

Green Files

Newsletter

March 2021 | Volume 37



Editorial



Infographic created by Raquel Benmergui for presentations given by SAI India during the 20th INTOSAI WGEA Assembly meeting

Green Files, a quarterly newsletter published by iCED features glimpses of recent environment news, events, emerging trends, initiatives and efforts of different organizations to protect the environment.

During the quarter January to March 2021, three National Training Programmes on the subjects such as Tools and Techniques on Use of Environmental Data in Audit and Audit of SDGs with reference to Environmental issues were conducted online using MS Teams platform. On the International front, iCED organised its first International Training Programme on Extractive Industries under the aegis of INTOSAI WGEI. An International workshop on "Biodiversity" was also organized for member SAIs of INTOSAI WGEA during this quarter.

This edition of the newsletter features world environment news, United Nations Environment Assembly - 5, updates on the 20th INTOSAI WGEA Assembly meeting hosted by National Audit Office Finland, articles on Environmental law practices during the British Era and Green initiatives – Community Participation in Conservation of Simlipal Tiger Reserve.

Shri Girish Chandra Murmu, the Comptroller and Auditor General of India visited iCED campus, on 17.02.2021.

We at iCED, value your suggestions to make Green Files more informative and user friendly. Your contributions within the broad scope of the newsletter will be highly appreciated. It may be sent by e. mail to: iced@cag.gov.in.

With regards.

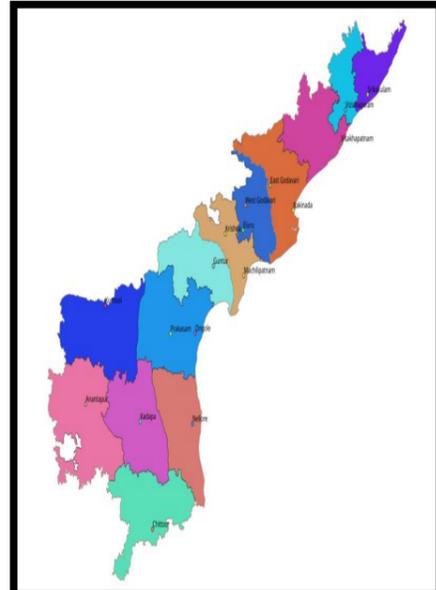
Manish Kumar
Director General

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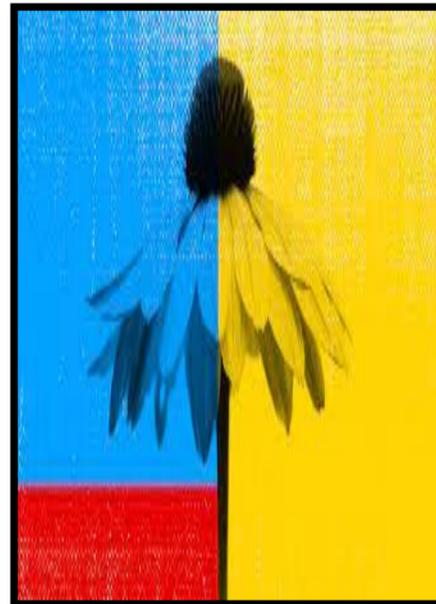
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Training's & Workshop at iCED

Pavan Meena, AAO

During the quarter (January – March 2021), iCED organised following online National Training Programmes (NTPs):

- i. Tools and Techniques on Use of Environmental Data in Audit
- ii. Audit of SDGs with reference to Environmental Issues
- iii. Environment Audit for IA&AS Officer Trainees (2019 Batch)

iCED conducted the International Workshop on Biodiversity. The workshop was organized online in two batches from 22nd February to 24th February, 2021 and 1st March to 3rd March, 2021 with different timings to enable participants from SAIs around the globe to participate. The workshop, was inaugurated by **Ms. Namita Sekhon**, Deputy Comptroller and Auditor General. Total 53 participants from 27 countries attended the workshop. **Dr. V. B. Mathur** (Chairman, NBA, Chennai) **Dr. T.V.Ramachandra** (IISc, Bangalore) **Ms. Joanna Kokot** and **Ms. Antonella Stasia** (European Court of Auditors) and **Mr. B.K. Mukherjee** (A G Audit II, Madhya Pradesh, Bhopal, SAI, India) delivered the sessions. It also included dedicated sessions on experience sharing by participants. The valedictory session of the programme was graced by **Ms. Tytti Yli-Viikari**, Chair of INTOSAI WGEA and Auditor General of NAO, Finland.

iCED organised its first International Training Programme on Audit of Extractive Industries through Video conference from 15th March to 19th March, 2021. Total 88 participants from 26 countries across the globe attended the programme.

Ms. Namita Sekhon, Deputy Comptroller and Auditor General inaugurated the programme. The course was designed to cover Module-1 (An Overview of Extractive Industries) and Module-8 (Environment and Sustainable Development) of Training Framework for Audit of Extractive Industries developed by INTOSAI WGEI.

Ms. Juliet Stella Mutesi, **Ms. Sheilla Ngira** & **Mr. Anthony Kimuli** from SAI Uganda; **Mr. Madhusoodanan K Nair**, **Mr. R.T. Venkatasamy** & **Ms. M Ray Bhattacharyya** from SAI India; **Dr. Devashis Bose** (DDR College, Assam, India) and **Mr Deb Ranjan Benerjee** (Oil India Limited, India) delivered the sessions during the training programme.



Ms. Namita Sekhon, Deputy Comptroller and Auditor General

Mr. John Murugwa, Chair INTOSAI WGEI

Mr. John Murugwa, Chair of INTOSAI WGEI and Auditor General of Uganda addressed the participants during concluding plenary of the programme.



Participants of the International Workshop on Biodiversity

Shri Girish Chandra Murmu, the Comptroller and Auditor General of India visited iCED, on 17.02.2021. Presentations were made by the HoDs from iCED, RTI, Jaipur, AG (A&E), AG (Audit)-I, AG (Audit)-II, Rajasthan and PDA (NWR). The CAG, was briefed about functioning of the offices, overall manpower & budget positions and progress of audit plans for 2020-2021. During his visit, the Comptroller and Auditor General of India also inaugurated a children's park in the iCED, campus.



Shri Girish Chandra Murmu, CAG of India, inaugurating the Children's park in iCED, campus.

Gaurav Jain, Sr.AO & Manoj Kumar, AAO

The COVID 19 pandemic and subsequent lockdowns have affected many aspects of people's lives. It has also led to significant shift in working arrangements. COVID 19 has shaken the whole working culture and has made a fundamental change in it. Video conferencing, tools like Microsoft teams and cloud-based file sharing have become more significant for working amid Covid situation.

iCED, Jaipur as the Global Training Facility of INTOSAI WGEA and INTOSAI WGEI delivered the planned assignments during 2020-21 through online mode amid lockdowns and travel restrictions.

In promotion of its core activities of Capacity Development and Knowledge Dissemination, the institute explored and utilized various online modes for conducting the training courses.

The institute conducted **13 National Training Programmes** and **04 National Workshops** including the 11th Foundation day workshop for Indian Audit and Accounts Department officers during 2020-21.

The National Training Programmes covered the issues related to Audit of Environmental Management in Govt. Establishments, Climate Change, Disaster Management, Waste Management, Air Pollution and other environmental related issues. The participants engaged in fruitful discussions on topics related to extractive industries, sustainable cities, water pollution and marine biodiversity through video conferencing. During the year 2020-21, National Webinars were held on SDGs, Biodiversity Conservation and Water Conservation. Total **279 and 69 participants** benefitted through these National Training Programmes and National Webinars respectively.

With a view to encourage experience sharing and prepare for organizing the scheduled international trainings, iCED organized an international webinar on Climate Change and Sustainable Development in September 2020. Overwhelming response from the participants and seamless delivery of sessions for participants around the globe aided in conducting other programmes successfully. It also facilitated designing of courses and suitable time slots for encouraging higher participation. Our international programmes were thus conducted online in two batches with different timings. These programmes also witnessed highest number of participants from wider number of SAIs. Around **286 auditors from various SAIs** around the globe took advantage of these international training programmes.



International participants during one of the online Training Programmes conducted at iCED

Similarly, experts were invited from some of the leading SAIs and other reputed organizations on associated subjects.

Feedback from the participants was highly encouraging and some of the participants recommended that we should continue to organize online trainings and workshops even when we resume face to face programmes at iCED campus as it provides opportunity to large number of participants to share their experience. Further, flexible schedule adopted under the virtual format besides providing convenient format also affects costs and carbon emissions.

The successful organization of all the scheduled training programmes and positive feedback of the participants has promoted continuity of the model amid prevailing challenges due to Covid 19, which indicates that virtual meeting technologies are here to stay, at least till the pandemic subsides.

Regularly conducting online training during 2020-21 has also enabled iCED in strengthening the in-house capacity for online trainings, which may be conducted simultaneously with face to face mode as and when required in future.

INTOSAI WGEA holds the 20th Assembly Meeting

Manoj Kumar, AAO

The 20th INTOSAI WGEA Virtual Assembly 2021 – Rethinking Circularity! Was held from 19th to 21st January 2021. It was hosted by the National Audit Office of Finland. The event gave an opportunity to listen to several interesting speeches, know about progress of INTOSAI WGEA Work Packages (WP) and exchange of information.

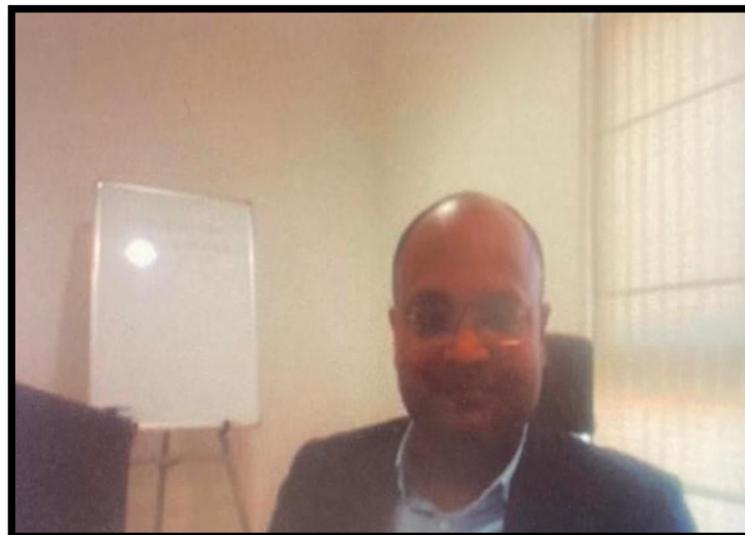
The first day was dedicated to Circular Economy. There were inspirational speeches and case studies from several Supreme Audit Institutions around the world. This was followed by presentations from SAI China, European Court of Auditors, SAI India and SAI Indonesia.

The presentation by SAI India on “Role of rag pickers/waste pickers in Circular Economy” was given by **Ms. Stefi Sofi, Director (Inspection), Environment and Scientific Departments, New Delhi**. Ms. Sofi emphasized the importance of circular economy, which could help auditors to scrutinize government actions in a variety of sectors. She emphasised on valuing garbage as a resource and discussed implications of rising living standards for waste pickers, recycling and reuse of materials.



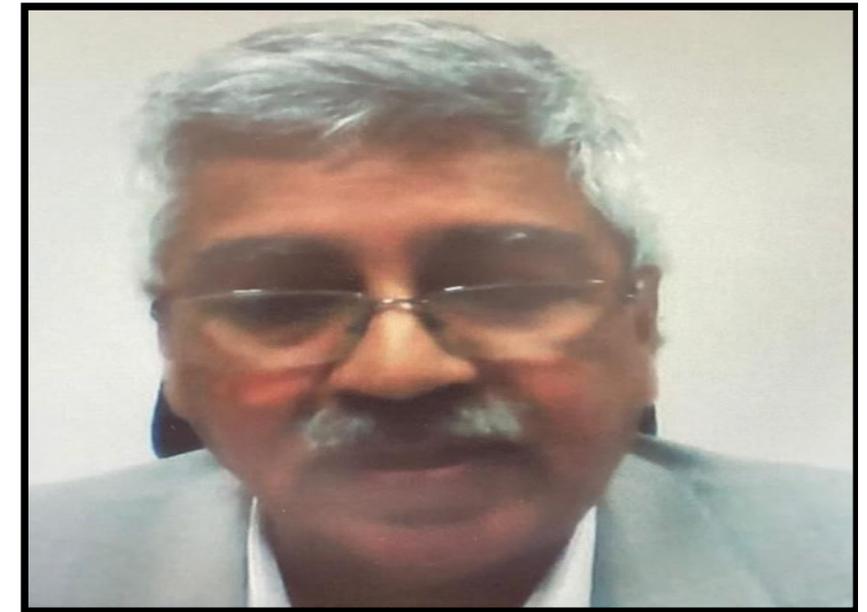
Ms. Stefi Sofi, Director (Inspection), Environment and Scientific Departments, New Delhi during presentation on “Role of rag pickers/waste pickers in Circular Economy”

The second day of the meeting was dedicated to the three thematic topics of the INTOSAI WGEA Work Plan for 2020-2022, namely *plastic waste, international climate finance and sustainable transport*. During the session on sustainable transportation, a presentation on “General overview of the Smart Cities Mission and experiences gained from audits focused on specific cities/ transport sector” in India was given by **Shri Pushkar Kumar, Director (Training & Research), iCED**. He briefed the delegates about importance of Smart Cities scheme introduced in India and outlined its important features including the financing and institutional mechanisms for its implementation. It was emphasized that urban mobility is an important part of the programme. He also informed that environmental issues related to transport sector have been covered in the audits conducted by SAI India. These audits have focussed on pollution caused by transportation in cities, vehicular emissions, fuel quality and monitoring mechanism for compliance with the prescribed emission standards and norms.



Shri Pushkar Kumar, Director (T&R) giving presentation on “General overview of the Smart Cities Mission and experiences gained from audits focused on specific cities/ transport sector”

The session on Plastic Waste was presided by **Shri Manish Kumar, Director General, iCED** from SAI India. He also gave a presentation on the ongoing research project under Work Package 2- SDG 12- Responsible Consumption and Production – Focus on Plastic Waste.



Shri Manish Kumar, DG (iCED) during presentation on Work Package 2- SDG 12- Responsible Consumption and Production – Focus on Plastic Waste

Shri Manish Kumar explained how plastics and plastic waste are connected to our daily lives. He emphasized that production of plastic has grown exponentially, especially for packaging. Plastics play a remarkable role in contemporary life and there are several benefits – but with an environmental cost associated with waste and sustainability concerns its effective management remain a challenge. He also emphasized that the topic has strong interlinkages with other thematic work packages of INTOSAI WGEA Work Plan for 2020-2022. SDG 12 is cross-cutting in nature and connected to all other SDGs. The topic should therefore be treated in a holistic manner since upon working towards accomplishing SDG 12, synergies towards other SDGs are created. Shri Manish Kumar also pointed to the concept of circular economy discussed during the first day of the Assembly, and how it has a critical role in solving the problems related to plastic waste. SAI India is the project leader of the WP 2- project on Plastic Waste. Shri Kumar shared the progress about the work done on the research project and future plan of action, for completion of the project by SAI India.

During this session SAI Egypt, SAI Finland, SAI Iran, SAI Iraq, SAI North Macedonia, SAI Poland and US Government Accountability Office also gave presentations on plastic waste issues.

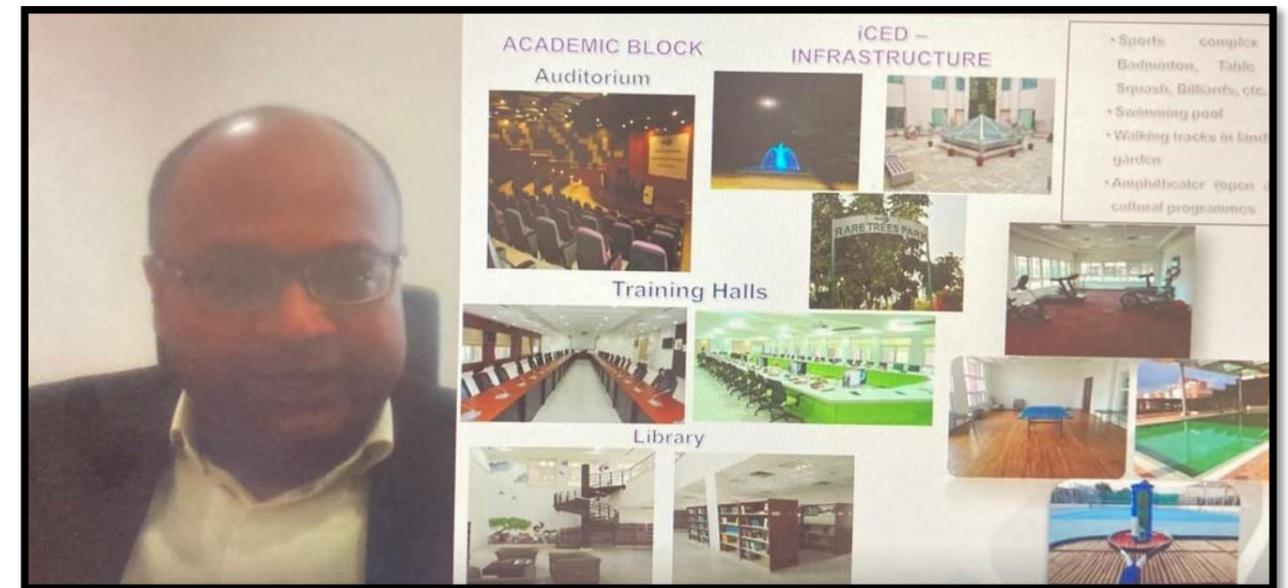
At the end of the day, there was a panel discussion which included all work package leaders. The panel discussion was moderated by Mr. David Le Blanc, United Nations Department of Economic and Social Affairs (UN DESA). Shri Manish Kumar, DG (iCED), represented SAI India in this panel discussion which focused on SDGs and their interlinkages to the topics discussed during the second day.



Shri Manish Kumar, DG, iCED during panel discussion with work package leaders

The final day of the Assembly consisted of interesting keynote speeches as well as sessions on the remaining work packages of the INTOSAI Work Plan 2020-2022.

During the session on Experience Sharing and Capacity Building (WP 6), **Shri Pushkar Kumar, Director (Trg & Res.), iCED** gave presentation on iCED the Global Training Facility of INTOSAI WGEA. Shri Pushkar Kumar informed about the training activities and infrastructure at iCED. He shared details regarding participants and experts in the training and workshops held at iCED since inception. He mentioned that amid Covid, all trainings are conducted on virtual platform, and there has been encouraging response from the participants. He informed that in addition to the scheduled International Trainings on Environmental Auditing and International Workshop, an additional webinar had been conducted during 2020. He also requested the participating SAIs to nominate participants to the upcoming International Workshop on Biodiversity Conservation.



Shri Pushkar Kumar making presentation during the session on Experience Sharing and Capacity Building (WP 6) on the Global Training Facility, iCED

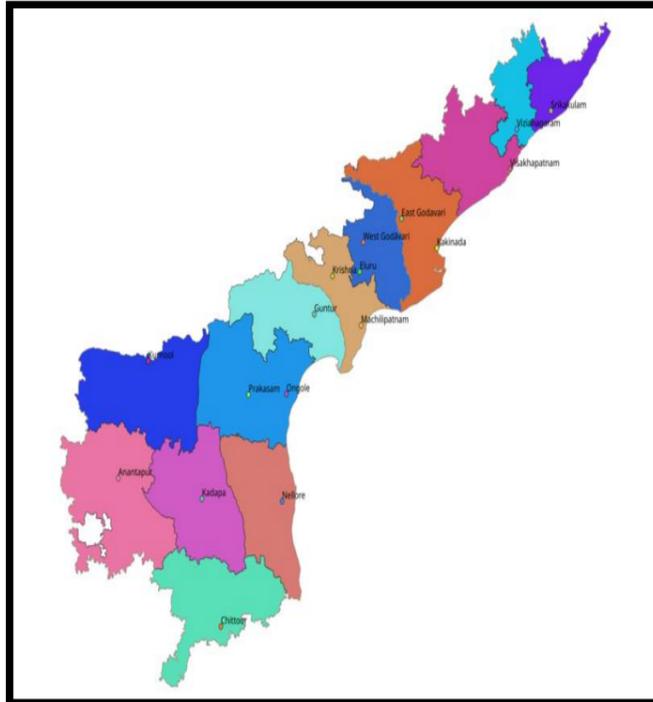
SAI Indonesia and SAI Slovenia were declared as joint winner's for the **first INTOSAI WGEA award** during the 20th INTOSAI WGEA Virtual Assembly 2021 – Rethinking Circularity!

The **first INTOSAI WGEA Award** was launched in consultation with the Steering Committee to celebrate the visibility of the valuable work that environmental auditors around the world are performing and to promote relevant topics.

The award was dedicated to visualizations used in environmental audits, as a conceptual continuation to the 2019 INTOSAI WGEA project Improving the Visibility of SAI's Work: Communicating environmental audit results. The Jury of the Award composed of the same SAIs that were working on the research paper in 2019: European Court of Auditors, SAI New Zealand, SAI Russia, U.S. GAO.

State in Focus - Andhra Pradesh

Virendra Jakhar, Sr AO



State of Andhra Pradesh

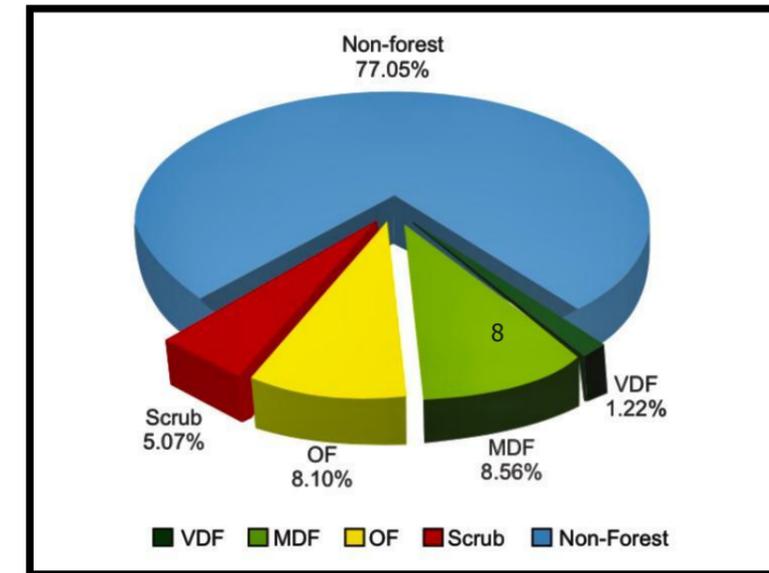
The Andhra Pradesh Reorganization Act, 2014 bifurcated erstwhile State of Andhra Pradesh into two separate States of Andhra Pradesh & Telangana in June, 2014. Andhra Pradesh is situated along the Bay of Bengal on the southeast coast of the country. Geographical area of the State is 1,62,968 sq km which is 4.96% of the geographical area of the country.

After Gujarat, the State of Andhra Pradesh has the second longest coastline among the States of India. The State experiences hot and humid climate.

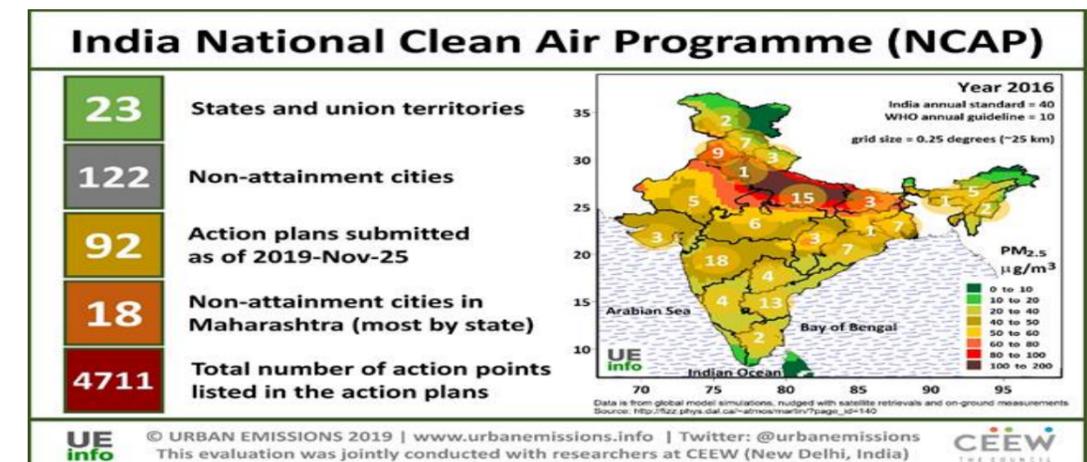
The annual rainfall ranges between 1,100 mm to 1,250 mm and the annual temperature varies from 15°C to 45°C. The State is drained by number of rivers. Godavari, Krishna and Penna are main rivers. As per 2011 census, Andhra Pradesh has a population of 49.39 million which is 4.08% of India's population. The urban & rural population constitute 29.58% and 70.42% respectively. The Tribal population is 5.32%.

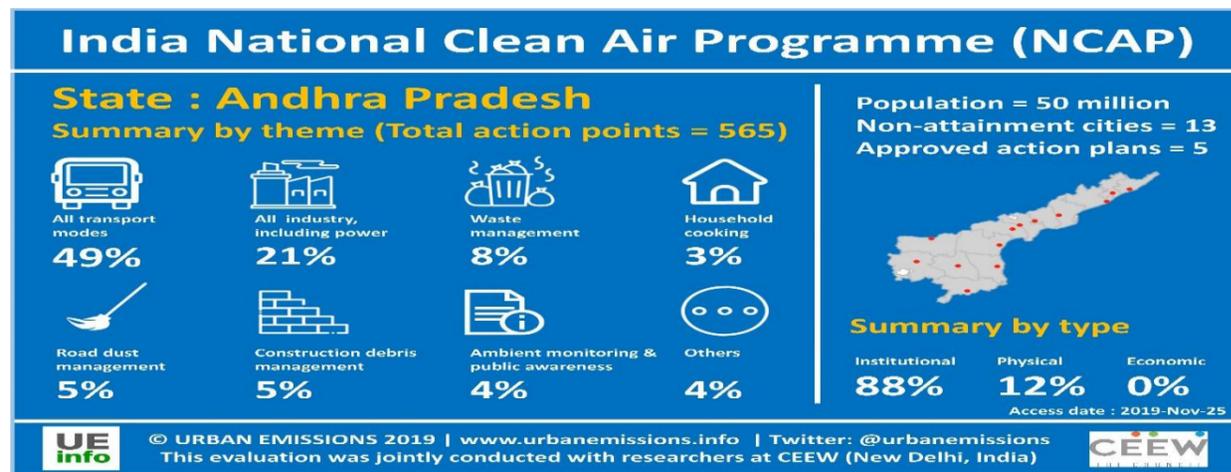
As per India State of Forest Report (ISFR) 2019, Forest Cover in the State is 29,137.40 sq km which is 17.88 % of the State's geographical area. In terms of forest canopy density classes, the State has 1,994.22 sq km under Very Dense Forest (VDF), 13,938.36 sq km under Moderately Dense Forest (MDF) and 13,204.82 sq km under Open Forest (OF). Forest Cover in the State has increased by 990.40 sq km as compared to the previous assessment reported in ISFR 2017.

The state has 3 National Parks and 13 Wildlife Sanctuaries covering an area of 7,311.08 sq km which is about 4.49% of the geographical area of the State. The long sea coast provides the nesting ground for sea turtles, the back water of Pulicat lake are the feeding grounds for Flamingo & Grey Pelican, the estuaries of river Godavari and Krishna support rich mangrove forests.



The urban areas are more at risk from the environmental pollution resulting from vehicular transport and industrialization which may increase exposure to biological, chemical and toxic wastes. In keeping with global projections, the health impacts of air pollution and their exacerbation due to climate change are likely to increase in the state. Under National Clean Air Programme, 122 non-attainment cities have been identified across the country based on the Air Quality data from 2014-2018. These include 13 cities of Andhra Pradesh namely Guntur, Kurnool, Nellore, Vijayawada, Vishakhapatnam, Anantapur, Chittoor, Eluru, Kadapa, Ongole, Rajahmundry, Srikakulam and Vizianagaram.





Andhra Pradesh is a riverine state with 40 major, medium and minor rivers. Godavari, Krishna, Vamsadhara, Nagavali and Pennar are major interstate rivers. During pre-monsoon 54% area of the state shows improvement in water levels and 46 % of the area shows decline in water level trends. Improvement in last five years has been observed in West Godavari (72%), Krishna (71%), Nellore (69%), Prakasam (65%), Vizianagaram (63%), Guntur (59%), Kurnool (57%), Cuddapah (55%) and Anantapur (53%) districts, whereas in major parts of Vishakhapatnam (68%), Chittoor (64%), East Godavari (63%) and Srikakulam (60%) districts, decline in water level trend has been observed. It has been further observed that long term 10 years falling trend further declined in last 5 years in 36% area of the state ranging from 53% in Chittoor to 22% in West Godavari district.

However, as a result of climate change, excessive rainfall in the coastal districts of Krishna and Godavari has led to flooding and consequently, the bacterial contamination of water. Water borne diseases are also caused by heavy metal contamination of water, due to industrial, agricultural and biological effluents. At some places, poor rainfall and excessive dependence on ground water for irrigation such as in the district like Anantapur and Chittoor have reduced water availability to crisis levels.

Andhra Pradesh is prone to more frequent and severe floods and hurricanes which results in deaths, disease and injury due to drowning, lack of sanitation and safe drinking water and exposure to dangerous chemical contaminants. Extreme weather events and the impact of coastal erosion results in enormous economic and physical damage and is likely to be associated with severe mental distress.

Amaravati- A new challenge

Andhra Pradesh Government has been going all out to develop a world-class capital, Amaravati. The new capital's location is between Vijayawada and Guntur alongside the River Krishna, comprising 24 revenue villages and part of Tadepalli municipality of Guntur district, covering a total area of 53,748 acres. While work on the new capital city is still in progress, environmentalists are highlighting concerns like the project's potential impact on forest, river, riverbed, floodplains and more which can perhaps be avoided as the city is being built from scratch. There is rampant illegal mechanised sand mining in and adjacent to River Krishna which has medium-term environmental implications. It is the aspect of green cover that has been one of the main concern areas for environmentalists. There are instances of de-notifying thousands of hectares of forest land, promising to carry out compensatory afforestation elsewhere. In November 2017, the National Green Tribunal (NGT) rejected several cases registered against the project, even as it ordered a series of safeguards to address the concerns raised by activists.



Construction work at riverine flood plains has increased the chances of chronic floods in the area.

Environmental News

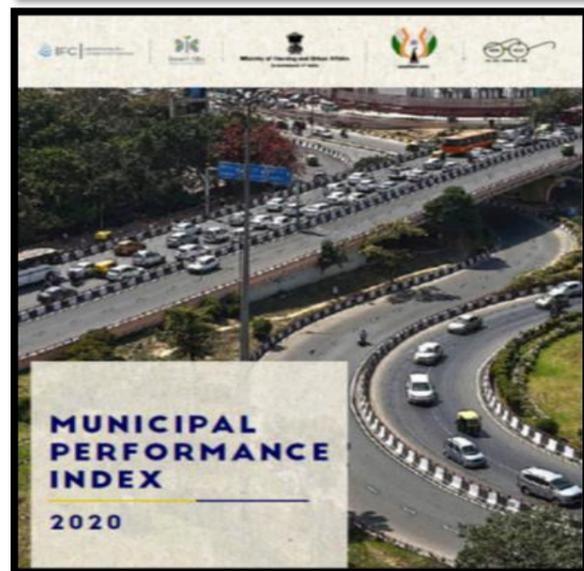
Vijendra Singh Tanwar, AAO

Ease of Living Index (EoLI) 2020 and the Municipal Performance Index (MPI) 2020

Department of Housing and Urban Affairs released final rankings of Ease of Living Index (EoLI) 2020 and the Municipal Performance Index (MPI) 2020 on 04 March 2021. Bengaluru emerged as the top performer in the Million + category (those with a population of more than a million), followed by Pune and Ahmedabad. In the Less than Million category (those with a population of less than a million), Shimla was ranked the highest in ease of living, followed by Bhubaneswar, Silvassa and Kakinada. The EoLI 2020 has a Citizen Perception Survey in the index, with a weightage of 30%. It also examines the outcomes that lead to existing living conditions through pillars of Quality of Life, Economic Ability, Sustainability, with 49 indicators spanning across 13 categories of - Education, Health, Housing and Shelter etc. These account for 70% of the overall outcome.

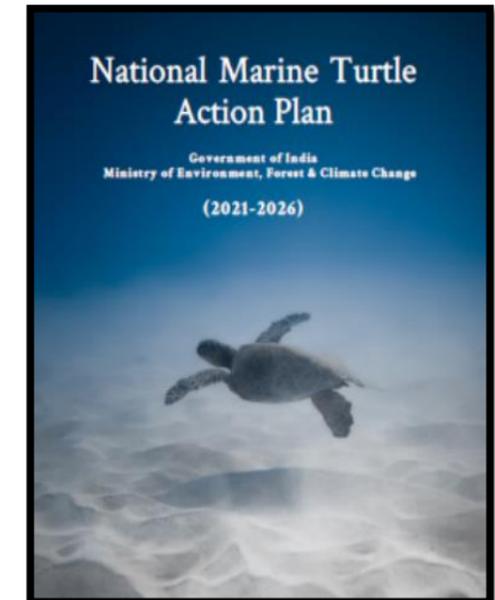
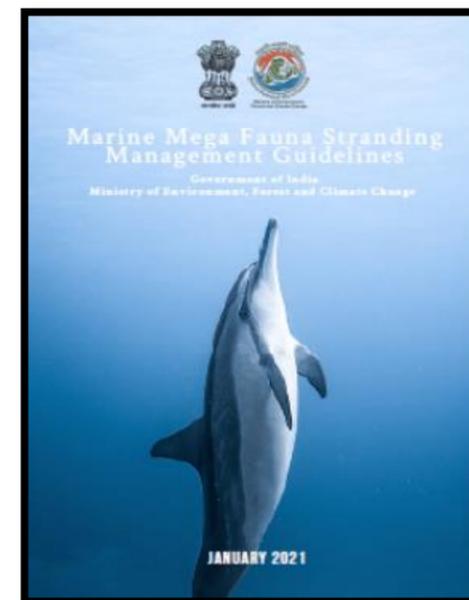
Similar to the EoLI index, the assessment framework under MPI 2020 has classified municipalities based on their population- Million+ and Less than Million Population. In the Million+ category, Indore has emerged as the highest ranked municipality, followed by Surat and Bhopal. In the Less than Million category, New Delhi Municipal Council has emerged as the leader, followed by Tirupati and Gandhinagar.

The MPI examined the sectoral performance of 111 municipalities across five verticals which comprise of 20 sectors vis. Education, Health, Water & Wastewater, SWM & Sanitation, Registration & Permits, Infrastructure, Revenue Management etc. The five verticals under MPI are Services, Finance, Policy, Technology and Governance.



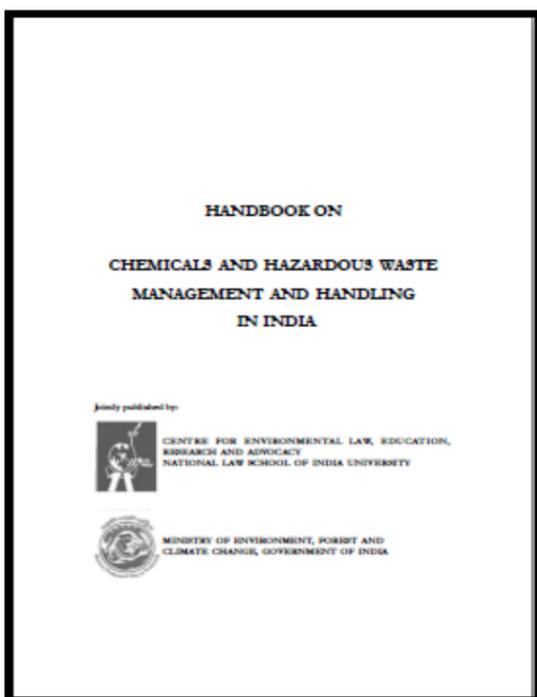
Ministry of Environment Forest and Climate Change (MoEF&CC) releases 'Marine Mega Fauna Stranding Management Guidelines' and 'National Marine Turtle Action Plan'

The Ministry of Environment Forest and Climate Change (MoEF&CC) has released 'Marine Mega Fauna Stranding Management Guidelines' and 'National Marine Turtle Action Plan' to have a conservation paradigm for marine mega fauna and marine turtles. These documents provide guidance on ways and means to promote inter-sectoral action for conservation and improve coordination amongst the government, civil society and all relevant stakeholders on the response to cases of stranding, entanglement, injury or mortality of marine mammals and marine turtles. There are instructions to be taken for handling the animals which get stranded on shore. Entangled in the sea or on a boat, management actions for improved coordination, reducing threats to marine species and their habitats, rehabilitation of degraded habitats, enhancing people's participation, advance scientific research and exchange of information on marine mammals and marine turtles and their habitats.



Handbook on Chemicals and Hazardous Waste Management and Handling in India jointly published by Centre for Environmental Law, Education, Research and Advocacy (CEERA) and Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India

A handbook on Chemicals and Hazardous Waste Management and Handling in India has been jointly published by the Centre for Environmental Law, Education, Research and Advocacy (CEERA) and Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India. The Handbook gives an overview of the legislative and regulatory framework governing the chemical sector in India. The handbook is a ready reckoner for stakeholders working in the field of chemicals and hazardous waste, such as members and officers of the Pollution Control Boards, allied institutions of the Ministry of Environment, Forest and Climate Change, other regulatory authorities, officials and employees of hazardous waste management companies and chemical industries, importers and exporters of chemicals and waste. The Handbook outlines the core objectives of the different Acts, Rules and Regulations that regulate different aspects of chemicals and hazardous waste.



The legislative framework in India governing chemicals and hazardous waste has originated from different Multilateral Environmental Agreements on hazardous waste. The Handbook also delineates the core principles of five major Conventions on hazardous waste and the obligations that the country has to fulfil in furtherance of their objectives. It presents a holistic picture of the chemical sector in India and attempts to apprise them about the fundamental concepts that influence and govern chemical and hazardous waste management and handling in the country.

Transformation of Aspirational Districts programme – Districts Ranking

Transformation of Aspirational Districts programme was launched in January 2018. The programme aimed to expeditiously transform the most backward 115 districts that were identified from across 28 states, in a transparent manner. These districts were those which had shown less progress in key social areas. The three core aspects that frame the structure of the programme were–

- Convergence (of Central & State Schemes),
- Collaboration (of Central, State-level ‘Prabhari’ Officers & District Collectors), and
- Competition among districts.

After several rounds of consultations, it was decided that a baseline ranking for the 115 Aspirational Districts would be done which would be based on 49 indicators across five sectors that included:

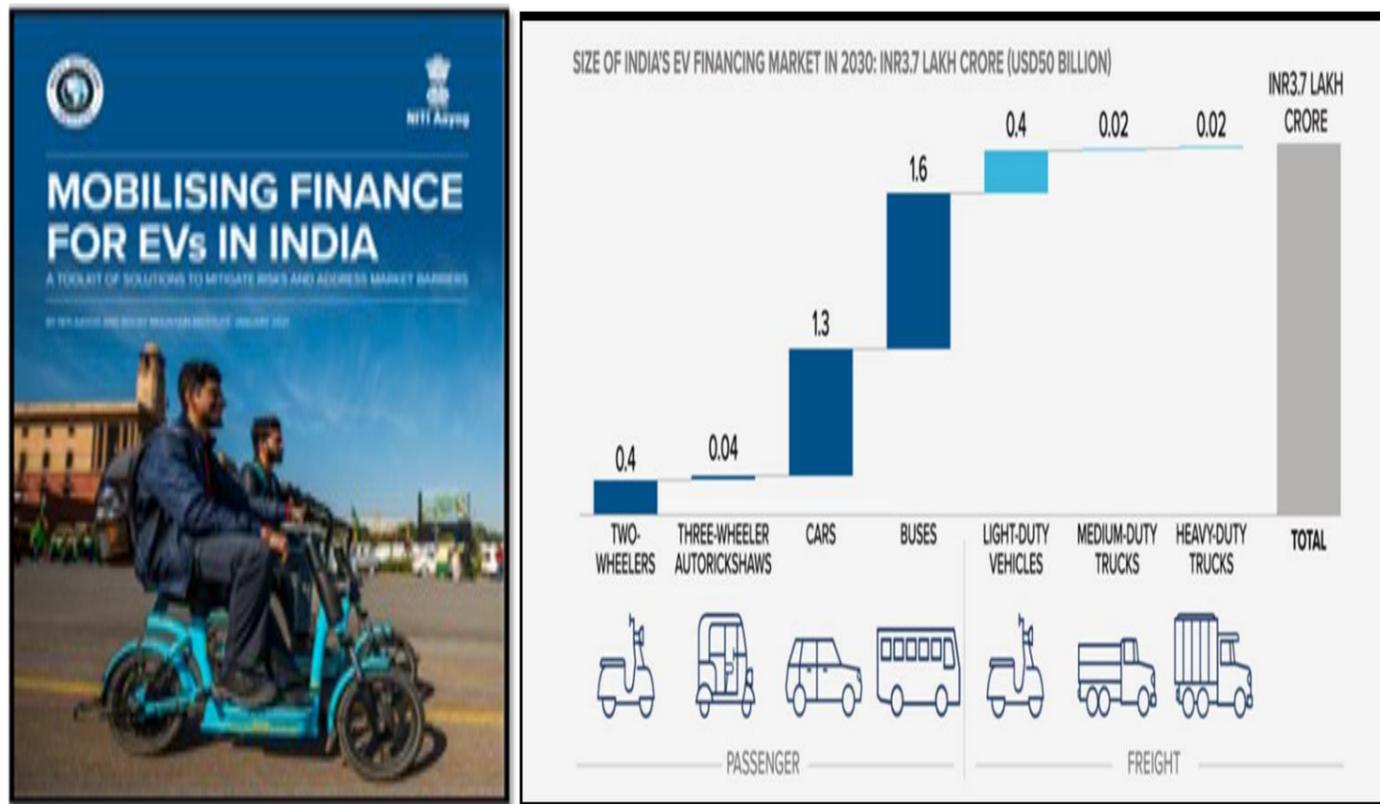
S. No.	Sector	Weightage	Number of indicators	Data points
1.	Health and nutrition	30%	13	31
2.	Education	30%	8	14
3.	Agriculture and water resources	20%	10	12
4.	Financial inclusion and skill development	10% (5% each)	11	16 (Financial inclusion – 6 & Skill development – 10)
5.	Basic infrastructure	10%	7	8

Now, National Institute for Transforming India (NITI) Aayog in partnership with the Government of Andhra Pradesh has created a dashboard for monitoring the real-time progress of the districts. Aspirational Districts Baseline Ranking was released in March, 2018. On April 1, 2018 districts started entering data. Beginning May 2018, districts were ranked based on progress made (‘delta ranking’) on a real-time basis. The dashboard (<http://championsofchange.gov.in/site/coc-home/>) is open to the public to monitor the progress of the aspirational districts Nawada in Bihar has topped the list of aspirational districts ranked by NITI Aayog in January, 2021. Kiphire (Nagaland) and Namsai (Arunachal Pradesh) were ranked second and third respectively. The ranking took in to account the progress made by over 112 districts.

NITI Aayog and Rocky Mountain Institute (RMI) India released a new report 'Mobilising Finance for EVs in India'

NITI Aayog and Rocky Mountain Institute (RMI) India has released a new report titled “Mobilising Finance for Electric Vehicles (EVs) in India”. This report highlights the role of finance in India’s transition to electric vehicles (EVs). As per the report, transition to electric vehicles (EVs) will require a cumulative capital investment of USD 266 billion (Rs 19.7 lakh crore) in EVs, charging infrastructure and batteries over the next decade.

The report also identifies a market size of USD 50 billion (Rs 3.7 lakh crore) for the financing of EVs in 2030—about 80% of the current size of India’s retail vehicle finance industry, worth USD 60 billion (Rs 4.5 lakh crore) today. NITI Aayog and RMI have identified a toolkit of 10 solutions that financial institutions such as banks and non-banking financial companies (NBFCs) as well as the industry and government can adopt in catalyzing the required capital. Recommendations beyond finance include digital lending, business model innovation, fleet and aggregator electrification targets, and the creation of an open data repository for EVs.



NITI Aayog Releases Report on Faecal Sludge and Septage Management in Urban Areas: Service and Business Models

NITI Aayog released a book on faecal sludge and septage management in urban areas, jointly developed with National Faecal Sludge and Septage Management (NFSSM) Alliance. The book presents 27 case studies across 10 states and various service and business models adopted by Indian cities while implementing faecal sludge and septage management (FSSM) initiatives

Considering the importance of FSSM solutions, the Ministry of Housing and Urban Affairs came up with the national policy on FSSM in 2017. The policy has been rigorously pursued across the country—more than 24 states have adopted it and 12 of them have come up with their own policies. The report mentions that about 60% of urban households rely on onsite sanitation systems, which require dedicated planning for management of waste collected in these systems’ containment structures. Accordingly, FSSM planning prioritizes human excreta management, a waste stream with a high potential for spreading diseases. The planning strategies entail emptying, transportation, treatment, and safe disposal of waste and possible reuse of output products post-treatment. It is a low-cost and easily scalable sanitation solution. The Alliance has also worked with state governments on various innovative models, policies and guidelines across the sanitation value chain to ensure that the waste is effectively managed.



United Nations Environment Assembly - 5

Kailash Bajya, AAO

The UN Environment Assembly meets biennially to set priorities for global environmental policies and develop international environmental law; decisions and resolutions then taken by Member States at the Assembly also define the work of the UN Environment Programme (UNEP). Due to the pandemic, Member States agreed on a two-step approach to UNEA-5: an online session (22-23 February 2021) and an in-person meeting planned for February 2022. The theme was “Strengthening Actions for Nature to Achieve the Sustainable Development Goals”, emphasizing the central role nature plays in achieving the Sustainable Development Goals by 2030.

The first session of UNEA-5 was conducted virtually on 22-23 February 2021 with a revised and streamlined agenda that was focused on urgent and procedural decisions. The first session of the

Assembly was attended by thousands of online participants, including more than 1,500 delegates from 153 UN Member States and over 60 Ministers of the Environment. During the meeting, the Assembly warned that the world risks new pandemics if we don't change how we safeguard nature.

UNEA-5 provided Member States and stakeholders with a platform for sharing and implementing successful approaches that contribute to the achievement of the environmental dimension of the 2030 Agenda and the SDGs, including the goals related to the eradication of poverty and sustainable patterns of consumption and production. It also encouraged Member States and Stakeholders to take ambitious steps towards building back better and greener future by ensuring that investments in economic recovery after the COVID-19 pandemic contribute to sustainable development.



The assembly agreed on key aspects of UNEP's work, kicked off the commemoration of UNEP's 50th anniversary and held leadership dialogues where Member States addressed how to build a resilient and inclusive post-pandemic world. The Member States reaffirmed UNEP's mandate as the leading global environmental authority and called for greater and more inclusive multilateralism to tackle the environmental challenges through a statement entitled “Looking ahead to the resumed UN Environment Assembly in 2022 – Message from online UNEA-5, Nairobi 22 – 23 February 2021”. The Assembly agreed to a new Medium-Term Strategy, Programme of Work and budget for UNEP. The new Strategy –2022-2025 – sets out a vision for UNEP's role in delivering the promises of the 2030 Agenda.

In the run-up to the Assembly, UNEP launched a major report–Making Peace with Nature – which provides a comprehensive blueprint for solving the triple planetary emergencies of climate change, biodiversity and pollution. A number of events were also held in support of UNEA-5, including a Global Youth Assembly, a Science Policy Business Forum and the launch of a Global Alliance on Circular Economy and Resource Efficiency.

The highlights of the UNEA-5 can be accessed at the following link -

<https://www.unep.org/news-and-stories/video/un-environment-assembly-2021-highlights>

Compliance Audit of Development and Popularisation of Renewable Energy in the State (Report of the CAG, General and Social Sector, for the year ended 31 March 2018, Government of Odisha, Report No.3 of the year 2020)

Anil Kumar Beniwal, Sr. AO

A Compliance Audit was conducted from April to August 2018 covering the period from 2013 to 2018 with the objective of examining efficiency in implementation of projects.

Audit test checked records in Science & Technology (S&T), Energy and Housing and Urban Development Departments and nine agencies involved in implementation and accounting of Renewable Energy (RE) projects in the State. Audit also conducted joint physical inspection (JPI) of assets in the presence of authorised officials.

The important findings of the audit are given below-

- During 2016 to 2018, the State could make capacity addition of only 23.75 MW (0.86 per cent of the target of 2,750 MW for addition by 2022 in State) and as of March 2018, the total RE installed capacity was 180.30 MW (6.56 per cent).
- In respect of energy from wind, small hydel, biomass and waste sources, no capacity addition had been made.
- In essence, achieving the target of addition of Renewable Energy capacity of 2,750 MW by 2022 remained a distant goal. It could be gauged from the fact that in terms of exploitation of the solar potential, Odisha ranked 17th among 29 States whereas the State ranked 21st in exploring renewable energy among the 29 States.
- Government of Odisha (GoO) though constituted Odisha Renewable Energy Empowered Committee in January 2017, the Committee did not meet once to review the implementation of the RE policy. The implementing agencies had also not prepared their own targets to achieve the State target.
- Odisha Renewable Energy Development Agency (OREDA) did not identify the obligatory entities for enforcing the Renewable Purchase Obligation (RPO). Even, Grid Corporation of Odisha Limited (GRIDCO), the sole bulk purchaser of electricity in the State too failed to comply with the RPO. The installed capacity did not increase at par with RPO percentage.
- Though Ministry of New and Renewable Energy (MNRE), GoI accorded approval for establishment of solar parks in October 2015 to be established within 18 months of approval, Green Energy Development Cooperation of Odisha Limited (GEDCOL) could not acquire land even after 34 months (up to September 2018). As a result, no capacity addition could be made under Ultra Mega Solar Power Projects (UMSPP).
- GEDCOL had neither taken steps to establish Grid Connected Solar Photo Voltaic projects at four locations nor had initiated action to acquire land at other suitable locations. Such inaction led to non-establishment of the proposed solar plants despite Central grant of ₹ 38.10 crore remaining unutilized for last three years (July 2018).
- Lack of efficient efforts by OREDA resulted in, no capacity addition for generation of electricity from biomass.
- Bhubaneswar Municipal Corporation (BMC) failed to implement the programme of generating power from RE sources despite assured financial assistance from GoI. Hence, the programme for 'Development of Solar Cities' remained a non-starter in the State.
- OREDA was to provide electricity to 485 villages from RE sources during 2014-17. As of July 2018, OREDA could complete electrification of 340 villages.
- Despite unsatisfactory past performance, OREDA awarded the work to M/s Gayatri Engineering Construction and Consultancy Private Limited (M/s Gayatri), leading to non-completion of the work.
- Due to delay in identification of beneficiaries, 1633 solar powered irrigation projects could not be commissioned in the State under Solar Pumping Programme for irrigation launched by MNRE and thus OREDA had to refund ₹ 2.76 crore to MNRE.
- OREDA did not take any steps for imposing penalty on M/s Gayatri, for not completing the work of supply, installation and commissioning of 902 High Mast/ Street Lighting Systems, as per the terms of the agreement.
- Injudicious decision on the part of OREDA in not cancelling the supply order of solar lanterns to M/s Powertronix, resulted in extra expenditure of ₹ 49.56 lakh owing to retendering.
- Evaluation of bids on the basis of incomplete documents led to inappropriate rejection of valid bids and acceptance of higher price, resulting in extra expenditure of ₹ 2.35 crore in procurement of 45483 solar lanterns.
- The Renewable Energy policy of 2016 envisaged the following addition (in MW): Wind – 200, Small Hydro – 150, Biomass – 180, Waste to Energy (WTE) – 20. Since 2013-14, the Government had not made any addition to the existing capacity.
- Lack of efficient efforts of GoO in tapping hydel resources resulted in no capacity addition in hydro projects after 2009.
- Of the 112 ULBs in the State, none of the ULBs had set up plants for generation of energy from waste. BMC had executed (May 2014) an agreement with M/s Essel Infra Project Limited for establishment of 11.5 MW capacity plant under PPP mode, but the same could not be set up due to resistance of the local people. BMC also did not identify any alternate site for the plant. Thus, the objective of generating energy from waste could not be achieved due to failure of BMC in identifying sites.

Environmental Governance in India during the British Era

Manoj Kumar, AAO

The early days of British rule in India were days of plunder of natural resources. They started exploiting the rich resources

British approach was more inclined towards exploiting the natural resources for their own good. Due to cut throat competition between colonial powers in Europe, Indian teak was in high demand for shipbuilding and boosting the colonial expansions of the British Empire. This increasing demand was further aggravated due to local construction of roads and railways and supply of teak and sandalwood for generating revenue, which led to exploitation of forests.

In the fifty years between 1860 and 1910, railway track increased from 1349 Kms to 51,658 Kms (Government of India, 1964). For every mile of track laid, 860 sleepers were required, which had an expected lifespan of approximately 12 to 14 years. In the 1870's, it was calculated that every year one million sleepers were needed. Indian trees, particularly sal, (*Shorea robusta*), deodar, (*Cedrus deodara*) and teak, (*Tectona grandis*) were preferred as sleepers, for their perceived strength over other Indian timbers, so it was these three species that were intensively exploited.

Apart from this there were occasions which witnessed widespread destruction of forests just to symbolize political victories. For example- Following the defeat of the Marathas, the East India Company razed to the ground teak plantation in Ratnagiri nurtured and grown by the legendary Maratha Admiral Kanhoji Angre.

In 1806 a Conservator of Forest was appointed by the British, but the post was subsequently abolished in the year 1823 as it had failed to conserve the forests.

The Forest Act of 1865 empowered the government to appropriate any land covered with trees, however, notification could only be effected, if existing rights of individuals and communities were not impinged upon. This initial Act was superseded by a more inclusive piece of legislation, in the Indian Forest Act of 1878. It was designed to facilitate strict state control over forest resources and was distinctly 'annexationist' in nature. It expanded the powers of the state by providing for reserved forest and empowering the forest administration to impose penalties for transgression of the Act.

The British Government declared its first Forest Policy through a resolution on the 19th October 1884 with the objective of promoting the general well-being of the people, preserving climatic and physical condition in the country and fulfilling the need of the people.

Then came the Indian Forest Act of 1927 which was very comprehensive and contained all the major provisions of the earlier Act and amendments made thereto including those relating to the duty on timber. The Act of 1927 also embodied land-using policy whereby the British could acquire all forestland, village forest and other Common Property Resources. Section 26(i) of the Act made it punishable if any person, who, in contravention of the rules made by the State Government, poisons water of a forest area. The State Government was empowered under Section 32(f) to make rules relating to poisoning of water in forests. This act is still in force, together with several amendments made by the State Governments.



Use of Indian timber in expansion of railway by the British

Apart from making laws to govern forests in India, there were various Acts in the field of environment related to conservation of water pollution, air pollution and environmental protection.

The Shore Nuisance (Bombay and Kolaba) Act, 1853 was the first Act in the field of environmental protection in India, which was enacted by the British for the British India. This Act intended to regulate the waste materials discharged in the coastal area of Bombay (Now Mumbai) and Colaba area, from various industries functioning in that area. **The Orient Gas Company Act, 1857** was among the first Act in the field of water pollution. It imposed restrictions on fouling of water by the company. **Indian Penal Code, 1860** provided that if anyone voluntarily corrupts or fouls the water of any public spring or reservoir, so as to make it less fit for the purpose for which it is ordinarily used, he shall be punished with simple or rigorous imprisonment for a term exceeding to three months or fine of five hundred rupees or both.

The Serais Act, 1867 enforced the keeper of any Serai or an inn to keep a certain quality of water "fit for consumption by persons and use of it by the animals" to the satisfaction of the District magistrate or his nominees. **The North India Canal and Drainage Act, 1873** regulated the way, canals for the purpose of irrigation, discharge of the effluents from various industries as well as drainage system is to be controlled. **Section 8 of The Obstruction in Fairways Act, 1881** empowered the Central Government to make Rules to regulate or prohibit the throwing of rubbish in any fairway leading to a port causing or likely to give rise to a bank or shoal.

The Indian Easement Act, 1882 protected riparian owners against unreasonable pollution by upstream pollution. **Criminal Procedure Code, 1893** was one of the major Acts, which provided some of the very strict punishments for the environmental offences under the criminal law.

The Indian Fisheries Act, 1897 penalized the killing of fish by poisoning water and by using explosives. **The Bengal Smoke Nuisance Act, 1905** aimed for the abatement of nuisances, arising from the smoke of furnaces or fire-places in the towns and suburbs of Kolkata and in Howrah and other areas of Bengal. Its main purpose being to preserve the dazzling whiteness of the fine huge white-marble structure of Victoria Memorial Hall.

The Indian Ports Act, 1908 provided rules to prevent water pollution caused by discharge of oil in port waters. **The Bombay Smoke Nuisance Act, 1912** was made for the abatement of nuisances arising from the smoke of furnaces in the Town and Island of Bombay. **The Mysore Destructive Insects & Pests Act, 1917** prevented the introduction into and the transport from one province to another, any insect, fungus or other pest, which is or may be destructive to crops.

Efforts were also made to induce environment protection through municipality laws in India. **The Uttar Pradesh Municipality Laws, 1916** and **Bihar and Orissa Municipality Laws, 1922** were among the earliest laws for regulating the environment conditions in the cities by the help of municipality laws.

There were initiatives taken on the wildlife protection front also. A law for prohibition on destruction of wild elephants with imposition of penalty was established in Madras (Chennai). In **1879, the Elephant Preservation Act** was established to reinforce the same. In **1887, the Wild Birds Protection Act** prohibiting the possession or sale of wild birds recently killed or taken during the notified breeding season was enacted. The first comprehensive law for protection of wildlife and its habitat was **the Hailey National Park Act of 1936** which established the Hailey (now Corbett) National Park in Uttar Pradesh.

Conclusion

It can be deduced that there were initiatives taken during the British era in order to protect the environment from degrading. However, most of the steps were enacted with the intention to benefit the British themselves rather than the targeted sectors. Some of the laws were, so as to protect the resources from the natives themselves, in order to allow the British to utilize them for their own needs. Moreover, most of the punishments prescribed under the laws were not strict and this allowed the offenders to escape such penalties unscathed. The theories like Sovereign Immunity always saved the government from being sued under public offence.

A few laws like the Indian Penal Code 1860 related to corruption or fouling of water of any public spring or reservoir and the Criminal Procedure Code 1893 related to punishment for any nuisance, which effected the public, proved to be effective deterrents against exploitation of environment. Moreover, such laws paved the way for independent India to make more efficient and effective provisions for preservation of environment, in future.



The problem of Water pollution has been persisting in India since the British period.

Green initiatives – Community Participation in Conservation of Simlipal Tiger Reserve

Vikas Dhir, AAO

Simlipal National Park is a national park and tiger reserve located in Mayurbhanj district in Odisha. Simlipal derives its name from “Simul” (Silk cotton) tree. The park is home to Bengal tiger, Asian Elephant, Gaur and chausingha. The national park is a part of UNESCO World network of biosphere reserves.

Formally it was designated as a tiger reserve in 1956 and under Project tiger in May 1973. Government of India declared Simlipal as a biosphere reserve in 1994. The national park is a treasure house to 1076 species of plants belonging to 102 families. Around 42 species of mammals, 242 species of birds and 30 species of reptiles have been recorded in Simlipal National Park. The mammals include tiger, leopard, Asian Elephant, sambar, barking deer, jungle cat, wild boar, chausinga, giant squirrel and common langur. Red jungle fowl, hill mynah, peafowl, Alexandrine parakeet, crested serpent Eagle are the commonly found birds.

The concept of Joint Forest Management (JFM) has been introduced in the STR, which emphasizes the participation of local users in forest protection, development, and management. It seeks to develop partnerships between state forest departments and local community organizations (as co-managers) for sustainable forest management.

The communities living around Similipal Biosphere have done efforts for protecting the forest and wildlife.

Communities such as **Guru Lakhadhra Gosthi Jungle Sambal Suraksha O Parichalana Committee** are doing a lot of work for protection of the forest. The committee conducts meetings to sort out issues related to protection, management and selling of Non Timber Forest Products (NTFPs). Many committee members practice “Thangapalli” to protect the forests. Thangapalli is a practice under which a group of community members carry Thengas (Bamboo lathis) and go inside the forest to patrol the trees on rotation basis and charge penalties from illegal intruders or miscreants if found responsible for felling of trees and poaching.

Tribes such as the Erenga Kharias and the Mankirdias practice traditional agricultural activities (the collection of seeds and timber).

The local tribals in Similipal have a long history of maintaining sacred groves of Sal tree known as Jahira. No harvesting is allowed without performing community rituals.

Kolha tribes celebrate a particular festival pertaining to sacred groves as “Phulbangni”. The festival is celebrated when flower start blossoming in Sal trees. Khadia tribes see the elephant as their God or Thakur.

These tribals have a belief that unless they hurt any animal, it would not hurt them. They also believe that God would protect them from wild beasts since their dependency on forests is genuine

. In the year 2002, **Sabuja Vahini** (green brigade) was formed in some fringe villages of buffer zone of the STR. The **Sabuja Vahini** members motivate people, search suspected people and inform the authorities about any suspicious activity. Another group known as “**Vaidya Sangha**” aims to promote local health traditions and conservation of medicinal plants in Similipal.

Legal recognition to the rights of communities under Forests Right Act has encouraged the communities to protect the environment. Community Forest Rights (CFR) Land deed has authorized them as the sole protector and managers of the forests. In April 2015, 43 villages inside Similipal Reserve received legal recognition recognizing their right to protect, manage or conserve any traditional community forest resource which they have been doing for sustainable use. It is only the second time in the history of Forest Rights Act that Community Forest Rights have been recognized inside a tiger reserve.



Local community members guarding the forest

Restrictions on the sale of non-timber forest products have been quashed after recognition of CFR (community forest rights). There has been a considerable decrease in forest fire incidents inside the biosphere. Now as soon as community people get to know about fire, they rush to that place and follow necessary protocols to seize the spread of fire. Due to the community conservation initiatives, there has been improvement in flowing pattern of streams inside the forest reserve. This has allowed the tribes to enjoy good harvest throughout the year.

The community is gaining global recognition for conservation efforts most importantly: - local, natural and bio diversity rich forests yield better water, food and nutrition security by tackling climate induced disasters in many ways. Farmers get good harvest every year due to recharge of water bodies. The economy has become self-sufficient and there had been sufficient decrease in rate of migration. Revival of existing local institutions and more participatory community management should be recommended. In order to reduce trust deficit between villages and forest department, more ownership rights should be transferred to local people which can enhance better forest conservation outcome.

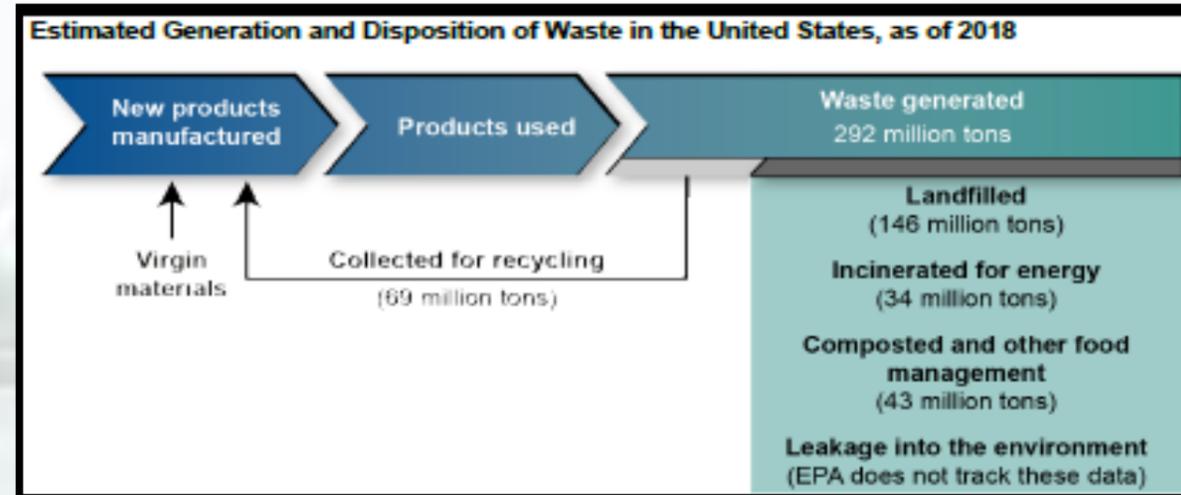
Audit Report on “Recycling: Building on Existing Federal Efforts Could Help Address Cross-Cutting Challenges (GAO-21-87)

Gaurav Jain Sr.AO

In U.S. Recycling System, municipalities generally have their own recycling programs to manage the municipal waste generated from households. They also arrange for recyclables to be collected and hauled to Materials recovery facility (MRFs), where the materials are sorted and cleaned. MRFs process recyclables using a combination of equipment and manual labour to sort the materials into bales of like materials, such as aluminium, glass, or paper.

Four key stages comprise the U.S. recycling system:

- Generating recyclables. Households, businesses, and institutional entities generate municipal waste from materials they have used and then either dispose of or separate them for recycling.
- Collecting recyclables. Municipal and private waste haulers collect recyclables from residences and businesses and transport them to MRFs. Individuals also bring materials to drop-off centers or redemption centers.
- Sorting and processing recyclables. MRFs sort, clean, and bale recyclables and sell them to brokers or send them to landfills for disposal. Some materials, like plastics, may require further processing, such as secondary sortation—which can produce bales of more distinct materials with lower contamination rates—or turning these materials into small, uniform pellets that manufacturers can more easily use.



- Manufacturing new products. Manufacturers generally purchase bales of recyclables from brokers and use the recycled content to make new products.

GAO, USA identified five cross-cutting challenges that affect the efficiency and effectiveness of recycling in the United States. These challenges are the

- contamination of recyclables,
- low collection of recyclables,
- limited market demand for recyclables,
- low profitability for operating recycling programs, and
- limited information to support decision-making about recycling.

Why GAO Did This Study: In 1976, Congress sought to reduce solid waste and encourage recycling as part of Resource Conservation and Recovery Act (RCRA), which gave primary responsibility for recycling to states and municipalities. The United States generated almost 1,800 pounds of waste per capita in 2018. Recycling rates for common recyclables,

such as paper, plastics, glass, and some metals, remain low. Furthermore, recent international import restrictions have reduced demand for U.S. exports of recyclables.

Audit Objectives: Audit objectives were to

- identify cross-cutting challenges affecting recycling in the United States,
- examine the extent to which selected federal agencies have taken actions that advance recycling in the United States, and
- assess the extent to which the Environmental Protection Agency (EPA) has taken actions to plan and coordinate.

Audit Methodology:

GAO reviewed laws and agency documents; and interviewed federal officials and non-federal stakeholders, such as states, municipalities, and industry representatives, selected for their expertise and efforts to advance recycling.

What GAO found:

1. EPA has not conducted studies or developed recommendations for administrative or legislative action on the effect of existing public policies on recycling, as the Resource Conservation and Recovery Act (RCRA) requires.
2. In addition, Commerce is not fully meeting its Resource Conservation and Recovery Act (RCRA) requirement to stimulate the development of markets for recycled materials because it has not taken actions to stimulate domestic markets, as GAO recommended in 2006.
3. EPA has not incorporated some desirable characteristics for effective national strategies, identified in prior GAO work.

Recommendations:

1. An implementation plan for conducting a study and developing recommendations for administrative or legislative action regarding the effect of existing public policies, and the likely effect of modifying or eliminating such incentives and disincentives, upon the reuse, recycling, and conservation of materials, as required by RCRA.
2. An implementation plan should also be developed regarding the necessity and method of imposing disposal or other charges on packaging, containers, vehicles, and other manufactured goods to reflect the cost of final disposal, the value of recoverable components of the item, and any social costs associated with non-recycling or uncontrolled disposal, as required by RCRA.
3. There should be incorporation of desirable characteristics for effective national strategies, including (1) identifying the resources and investments needed, and balancing the risk reductions with costs; (2) clarifying the roles and responsibilities of participating entities; and (3) articulating how it will implement the strategy and integrate new activities into existing programs and activities.

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Some important International Environment Awareness Day's (January to March)

