Report and Recommendations of
International Conference on
Global Environmental Issues

14th - 15th March 2015 | Vigyan Bhawan, New Delhi
MESSAGE

I am happy to learn that the National Green Tribunal, in association with the Ministry of Environment, Forests and Climate Change; and the Indian Law Institute, is organizing an International Conference on "Global Environment Issues" on 14th - 15th March, 2015 at New Delhi.

I am sure this conference will provide an interdisciplinary platform for discussion and exchange of ideas among experts in the field. I hope the deliberations shall provide a roadmap for future environment policy formulation.

I convey my best wishes to the organizers and participants, for the success of the Conference.

(Narendra Modi)

New Delhi
17 February, 2015
'OM' is considered as the sound of cosmic energy and it contains all sounds in itself.
with diverse aspects of environment including Global Warming and Disaster Management, World Oceans, Improving Public Health by Preventing Eminent Causes of Pollution; Forest, Wildlife, Development and Environment, Municipal Solid Waste Management and Substantial Environmental Issues – Remedy and Law. The brain storming and interactive sessions with conflicting ideas ensured healthy discussion and result oriented problem resolution, and also provided creative solutions to the above, as creativity comes from conflict of ideas.

In these technical sessions some of the key topics such as ozone layer depletion, impact of climate change, unplanned development, impact of sinking ships and waste disposal on marine eco-system, noise and air pollution, environmental toxicology and chemical carcinogenesis, changing principles of sustainable development in developed and developing countries, loss of bio-diversity, effective methodology for collection, segregation and disposal of municipal waste, international dispute resolution mechanisms were dealt with.

It is only through International Conferences like these and the knowledge we imbibe therefrom, that we can prepare ourselves for taking suitable actions against challenges, such as managing the environment as well as mitigating and adapting to the many impacts of climate change.

Here we provide the executive summary and the recommendations of the international conference on global environmental issues. I do hope that the deliberations at this international conference and its recommendations would be of some help and guidance to the international community particularly those who have interest in environment protection.

(Justice Swatanter Kumar)
EXECUTIVE SUMMARY

The two days International Conference on "Global Environmental Issues" organised under the aegis of the National Green Tribunal (India), the Ministry of Environment & Forests and the Indian Law Institute was inaugurated on 14 March 2015 at the Vigyan Bhawan. The Vice-President of India, the Chief Justice of India; the Union Minister of State for Environment - Forest and Climate Change, Minister of State for Power, Judges of the Supreme Court of India, the Chief Justices of various High Courts, the judges of High court and district courts, the Attorney General of India, the Solicitor General of India, the secretaries working in the Ministry of Environment, retired judges, Senior Advocates and legal officers and lawyers, Secretaries from Union and States, Chairpersons of Pollution Control Boards, Members of Civil Society, Vice-Chancellors, Deans, Professors, faculty members, law students along with the Chairperson and other members of National Green Tribunal participated. The conference was held in six technical sessions and it provided a forum for legal experts, policy makers and other stakeholders to deliberate on issues like conservation and protection of environment.

The main objective was to mull over numerous critical issues regarding global environmental change and to come up with effectual solutions. The conference dwelled upon various topics such as the role of equal justice and social inclusion for obtaining the goal of environmental justice; rehabilitation, reconstruction and reallocation as the three main concerns for environment protection; government’s commitment to protect and conserve environment; economic constraints faced by nations in combating environmental issues and the need to translate humanity’s commitment to action.

In the session on the 'Facets of Global Warming and Disaster Management' the proposal that emerged from deliberation was the urgent need for global collaboration to combat climate change and environmental degradation. The speakers deliberated upon various issues of global concern. Anthropogenic impact on environment was the key feature of the discussion. The role of judiciary in upholding the cause of environment as an important right of both present and future generations was highlighted. The need for equitable and optimum utilization of resources was further conveyed. Uncertainty as a factor of environmental jurisprudence was discussed and it was pointed out that many a time, environment courts have no precedents to follow, such as in the case of rising sea levels that threaten coastal nations like Bangladesh and New Zealand. It was further articulated that handing over the environment in its pristine form to the
global environment protection was discussed with special reference to Kenya. The need for national regulating agencies and importance of environmental education was stressed upon. The efforts done by the National Green Tribunal and its expertise members in safeguarding the environment in India were highly appreciated.

The session on 'Municipal Solid Waste Management' highlighted that municipal solid waste was set to touch staggering proportions as a result of population explosion. Many speakers provided various statistics on disappointing mounting level of wastes and it was indicated that by the year 2025, municipal solid waste is expected to reach a colossal figure of three hundred million tons in India. It was further held that about 1024sq.km of land may be required in India alone for landfills. Further the session opined that urban areas with greater population density are likely to face new challenges in the domain of waste management. It was realized that the problem only intensifies due to migration from rural areas and unplanned growth of cities, unchecked dumping of waste and lack of awareness about organized waste management amongst most populations, particularly rural and ethnic populations. The speakers were of the opinion that waste not only litters, it pollutes the soil, underground water and the atmosphere. At this juncture, it was felt imperative to define waste in the context of modern times. The session deliberated upon the need for managing different types of wastes such as ordinary domestic waste, radioactive waste, hazardous waste, chemical waste, e-waste with technical finesse. It was further opined that involvement of corporate houses can be sought in storage of waste by providing incentives to those manufacturers who visualize and facilitate disposal of their products at end life. A further research on successful models from developing countries was felt for a suitable adaption to developing nations subject to budgetary and technological constriction. Many speakers highlighted the advantage of converting of waste to energy and eventually to wealth. Policy driven frameworks for waste management together with sound laws was considered as the need of the hour. Judicial ability of environment judges was felt to be enhanced and public interest litigation against careless dumping of waste and related issues were held to be encouraged. The session concluded with a note that mass participation should be encouraged to make waste management projects a success.

The session on 'Substantial Environmental Issues' revolved around such as international dispute resolution mechanism, hazardous waste disposal and role of international cooperation in developing environmental jurisprudence. The panelists discussed the technological advances and their impact on environment and ways to balance economic development with environmental protection. The role of developed nations in assisting developing and under developed countries was recognized. It was suggested that the use of alternative energy should be optimized and nuclear energy should be utilized as the last resort. Further, India’s indigenous capacity to produce nuclear energy at par with developed nations was discussed. Adoption of Civil enforcement and merit review mechanism while resolving judicial disputes was analysed and the need to adhere to certain principles like impartiality, independence, accessibility inter alia in dispute resolution was emphasised. The public interest priority principle was stressed upon and the state’s liability to protect the environment
Hon'ble Shri Mohammad Hamid Ansari, The Vice President of India along with other Dignitaries at the Inaugural Session of the International Conference on Global Environmental Issues
THE REPORT

of

International Conference on

Global Environmental Issues

held on 14th - 15th March 2015 at Vidyut Bhawan, New Delhi
creation and establishment of the Tribunal and the Tribunal’s efforts for the restoration of Ganga and Yamuna Rivers were praised. Justice Kumar announced the release of the *International Journal of National Green Tribunal* which consists of laws on environment and articles elaborating the various aspects of climate change debate and stressing on the need to augment the capability of humankind to combat climate change.

Mr. Mukul Rohatgi, Attorney General for India in his introductory speech addressed the multitude of problems such as illiteracy and lack of awareness, which remain a major hurdle in the conservation of natural resources. He emphasized on global issues like global warmings, ozone-layer depletion; electronic and nuclear waste; collapse of ocean system; and public health issues. Concern was raised regarding the high levels of fine particulate matter that cause serious health problems in the cities of Delhi and Beijing. At the same time, the exemplary efforts of the Supreme Court in removing heavy industry from Delhi, establishing the Green Bench and encouraging the use of compressed natural gas for public transportation in Delhi were lauded. Apprehension was raised regarding the hostile attitude of the affected people towards environmental conservation policies. Rehabilitation, reconstruction and reallocation as the three main concerns for environment protection were emphasised.

Hon’ble Mr. Prakash Javadekar, Union Minister of State (Independent Charge) for Environment Forest and Climate Change deliberated on the scheme of our Constitution, new sensibilities and the need for respect and trust among the ‘three pillars’ of the Constitution. The mandate placed on the government to conserve nature must be respected by the ‘three pillars’ to keeping in mind the larger picture of sustainable development. ‘Development without destruction’ was stated as the motto of the Indian Government. There was an emphasis on the policy based decisions which should be more transparent on the issues like sand, river excavations, for which technological innovations must be used. The Indian government is also striving towards transparency in the government procedure which would help in achieving the goal of sustainable development. The public campaign for ‘fresh air- my birth right and creation of responsible environmental governance was also highlighted.

Hon’ble Mr. Justice H.L. Dattu, Chief Justice of India in his keynote address stressed on the role of international community in the protection and preservation of environment. He advised that the first step towards effective conservation of nature is the identification of problems and the implementation of corrective measures. Various issues such as global warming and made a special reference to affect of climate change on coastal nations were discussed by him. He also deliberated on the negative ramifications of development especially with regard to the increase in food insecurity and genetically-modified food products, which are harmful for the environment and human population. The speaker appreciated Supreme Court’s efforts in including the ‘Right to Clean Environment’ within the ambit of ‘Right to Life’. He reflected on the economic constraints faced by nation in combating climate change and stressed on international cooperation as an effective solution to the same.
Facets of Global Warming and Disaster Management

- Global Warming-Ozone Layer depletion and its effects
- Preventive and Precautionary steps that would help in reducing adverse impacts of Climate Change
- Impact of Climate Change on Himalayan Glacier and Glacier Lakes
- Unplanned Development: Natural and Anthropogenic disasters with reference to developing countries (particularly Uttarakhand, India)

This session was chaired by Hon’ble Mr. Justice J.S. Khehar, Judge, Supreme Court of India, and the other Co-Chairpersons were Hon’ble Mr. Justice Robert John Anderson Carnwath Judge, Supreme Court of UK and Hon’ble Mr. Justice Dr. D.Y.Chandrachud Chief Justice, Allahabad High Court. The panel also had distinguished speakers such as Dr. Upendra Baxi Professor, University of Warwick, UK, Hon’ble Mr. Justice Abdul Qader Adalatkhah Judge, Supreme Court of Afghanistan and Ms. Marlene Oliver, Environment Commissioner, Environment Court of New Zealand. The speakers highlighted various aspects such as global warming, rising sea level, ozone layer depletion and other grave environmental concerns. They further talked about preventive and precautionary steps that would help in reducing adverse impacts of climate change. Some of the speakers also highlighted the impact of Climate change on Himalayan Glacier and Glacier Lakes, unplanned Development, natural and anthropogenic disasters with reference to developing countries (particularly Uttarakhand, India).

Prof. (Dr.) Upendra Baxi, Professor, University of Warwick, UK commenced the session with delivering a talk on the issue of ‘Anthropogenic Disasters and Climate Justice’. He stated that Green Judges, while dealing with the environmental matters need to give value to justice. Green Judges have to be more ‘sensitive’ compared to other judges, since environment is a universal proprietary and it is to be handed over to the future generations. The major stress was on the anthropogenic impact and its relation with the climate justice. As an illustration the Bhopal Gas tragedy incident was referred
Hon’ble Mr. Justice Dr. D.Y. Chandrachud, Chief Justice, Allahabad High Court, India expressed his opinions on the topic ‘Global Collaboration for Environment Justice Mechanism’. The Speaker talked about the various impacts of climate change such as melting of glaciers, rising sea levels, flash floods such as in Uttarakhand. The continuing depletion of ozone layer due to emission of CFCs and other gases was highlighted. The ongoing misuse of environment would have adverse impact on terrestrial plants, aquatic eco-systems, bio-geo-chemical cycles and green house effect. The International Community needed to work for a holistic view of Environment. The bilateral treaties can place or accommodate environmental obligations to make environment acts actionable with respect to non-state actors of other countries also.

The Recommendations were:
- Link economics/trade with environment
- Creation of green/climate funds
- Climate change should be synced with human rights
- Liability on the basis of market share

Hon’ble Mr. Justice J.S. Khehar, Judge Supreme Court of India addressed the contemporary issue related to the Environmental degradation in Uttarakhand – A Case Study. The Chairperson was giving the example of Uttarakhand as the case study. He stated that the heavy influx of tourists and pilgrims in Uttarakhand resulted into unchecked so called ‘development’. Justice Khehar further cited the examples of construction of roads, hotels, hydel projects such as Tehri Dam in those soft hilly areas of Uttarakhand. It was further stated that infrastructure and development should not be done at the cost of environment. Little consideration should be given to long term environment impact and no development process should be made disregarding the environmental fragility of the mountain range.

The Recommendations were:
- Public sensitization and mass participation/awareness as important as enforcement of environment law
- It is the time to think beyond human needs and greed

Lord Robert John Anderson Carnwath, Judge, Supreme Court, UK expressed his view on the role of Courts in ensuring environmental protection. He stated that a sense of specialist Tribunals for environmental protection is the emerging trend. Certain important negotiations will be taking place in Paris on Climate Change this year; it is crucial that countries come together and enter in an agreement which can be enforced. He pointed out that law is a bridge between scientific knowledge and political action. He referred to a US Supreme Court judgment relating to Massachusetts wherein meaning of the word ‘pollutant’ was discussed and it was held that ‘pollutant’ includes global warming gasses. Global warming is the most pressing environmental challenge.

The recommendations were:
- International body should be established to enforce environmental law.
- There is a need at domestic level to develop enforcing law to give teeth to the responsibility of controlling climate change effects.
- Trace modern principles of environmental law.
- Judges and lawyers need to build the bridge between science and political action.
The Recommendations were:

- Need for training and educating the youth and creating awareness for environmental protection.
- Need for sensitization of people in general with regard to environmental concerns.
- Global concerted efforts to deal with these concerns.

Hon’ble Mr. Justice A.M. Khanwilkar, Chief Justice, Madhya Pradesh High Court, India focused his attention on sinking states; sinking ships; impact of waste disposal on marine ecosystem; oil spills. His address aimed at emphasizing on the pro-active role played by the Indian judiciary in reminding the people of their fundamental duties and commitments towards protection of the environment. The discussion further revolved around the phenomenon of "sinking islands", which is a result of rapid global warming, caused by emission of the greenhouse gases and rapid industrialization. Multiple cases were cited as examples, especially the Research Foundation case, wherein the Court appointed a Committee of Experts to recommend on the issue of sinking ships. It was enumerated that these issues were global concerns and in need of urgent attention. Referring to the manner and method of waste disposal, it was observed that land based activities are the highest contributors of marine pollution (approximately 80%). In relation to Oil Spills, in the year 1992, India constituted a strong framework on National Oil Spill and Disaster Contingency Plan, which recognized the Polluter Pays Principle. In essence, through his address, the speaker touched upon all the themes identified in this session.

The Recommendations were:

- Implementing the Polluter Pays Principle as an appropriate strategy to address these problems.
- Cost of damage to the nature cannot be estimated, or be compensated. Therefore, the best strategy is to follow Pollution Prevention Principle.

Hon’ble Mr. Justice Antonio Herman Benjamin, Judge High Court of Brazil focused on the issue of Oceans and problems faced by Judiciary in Prevention of Pollution in Oceans. The speech was opened by stating that oceans are one of the global commons par excellence. Having said that, for ages, oceans were seen as infinite and open access resources and therefore, not deserving of highest protection from the legal system. Traditionally, oceans were viewed from 2 aspects, namely (i) medium of transportation; and (ii) for fishery. Oceans pose a number of difficulties vis-à-vis legal regimes and the way judges operate in specified jurisdictions. Oceans are beyond the reach of the judges and they do not have the power to protect them. In fact, waters, even those that are within the jurisdiction of the judges, do not come up as issues before them and this was a fundamental hurdle.

The speaker highlighted the following challenges that are being faced by the judiciary in protection of the oceans:

i. Judges perceive of local problems and they are not trained to go beyond the border of the State;
ii. Environment is fragmented into narrow jurisdictions – National, State, Local levels;
iii. Ethical problem – the way one sees and relates to nature.

The Recommendations were:
Mr. K.K. Venugopal, Sr. Advocate, Supreme Court of India in his address focused upon ‘Sources of Ocean Pollution, Legal Framework governing the same and Role of Indian Judiciary.’ Oil spills, waste disposal, plastic wastes etc. are major sources of ocean pollution. Furthermore, the legal framework in India with regard to environmental laws was elaborated. Environment Protection Act, Water and Air Acts provide a broad framework to protect environment. The speaker also highlighted the role of the National Green Tribunal, 24 High Courts and the Supreme Court of India, in playing a proactive role with regard to protection and conservation of environment. Asserting that environmental concerns are trans-boundary concerns, the need to deal with these issues collectively was emphasized. Public Interest Litigation acts as a powerful tool for every citizen to come forth and prevent environmental damage. Courts are empowered to issue writs directing the ering authorities to function in accordance with law. A reference to Jagannath v. Union of India, was made wherein the Court took a strict stance against direct and indirect forms of dumping in coastal areas.

The Recommendations were:

- Need to incorporate citizens in the environment protection programmes.
- Spreading awareness of legal rights and duties.
- Sensitizing people towards environmental concerns.

Professor William J. Lockhart, University of Utah, USA focused his attention on 'Environment Impact Assessment (EIA) as a 'Tool for Environmental Protection' and expressed concern that the global EIA community is worried about the recent Environmental Assessment Committee (EAC) report by the Ministry of Environment and Forest (MOEF). The speaker pointed out various deficiencies in the above report. Firstly, the report proposed changes in the existing laws, but failed to acknowledge the status of implementation of the statutes already in force. Secondly, some of the recommendations made in the report were inconsistent with the existing laws. A notification issued by the MoEF was referred, wherein MoEF made objections to EAC re-visiting the site and seeking of additional assistance that was not contemplated in the Terms of Reference. Such an attitude of the Ministry limited the scope of the enquiry of the committee. An example of a case study relating to Native American community living in Utah, USA was taken up. The community in Spring Valley reveres their environmental sources (water) and protects their cultural identity. Las Vegas has a great water demand which threatens the ecosystem in Spring Valley. This presented a problem in how EIA can be conducted and also highlighted that the federal government must ensure that the resources must be replenished. In that context, meaningful government review is required.

The Recommendations were:

- Process of EIA should be rigorously followed.
- Government comprehensive review of various policy and Acts must be conducted periodically.
- Scientific studies must be carried out to compliment EIA process.
effects of toxins, especially insecticides and pesticides, in agriculture in Hawaii and the unique environmental aspects of the Constitution of Hawaii. A case study was provided of the effect of insecticides and pesticides on the biodiversity of Pearl Harbour. The importance of considering natural beauty as a resource was underlined. The speaker discussed about the important environmental law principles like ‘polluter pays principle’ and the ‘precautionary principle’ with special reference to Hawaii.

The Recommendations were:

• Incorporating environment-protection provisions in the Constitution to reduce the use of powerful insecticides in agriculture and thus maintain a healthy bio-diversity.
• Emphasize the ‘precautionary principle’ and ‘inter-generational policies’.

Dr. Eli Cohen, CEO & Founder, Ayala Water & Ecology, Israel spoke on water conservation, the restoration of ecological balance and the technical aspects of restoration and rejuvenation of water bodies. He raised concern about the misbalance in the water, food and energy network and its repercussions on human existence and also discussed the unsustainable water use, the increasing water footprints of several countries and the gap between infrastructural capabilities of the cities and the growth of urbanisation. The main issues identified were: sewage treatment plans bypasses; lack of monsoon storm-water buffering; protection of rivers from perennial sewage flows; and polluted urban flow.

The Recommendations were:

• A decentralized system to treat water may be better than a centralized one; greater regulation of water is required to prevent waste and exploitation;
• A green belt would be a comprehensive solution;
• Natural Biological System (NBS) i.e., a natural hybrid machine that uses living organisms and technology should be implemented. This system uses gravitational force for flow regulation, and it is 20% cheaper than the conventional methods for sewage treatment;
• Drip irrigation could be expanded in India;
• Recharging of wetlands using rainwater, and restoring the flow of natural sediments would help in preventing environmental degradation.
• Buffering and harvesting of rain water is an effective solution for water restoration.
• Attempt to establishment active landscaping in cities.
• Sewage treatment and recycling was recommended.

Dr. Benedict Basnayake, University of Peradeniya, Sri Lanka dealt on the efficacy of legal framework to prevent nano- pollution with special focus on the on the adverse impact of particulate matter. The contribution of nano pollution in causing health problems and environmental disasters was explained, the causal connection between particulate matters and climate change and the concept of eco-survival was also elucidated.
Forest, Wildlife, Development and Environment

- Development and Rehabilitation of Displaced Wildlife
- Loss of biodiversity resulting from urbanization and industrialization
- Hydropower generation, Impact on ecology & environmental degradation
- Changing Principles of sustainable development, Comparative Study of developed and developing countries [Role of UNEP]

Hon’ble Mr. Justice K. Sripavan Chief Justice, Supreme Court Of Srilanka, was the chairperson of the session. Hon’ble Mr. Justice J. Chelameswar, Judge Supreme Court Of India, Hon’ble Mr. Justice Madan B. Lokur Judge Supreme Court Of India, were the co-chairperson and the speakers of the session were Ms. Justice Pauline Nyanweya Presiding Judge, Land And Environment Division High Court, Kenya, she spoke on 'The Kenyan Situation And Challenges Faced By Kenyan Judiciary In Tracing The Existence Of Environmental Mandate And Implementing It’. Mr. Fali S. Nariman Sr. Advocate Supreme Court Of India, spoke comprehensively on many global environmental issues, and Dr. Gitanjali Nain Gill Northumbria University United Kingdom, who tabled her presentation on Role Of Experts In NGT In India- A New Platform For Sustainable Development’.

Hon’ble Mr. Justice K. Sripavan, Chief Justice, Supreme Court of Sri Lanka commenced the session by addressing urgency of recognizing the environmental protection as a fundamental duty on the government as well as citizens which can be done by creating awareness in public at large about environmental concerns. He underlined that being custodians of Rule of Law, role of the judges becomes unique in protecting the environment and further added that globally certain constitutions like USA and MALI, have adopted explicitly environmental mandate, which other countries should also follow.

The Recommendations were:

- Efforts should be made to conserve the biodiversity globally.
- Human activities threatening the biodiversity like, encroachment, clearing land, excessive excavations or mining in the forests etc. should be minimized.
The Recommendations were:

- For effective environment protection we need cooperation from international bodies and strengthening of the judiciary.
- Lawyers need to have a proactive approach towards PIL jurisprudence in Kenya.

Mr. Fali S. Nariman, Sr. Advocate, Supreme Court of India spoke comprehensively on many global environmental issues. It was significantly mentioned that, on this subcontinent man, water and forest are not hum drum issues but they are bread and butter and poverty relieving issues. Further talked about role of Indian Supreme Court in last 30 years towards protection of environment and compared it with United State Supreme court. Speaker mentioned about issue of conflict of forests versus industries and urged courts around the world to strike a balance between good and good (i.e environment/forests protection and Industrialization) saying that it is not an easy task.

The Recommendations were:

- Right to economic development to be balanced with right to ecology.
- Projection of National Regulator (NR) along with power to impose penalty
- Teaching of Environment Protection as a education subject at all level of education with good result

Dr. Gitanjali Nain Gill, Northumbria University, UK spoke on, ‘Role of Experts in National Green Tribunal (NGT) in India- A New Platform for Sustainable Development’ and mentioned that NGT has been developed as a new platform for sustainable development, through its decision making. The need traced of adoption of science based and action oriented agenda in environment protection as a road to dignity was stressed and the use of good sciences by courts and tribunals to interface between law and science was promoted. NGT to a large extent had been able to solve this tension between law and science by having In-House Experts to help the courts solve the environmental issues scientifically. She talked about three major principles that ought to be adopted by the experts in balancing the environment protection and development namely; 1) collegiality, 2) Instrumental Practices, and 3) Strategic Element. The talk was concluded by saying that NGT has successfully adopted these three principles by upholding Sustainable Development and finding other options, and creative approach in the interest of the society at large.

The Recommendations were:

- Cumulative Environment Impact Assessment should be adopted.
- NGT has proved to be a strong and innovative tribunal which should be strengthened further.
- There should be an expansion of legal lens beyond pre-determined legal remedies.
- Interdisciplinary decision making and outcomes.
- Accountability should be imposed on people for their acts harming the environment.
The Recommendations were:

- Reduce, re-use and recycle are the 3 most efficient means which emerge for the disposal and control of municipal waste management.
- Models of the developed nations like USA and UK can be studied for application by developing countries.
- Technical expertise and enormous investment is required for developing countries for the treatment of solid waste.

Hon’ble Mr. Justice Ram Kumar Prasad Shah, Chief Justice, Supreme Court of Nepal discussed the 'Sustainable Urban Development and Municipal Solid Waste Management in Developing Countries.' He began by stating that the dumping of waste in an unscientific and careless manner largely on lands occupied by ethnic minority communities in developing countries is unchecked, and it can be said that in this regard, environmental racism is prevalent. Furthermore, it was discussed that dumping is not merely the problem of urban areas but the same is done by rural communities as well. The nature of waste is multifarious eg: regular, radioactive, hazardous waste including heavy metals and chemicals which makes it all the more essential that the same should be managed properly. The policies work only when they have backing of law. There was a particular reference to Kathmandu as a case study. A prime reason identified for the problem posed by municipal solid wastes was the concentration of most of the population on comparatively smaller areas of land. Development should be guided by justice particularly because infringement of one right can sometimes impact other rights also.

The Recommendations were:

- Waste can be converted to wealth for the benefit of the public: can be linked with Right to Employment.
- Capacity building of the infrastructure and awareness amongst people about MSW is required.
- Deficit in governance can be addressed by judicial systems since development can’t be left to private parties alone.

Hon’ble Mr. Justice Sunil Ambwani, Acting Chief Justice, Rajasthan High Court discussed the '360 Degree Appraisal of Consumerism and Increasing Waste.' He began by identifying the causes of the problem of solid waste disposal. Population explosion and rural migration have been responsible for putting great pressure on the urban municipal solid waste systems. The objective in the present era was to reduce, clean and recover (calories and wealth). In addition to this, reference was made to some figures highlighting that at the current rate, 1024 sq km of land may be required for landfills alone for the dumping of wastes, not to mention the adverse impact on soil, underground water and atmosphere. By focusing on the need to put into place substantial measures, concern was expressed over the fact that states are yet to achieve municipal solid waste targets.

The Recommendations were:

- Segregation of type of wastes must be done by the generator of the waste and not merely municipal bodies.
- Public-Private Partnership can be encouraged for better management.
The Recommendations were:

- Need for defining waste and the need for framework, both legal and policy based within which action can be taken.
- Need for discussions in relation to proper procedure, agenda, policy consideration, economic impacts and social benefits.
- Need for an efficient and effective system of disposal of solid wastes primarily in urban areas.

Hon’ble Mr. Justice Wang Xuguang, Deputy Chief Judge, Supreme People’s Court of the People’s Republic of China dealt with ‘Governance of Water Pollution: The Power of Judicature.’, called for creating consciousness towards water saving and protection of water resources. Thereafter, the role of the Chinese Courts in prevention of water pollution was highlighted, as they have taken a great deal of measures in hearing the cases according to the law, promoting litigation for the public good, advancing the judicial organs and deepening judicial reforms especially by punishing the criminal behavior of water pollution and damage; civil and administrative cases concerning water resources; and promoting civil public interest litigation on environment protection. The speaker mentioned that various amendments in 2008, 2014 and 2015 were made in the water pollution laws to incorporate new forms of pollution under the ambit of the Act- 46 criminal cases and these were the most stringent laws. He further deliberated that the system of restorative justice and polluter to pay damages for restoration was put in place in China. Role of more than 700 environmental organizations in bringing forth issues relating to the environmental pollution to the Supreme Court through public interest litigation was also discussed.

The Recommendations were:

- More PILs to be promoted in the field of environmental protection and proactive role of courts
- Spreading awareness and legal education
- Uprising the judicial ability of judges devoted to environment resources trial business.
- Promoting judicial reforms on environment resources.
Arbitration has been a key mechanism in international law regarding the environment.

The existing legal framework should be strengthened.

Technologically developed states need to provide assistance to developing states.

Sharing of knowledge among the countries

Conjoint efforts to attain minimal international standards for environment protection.

Need for continuous monitoring mechanism.

Hon'ble Mr. Justice Tshering Wangchuck, Chief Justice, Supreme Court of Bhutan commenced his address by highlighting the position in Bhutan about environment protection and legal framework. He mentioned that Bhutan is having fragile eco-system and efforts have been undertaken to strike a balance between economic development and environmental protection via specific mechanisms. For example, every development initiative requires environmental clearance. Further it was said that as per the Constitution of Bhutan, Article 5 is dedicated to environmental protection and there is a mandate that 60% of the surface area must remain under forest in perpetuity.

The Recommendations were:

- There should be more investments in alternative methods of energy
- Global warming is an issue for developing nations, for which international cooperation is inevitable.
- A binding international protocol for combating climate change was advocated

Prof. Armin Rosencranz, University of Stanford, USA discussed the feasibility of nuclear energy and made suggestions to improve the efficacy of National Green Tribunal (NGT), India. He stated that India’s plan for a 10% expansion of wind and solar energy is not feasible because solar and wind energy require huge amounts of empty space which India cannot provide. Furthermore, there is a huge potential for nuclear energy in India due to its thorium reserves. At the moment India imports 20% of coal from other countries. Nuclear energy is therefore future more so due to indigenous availability.

He also discussed ways to make NGT India, a more efficient body. He mentioned that that the NGT is a good organization. However it can be improved with steps such as, an increased incorporation of experts, better job security and pension and greater diversity amongst the composition of the Tribunal (which mainly comprises of scientists and judges at the moment). He applauded India for being the only country in the world that issued environmental referendums. The importance of Gram Sabha in implementing these referendums was discussed.

The Recommendations were:

- Nuclear energy should eventually be given priority over thermal energy in India.
- He suggested certain reforms in the functioning of NGT, India like increased incorporation of
vi. Optimal use of scientific resources: The advice of experts should be considered in order to reach a decision. However Justice Rackemann believed that the presence of experts within the adjudicatory body might blur the acquisitorial, prosecutorial and inquisitorial, lines within.

It was urged that judges should not become biased towards their own experts or against the experts of any party. The court/tribunal should consider all opinions before arriving at a decision. However there is no particularly perfect model that can be prescribed.

vii. Problem solving perspective: Environmental disputes are not about economic gain. They are primarily about the silent party, i.e., the environment. Eventually it is the quality of the outcome that matters. While 94% of the cases before the tribunal in Queensland are settled, settlements are acceptable so long as the environment is not affected.

The speaker believed that the International efforts to protect the environment are not sufficient. He espoused the idea of ‘Think globally and act locally’ as according to him all domestic action have international reverberations, especially with regard to environment.

The Recommendations were:

- Domestic action is more effective than international action and therefore, local and domestic initiatives should be encouraged.

- The development of effective local and domestic adjudicatory bodies which are independent, impartial, timely and accessible.

- These bodies should utilize their scientific resources optimally with a view of focusing on, and solving, the pernicious problem of environmental degradation in the qualitative manner.

Hon’ble Mr. Justice Gadis Gadzhiev, Judge, Constitutional Court of the Russian Federation, Russia discussed the economic development and environment protection mechanisms in Russia. He stated that Russia has one of the largest stocks of wood with total wood reserves amounting to 77 billion. A mandate to protect the forest cover in Russia has been provided in the Russian Constitution. Furthermore, the Russian constitution deals with the principle of proportionality for restoration of environment and imposing optimum damage compensation. He emphasized on balancing public and private interests and discussed the concept of Public Interest Priority Principle wherein forests are considered to have a public value and it is the State’s responsibility to protect the forests for the present as well as the future generations. The presentation deliberated on economization of environmental law and the role polluter pays principle in dealing with new technical advances. He believed that the economic analysis of law is a successful mechanism in Russia. The speaker deliberated on the concept of Strict Economic Liability and mentioned that liability should include restoration of economic losses and economic costs with regard to the damage to forests. Overall, strict liability was advocated for punishing the loss of forest cover due to pollution. It was suggested that the State should establish an objective estimation with regard to
The valedictory session of the International Conference on "Global Environmental Issues" conjointly organized by the National Green Tribunal (India), the Ministry of Environment & Forests and the Indian Law Institute was graced by Hon'ble Mr. Justice Swatanter Kumar, Former Judge, Supreme Court of India, Chairperson, National Green Tribunal, Mr. Ranjeet Kumar, Solicitor General of India, Hon’ble Mr. Piyush Goyal, Minister of State (Independent Charge) for Power, Coal and New & Renewable Energy, Hon’ble Justice T.S. Thakur, Judge Supreme Court of India and Hon’ble Mr. Dalveer Bhandari, Judge, International Court of Justice.

The valedictory programme commenced with the welcome address by Hon’ble Mr. Justice Swatanter Kumar, Chairperson, National Green Tribunal who ingeminated the events of the conference and recapitulated the idea behind organising the programme to raise environmental awareness, by asking new questions, exploring new possibilities, and effectively, looking at old problems from new global angles. He expressed that the conclusions and recommendations formulated in the conference would mark a real advance in environmental jurisprudence and thinking. It was observed that the taking of a holistic view of pertinent issues and to exploring new possibilities from global perspective by carving a middle path between scientific enthusiasm and social activism would help develop structural data support system. He affirmed the goal of working together towards a ‘green economy’ in which there is harmonious interaction between humans and nature. Generating new sources of income and employment, proper application of indigenous methodology and creating a legal regime and imposing criminal sanctions would help in achieving ‘inter-generational equity’ for protection of the bio-diversity. He expressed that prevention coupled with regulation was better than facing natural or man-made disasters. He distinguished the role of National Green Tribunal, compared to environmental courts in other countries, and mentioned the number of cases heard and disposed by the Tribunal, to date. The role of equal justice and social inclusion for obtaining the goal of environmental justice was stressed.

Mr. Ranjeet Kumar, Solicitor General of India raised several important aspects related to the environment such as rising alarm on climate change resulting in early conferences to bring out credible solutions for environmental problems, forest
I. INTERNATIONAL MECHANISMS

• Establishment of International Environmental Bodies / Tribunals, through transnational consensus having both reformatory and punitive jurisdictions.

• Establishment of Global Environment Authority for carrying out periodical auditing in respect of Treaties, National and International Policies and Enactments.

• Establishment of Global Environmental Regulator to regulate environmentally deteriorative activities. The Global Regulator shall report to the Specialized Global Environment Authority.

• Establishment of Global Research Bodies to undertake research on front line areas of environmental pollution and harmonizing the International / National norms and promoting scientific technologies to improve the Global environment. Such Global Research Bodies to collect baseline International Environmental Data and thereafter there should be continuous data collection internationally for suggesting means and methods to improve environment quality.

• Establishment of Environment Institutions dealing with Environmental Science and Law at all levels.

II. EMERGING ISSUES AND TRENDS IN ENVIRONMENT JURISPRUDENCE

• Adoption of Pragmatic strategies and newer technologies to monitor and treat water contamination, especially ground water.

• International Policy formulation for banning dumping of all kinds of waste.

• Waste generators should be made accountable at domestic, national and international level. The liability should be directly proportionate to the quantum of waste generated. It should include collection, segregation and management of waste.

• Need for a shift from centralized to decentralized system of energy and promotion of the usage of renewable energy.
FEEDBACK OF THE CONFERENCE

Lord Robert John Anderson Carnwath  
Judge, Supreme Court, UK

“I was privileged to attend the International Conference on Global Environmental Issues in March 2015, organised by the National Green Tribunal. As a member of the UNEP, International Advisory Council on Environmental Justice, I was particularly pleased to witness the bringing together of expert judges and practitioners from so many different jurisdictions. My own views on the importance of judicial interchange are apparent from my paper “Environmental Law in a Global Society”, which was included in the conference papers. The subjects covered were extremely varied but all of central importance. The presentations were of the highest quality. It was clear from the discussions that we all had much to learn from each other. The final plenary session was also of particular interest for the vigour of exchanges between judges and ministers, on the interaction of policy and law in this area. The conference as a whole was a showcase of the leadership role taken by the Indian Supreme Court and now the National Green Tribunal in developing legal principles necessary to tackle the intractable problems facing this and future generations in safeguarding their environment. I congratulate all involved in the organisation.”

Justice Abhay Manohar Sapre  
Judge, Supreme Court of India

“Indeed, this was the voice of a large number of participants, which I heard in two days. Needless to say that all this was possible only due to your personal involvement in execution and attending to every small issue and constantly guiding to all stakeholders involved in its execution. One participant rightly said “It is easy to attend such conference for the participants but how difficult it is to arrange and accomplish such conference”.

Every participant also appreciated the selection of the resource persons (all were experts in their respective fields) and those addressed the gathering. Every participant was no less than the other.”

Justice Michael Wilson  
Judge, Supreme Court of Hawaii  
United States of America

“Conference represented a critical example of an independent judicial approach to International Environmental Law. It is a rare example of inspirational values to protect the environment evolving in to an authentic value.”
Professor M. Afzal Wani  
*Dean, University School of Law and Legal Studies  
Guru Gobind Singh Indraprastha University*

“The conference was timely and aptly organised to highlight the issues which need immediate attention. Resource Persons were of quality and across nations as was required. Students felt that their capacity on taking up environmental issues has improved. Organisation Skills of students have improved. Students developed great interest in environmental advocacy. Such more conferences should be held on each issue for greater focus.”

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Senior Professor Dr. BFA Basnayake  
*Agriculture Engineering University of Peradeniya, Sri Lanka*

“I sincerely thank you and your wonderful staff for the successful completion of the International Conference. I learnt a lot and we hope we did contribute towards a better future for us all. We hope to create a similar system of environmental management with a strong juridical backing.”

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Professor Tracy Hester  
*University of Houston Law Centre  
Texas, United State of America*

“The International Conference on Global Environmental Issues brought together a unique assembly of high-level government officials, justices and judges of multiple nations, and academics and practitioners from around the world. As a result, this broad array of expertise and experience helped tackle important issues on the protection of oceans, the atmosphere, land and human rights at a high level with great effect.”

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Advocate Asim Sarode  
*President NGT Bar Association  
Western Zone, Pune, India*

“I wish to congratulate you for organizing environmental conference on such a large scale and engaging in discussions on important environmental issue of present days. The discourse that happened at the conference was enriching and great food for thought.”
EDITORIAL TEAM

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