pools and restaurants. Some mega cruises have additional features like water slides, roller coasters, go kart track, outside skydive simulator, etc. It's a market that is worth over 50 billion dollars and is growing at a very fast rate. By 2020, almost 30 million people will be using cruises.

But there is a lot you should know about cruises; first of all, it should not come as a surprise that cruise ships are not great for the ocean. It also causes pollution and demise to various aspects of society and the environment. We can all fathom the level of extreme degradation that may be caused to the marine life and destruction of marine ecosystems if all the seven continents were actively engaged in careless and unaccountable cruise line tourism activities that are spreading throughout the world. There are facts available to understand and justify the ill effects of how the major cruise line industries use the loop holes in the laws and regulations to evade taxes in billions of dollars and how they end up destroying the environment. So let us cut to the chase and understand the reality of this industry.

In the last 30 years, the industry has been caught polluting and dumping hundreds of times. They have already paid over 100 million dollars in fines, and that is just illegal dumping. Legally, cruise ships are permitted to dump food waste, cargo residue, cleaning agents and animal carcasses. Let us for instance, take emissions. New York Times reported that moving a floating city burns a lot of fuel, which is why, per passenger, Cruise ships emit three to four times more carbon dioxide (CO₂) than jets and there are other kinds of pollution too (Collins, 2019). Like the emission of gases that cause acid rain. The World's largest Cruise line operator Carnival is reported to be emitting nearly ten times more sulphur dioxide around European coasts than all



the 260 million European cars (Morgan, 2017). And that is just one type of gas from one Cruise line on one continent.

There have been incidents leading to marine disasters that have happened around the world due to the negligent and irresponsible nature of these major cruise line operator industries that have been the cause to major environmental pollution around the world.

A passenger's carbon footprint triples in size when taking a cruise and other than the pollution caused by their exhaust fumes, cruise ships have been caught discarding trash, fuel and sewage directly into the ocean. In 2018, it was reported that nearly every ship in Europe is still using high polluting fuels that have harmed the environment and human health. In France, 10% of air pollution in the port city of Marseilles can be directly related to the shipping industry (Chrisafis, 2018). Meanwhile in the United Kingdom, it has been estimated that between 40,000 and 100,000 people die prematurely every year as a result of emissions from the shipping and cruise industries with South Hampton, Grimsby and Liverpool as the major port cities which are the most affected. The quantity and quality of the fuels that are burned by these floating citadels cause emission of enormous amounts of carbon and other dangerous particulates, which include nitrogen oxide, which can be linked to the cause of acid rain, high rates of cancer and other forms of respiratory diseases (Gabbatiss, Independent, 2019).

As nations strive to reduce the CO₂ emissions and major companies come under pressure to decrease the carbon foot print they have been leaving behind for years, the maritime industry is finding itself under increasing scrutiny. Whilst commercial shipping has always been at the centre

of environmental concerns, the issues surrounding cruise ships are being increasingly called out in the port cities in which they dock. "Floating cities" is what cruise ships have often been described as and many environmental groups including researchers and scientists have proven that the pollution caused by the maritime industry is very enormous and if not controlled, can result in disastrous air pollution, marine pollution and bad effects on human health (Gabbatiss, Independent, 2018). There is a worldwide operation and pollution is happening in different parts of the world and there are more than enough records to prove the disastrous effect this industry has on the environment. In underdeveloped countries where regulations are not strict enough, they are more prone to the destruction of their marine ecosystems.

We need world uniform forums and laws to regulate and monitor cruise lines around the world with stricter maritime pollution laws along the shores and docks and make sure the polluters are barred from polluting and evading paying the accurate taxes using the loop holes in laws of any nation. We all love cruises but you should know the price of a cruise is not the price you pay for a ticket. The real cost is: polluted air, poisoned water, piles of garbage, lost tax revenue, climate change and much more. And if at all we need to find is it still worth!

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Other Sources showing various cases of pollution caused by the maritime industry around the world:

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- <https://www.vox.com/the-goods/2018/11/15/18096925/cruise-environment-pollution-crime>
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➤ Hariharan Kannan