National Green Tribunal
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Each issue of the journal may contain up to five sections:

1. Opinion on relevant issues
2. Articles on environment issues and concerns
3. Lectures from Hon’ble Chairperson and Members on Environment
4. Events
5. Report of NGT

Book Note

The journal aims to stimulate thoughtful, thought-provoking prose in the interest of justice, which will provide an opportunity for academics, practitioners and consultants from different backgrounds to discuss significant legal developments in the field of environmental laws and diverse aspects of environmental and ecology. We invite authors to submit original manuscripts for consideration ranging from full articles to book reviews.

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Hon’ble Mr. Justice Sudhansu J Mukhopadhaya
Judge, Supreme Court of India
Chief Guest on 4th Foundation Day Celebration of National Green Tribunal

Hon’ble Mr. Justice Ranjan Gogoi
Judge, Supreme Court of India
Chief Guest on 4th Foundation Day Celebration of National Green Tribunal
Sh. Prakash Javadekar
Hon’ble Minister of Environment and Forests
Presided over the 4th Foundation Day Celebration of National Green Tribunal

Sh. Piyush Goyal
Hon’ble Minister of State with independent charge for Power, Coal and New and Renewable Energy
Presided over the 4th Foundation Day Celebration of National Green Tribunal
Introduction

I take pride in introducing the readers to the second volume of the NGT International Journal on Environment, published by National Green Tribunal and released on its 4th Foundation day.

The purpose of this International Journal is to provide greater information to the global family with regard to the functioning and administration of environmental justice by the National Green Tribunal. Volume I of the International Journal has already been published containing articles, lectures from various foreign and Indian authors, Judges, Professors and Environmentalists dealing with various environmental aspects.

With the functioning of Principal Bench and all the four Regional Benches of the NGT, the work of NGT has increased manifold. There is steep increase in institution and disposal of cases by National Green Tribunal. Keeping in view, the legislative object of expeditious disposal of environmental cases, the National Green Tribunal is endeavoring its best to keep pace with expeditious disposal of cases.

On behalf of the National Green Tribunal, I thank

Hon’ble Mr Justice Sudhanu Jayoti Mukhopadhyaya, Judge, Supreme Court of India,
Hon’ble Mr Justice Ranjan Gogoi, Judge, Supreme Court of India,
Sh. Prakash Javadekar Hon’ble Minister of Environment and Forests,
Sh. Piyush Goyal, Hon’ble Minister of State with independent charge for Power, Coal and New and Renewable Energy

for their kind cooperation and providing way ahead to National Green Tribunal on the auspicious occasion of 4th Foundation Day of National Green Tribunal.

(Justice Swatanter Kumar)
From the Editor’s Desk

Dated: 9th October, 2014

Dear esteemed readers,

We are glad to present this 2nd Volume of our biannual journal to you—a community comprising of jurists, environmentalist, social activists, inspiring minds and last but not the least our critics. From its inception, we intended and were committed to draw attention of this community to various environmental issues facing our nation and world as a whole. We hope that in presenting this bouquet of 7 articles authored by men of eminence in their respective fields, we would be fulfilling our commitment, if not fully, but in substantial measure.

Environmental science is a multidisciplinary Science and its marriage with the law has given birth to National Green Tribunal, created by NGT Act, 2010. Hopefully, this issue will take you the reader with diverse interest on an intellectual journey through the topics ranging from state of environment at global level, its decline over the years coupled with the evolution of environmental laws, simplification of environmental regulations and its application to the Indian conditions.

Passion for knowledge, we know, like all other passions is unsatiated. Readers therefore, would certainly crave for more than what we have presented. However, what we intended to achieve is to instigate our readers to fathom the unknown and raise such questions the answers of which would help us in creating benign environmental conditions worldwide. Purpose of publishing this journal, we believe, will be served if our readers take a step in that direction.

With regards,

[Signature]

[Justice U.D. Salvi]
Judicial Member, National Green Tribunal
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Chairperson, National Green Tribunal, New Delhi, India

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ARTICLES ON ENVIRONMENT ISSUES AND CONCERNS

Environmental Law: Its Development And Jurisprudence

Justice Madan B. Lokur
Judge, Supreme Court of India
Abstract

The paper presents a brief evolution of environmental laws in India. It highlights some landmark judgments of the Supreme Court, which helped to establish principles for many environmental legislations and policies framed in India. The Supreme Court recognized Sustainable Development, Precautionary Principle, and Polluter Pays Principle as a part of our environmental jurisprudence. The paper also briefly explains specific interventions by the Supreme Court, which resulted in large benefit to the environment and society.

Today, most discussions on environmentalism in our country begin with the Stockholm Conference (1972). But, some ancient texts tell us that our society paid more attention to protecting the environment than we can imagine. These texts tell us that it was the dharma of each individual in society to protect Nature, so much so that people worshipped the objects of Nature. Trees, water, land, and animals had considerable importance in our ancient texts, and the Manusmirit prescribed different punishments for causing injury to plants. Kautilya is said to have gone a step further and determined punishments on the basis of the importance of a particular part of a tree. Some important trees were even elevated to a divine position.

From this, what comes forth vividly is that environmental management and control of pollution was not limited only to an individual or a group, but society as a whole accepted its duty to protect the environment. The dharma of protecting the environment was to sustain and ensure progress and welfare of all. The effort was not just to punish the culprit, but to balance the ecosystem as well. In this attempt, the ancient texts acted as cementing factors between the right to exploit the environment and a duty to conserve it—which is now internationally recognized as the concept of 'sustainable development'.

The definition of 'environment' and, therefore, environmental law in India has always been rather broad. Even today, not only does it include the concept of sustainable development but also air and water pollution, preservation of our forests and wildlife, noise pollution and even the protection of our ancient monuments, which are undergoing severe stress due to urbanization and consequent environmental pollution.

A modest beginning

However, without going back to the ancient texts, it can be said that environmental jurisprudence in India made a beginning in the mid-seventies when Parliament enacted the Water (Prevention and Control of Pollution) Act, 1974. But soon, there was a quantum leap with the amendment of our Constitution in 1979 and incorporation of Article 48A in the Directive Principles of State Policy and Article 31-A(g) in the Fundamental Duties of every citizen of India. Both these Articles unequivocally provide for protection and improvement of the environment. Inevitably, Parliament enacted the...
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- An Expert Committee called the Valdivia Committee to look into the disturbance of the ecology, air, water and environment pollution due to quarrying and the use of stone crushers.

- A High Powered Committee headed by Mr. Babu Chopra to look into some of the aspects mentioned above and also a Monitoring Committee called the Central Government Committee to monitor the decisions issued by the Supreme Court.

The Supreme Court did not simply accept the reports of these Committees but invited objections to them, which, were required to be filed within a reasonable time. These objections were considered, and as and when necessary, mining activity and stone quarrying were prohibited. The stoppage of industrial activity necessarily led to the closure of mines and several workers were rendered jobless. The Supreme Court realised the difficulties that would be faced by the mines lessees as well as by workmen and, therefore, directed steps to be taken for the rehabilitation of the displaced mines lessees and the setting up of an Eco-Task Force by the Government of India to take over and reclaim land and engage workers in the task of afforestation and soil conservation.

All this was obviously not achieved in a single day but took several years. The results achieved, with the intervention of the Supreme Court, were more than satisfactory and the Muzoore Hills have now been restored to their pristine glory.

Around this time, a somewhat dramatic event occurred in Delhi on 4th and 6th December, 1985. There was a leak of oleum gas from the factory premises of Shriram Foods and Fertilizer Industries. The gas leak affected a large number of persons and one lawyer practicing in the District Courts in Delhi died. Memories of the Bhagal Gas Disaster that had occurred a year earlier were instantly revived.

An activist lawyer immediately initiated proceedings in the Supreme Court to bring out the problem caused by the leakage of oleum gas. It transpired during the course of proceedings that earlier, in March that year, a Committee called the Manohar Singh Committee had gone into the safety and pollution control aspects of Shriram Foods and Fertilizer Industries with a view to eliminating community risk. The Supreme Court appointed a team of experts to look into these recommendations. The team reported that the recommendations of the Manohar Singh Committee were being complied with. However, this Expert Committee also pointed out various inadequacies in the plant and opined that it was not possible to eliminate hazards to the public so long as the plant remained in its present location in Delhi. In view of the conflicting reports received by it, the Supreme Court appointed a Committee of Experts called the Niyay Chaudhry Committee.

A consideration of the reports of all these Committees showed that they were unanimous in concluding that the element of risk to workmen and the public could be minimised, but not totally eliminated.

In this background, the Supreme Court suggested that the Government evolve a National Policy for the location of toxic and hazardous industries and that it should set up an independent centre with professionally competent and expertly selected experts to provide scientific and technological inputs. The reason for this was that the Supreme Court found it difficult to get proper advice and expertise to enable it to arrive at a correct decision. The Supreme Court also recommended the setting up of Environmental Courts to deal with situations of this kind.

The importance of this case lies in the conclusion arrived at by the Supreme Court that an enterprise engaged in a hazardous or inherently dangerous industry which poses a threat to the health and safety...
of its workers and the residents of nearby areas owes an absolute and non-delegable duty to the community to ensure that no harm results to anyone on account of its activity. If any harm does result, then the enterprise is absolutely liable to compensate for such harm and it is no answer to say that it had taken all reasonable care or that the harm occurred without any negligence on its part. In other words, the Supreme Court evolved a principle of absolute liability and did not accept any of the exceptions in such a case as mentioned in Rylands v. Fletcher.66

The trend of activist intervention having been set by the Supreme Court, and some important steps relating to protection of the environment having been taken, a large number of cases in public interest then came to be filed in the Supreme Court which passed various orders in these cases from time to time. It is not necessary to discuss all these decisions, as indeed it is not presently possible, except those in which there was a significant development of the law or a significant contribution to the environmental jurisprudence of India.

Guiding principles

The mid nineties saw the Supreme Court recognize some internationally accepted and important principles in matters pertaining to the environment. This period also saw the Supreme Court rely more and more on Article 21 of the Constitution67 of India and give an expansive meaning to “environment” taking within its fold the quality of life68 as distinguished from mere animal existence.69 This is really the period when environmental jurisprudence began to come into its own.

In Indian Council for Enviro-Legal Action70 and

the Supreme Court adopted the Polluter Pays principle.71 In this case, some chemical factories in Bishnupur (Udaipur District) produced hazardous chemicals like oleum etc. These industries did not have the requisite clearances, licenses, etc. nor did they have necessary equipment for the treatment of discharged toxic effluents. Toxic sludge and untreated waste water resulted in the pollution of toxic substances into the boles of the Earth. Aquifers and subterranean supplies of water got polluted, wells and streams turned dark and dirty. Water not only became unfit for human consumption but also unfit for cattle to drink and for irrigation of land. So much so, even the soil became unfit for cultivation. Death, disease and other disasters gradually resulted and the villagers in the area revolted as a result of this enormous environmental degradation. The District Magistrate of the area had to resort to Section 144 of the Criminal Procedure Code72 to avoid any untoward incident.

A writ petition under Article 32 of the Constitution was filed in the Supreme Court and the Court asked for a report to be prepared by the National Environmental Engineering Research Institute (NEERI) as to the choice and scale of available remedial alternative. NEERI suggested the application of the Polluter Pays principle inasmuch as “the incident involved deliberate release of untreated acidic process wastewater and negligent handling of waste sludge knowing fully well the implications of such act.” The cost of restoration was expected to be in the region of Rs. 40 crores. The Supreme Court examined all the available material and concluded that the industries alone were responsible for the damage to the soil, underground water and the village in general.

The Supreme Court held that as per the Polluter Pays principle

“...once the activity carried on the hazardous or inherently dangerous, the person carrying on such activity is liable to make good the loss caused to any other person by his activity irrespective of the fact whether he took reasonable care while carrying on his activity. The rule is premised on the very nature of the activity carried on.”

The Supreme Court cited with approval the following passage73 pertaining to the Polluter Pays principle:

“The Polluter Pays principle demands that the financial costs of preventing or remedying damage caused by pollution should lie with the undertaking which causes the pollution, or produce the goods which cause the pollution. Under the principle it is not the role of Government to meet the costs involved in either prevention of such damage, or in carrying out remedial action, because the effect of this would be to shift the financial burden of the pollution incident to the taxpayer.”

Adopting this principle, the Supreme Court directed that “the task of determining the amount required for carrying out the remedial measures, its recovery and the task of undertaking the remedial measures is placed upon the Central Government.” It was directed that the amount so determined should be recovered from the polluting industries.

The villages were permitted to file suits for recovery of damages, but more importantly, the Supreme Court accepted the principle of absolute liability laid down in the Oleum Case.74

While applying the principle of Polluter Pays, the Supreme Court later expressed the view75 that compensation to be awarded must have some correlation not only with the magnitude and capacity of the enterprise but also the harm caused by it. The applicability of the principle of Polluter Pays should be practical, simple and easy in application. In Deepak Nitrile, while remanding the matter to the High Court for reconsideration, the Supreme Court observed that the possibility of 1% of the turnover of the enterprise may be adequate compensation.

The concept of Sustainable Development was articulated and given effect to by the Supreme Court in Vellore Citizens Welfare Forum76 in 1989. This concept first came to be acknowledged in the Stockholm Declaration of 1972. It was subsequently given definite shape in 1987 by the World Commission on Environment and Development in its report called “Our Common Future” chaired by Maude Barlow, the then Prime Minister of Norway. This report defined sustainable development as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

In Vellore Citizens Welfare Forum, about 900 tonnes in five districts of the State of Tamil Nadu were discharging enormous amount of untreated effluent consisting of about 120 different types of chemicals into agricultural fields, roadways, waterways and open land. About 35,000 hectares of land became partially or totally unfit for cultivation. The water in the area became unfit for consumption and irrigation purposes.

One of the significant directions given by the Supreme Court in this litigation was contained in an order passed in 1995 whereby some of the industries were required to set up effluent treatment plants. In another order passed in 1996, the Supreme Court issued notices to some of the
tanneries to show cause why they should not be asked to pay a pollution fine.

The Supreme Court also recognised the Precautionary Principle, which is one of the principles of sustainable development. It was said that in the context of municipal law, the Precautionary Principle means:

- Environmental measures to anticipate, prevent and attack the causes of environmental degradation.
- Lack of scientific inquiry should not be used to postpone measures for prevention of environmental degradation.
- The onus of proof is on the actor, developer or industrialist to show that his action is environmentally benign.

The introduction of the 'onus of proof' as a factor relevant for environment protection was developed for the first time in this case.

The Supreme Court endorsed the Polluter Pays principle, which was earlier recognised in Indian Council for Enviro-Legal Action. It was said:

"The Polluter Pays Principle as interpreted by this Court means that the absolute liability for harm to the environment extends not only to compensate the victims of pollution but also to the cost of restoring the environmental degradation."

Resultantly, the Supreme Court recognised Sustainable Development, the Precautionary Principle and the Polluter Pays principle as a part of our environmental jurisprudence.

The Supreme Court passed two significant orders in this case. One was for setting up an Environment Protection Fund. Each of the tanneries who were asked to pay a pollution fine in this case were asked to deposit the amount in the Environment Protection Fund. The other significant direction given by the Supreme Court was to set up "Green Benches" in the High Courts.

In the Calcutta Tanners Case, the Polluter Pays Principle relating to relocation of industries was applied with a direction to those relocated industries to pay 25% of the cost of land. Those who did not pay for the cost of land were directed to be closed. The Supreme Court again resorted to directions earlier given in Vellore Citizens Welfare Forum for setting up efficient treatment plants.

It needs to be mentioned that a strict interpretation of the Polluter Pays principle requires that the polluter shall pay for causing the pollution and consequenial costs for any general deterioration of the environment while another view is that the polluter is only responsible for paying the costs of pollution control measures. Generally speaking, the polluter must pay for:

- The cost of pollution abatement.
- The cost of environment recovery.
- Compensation costs for victims of damages if any, due to pollution.

A more than helpful discussion on the Polluter Pays principle and the Precautionary Principle is to be found in A P Pollution Control Board Case. In this case, the Supreme Court made a reference to the Stockholm Declaration and the U.N. General Assembly Resolution on World Charter for Nature, 1982. The principle has recently been extended and quite significantly so, in a case pertaining to the import of hazardous waste, to include the cost not only of avoiding pollution, but also remedying the damage. Reference was made to Principles 15 and 16 of the Rio Declaration and it was said, "The nature and extent of cost and the circumstances in which the principle will apply may differ from case to case."

The Stockholm Declaration accepted the "polluter pays" rule which assumed that the environment could absorb impacts and science could provide the necessary information and technology to deal with environmental degradation. The World Charter for Nature shifted the emphasis, which came to be known and accepted in the Rio Declaration on Environment and Development, 1992 as the Precautionary Principle. The principle is based on the "lack of full scientific certainty". The basic idea behind this principle is that it is better to err on the side of caution and prevent activities that may cause serious or irreversible harm. An informed decision can be made at a later stage when additional data is available or resources permit further research.

Significantly, the Supreme Court recognised that environmental concerns are as important as human rights concerns. It was said:

"In fact, both are to be viewed as Articles 21 which deals with the fundamental right to life and liberty. While environmental aspects concern "life", human rights aspects concern "liberty". In our view, in the context of emerging jurisprudence relating to environmental matters, it is the duty of this Court to render justice by taking all aspects into consideration."

In view of certain technical matters involved in this case, the Supreme Court referred to the provisions of the National Environmental Appellate Authority Act, 1997 and referred two questions for its opinion. After obtaining the report of the Appellate Authority and considering it along with two other reports, the Supreme Court applied the Precautionary Principle and passed appropriate orders.

The Precautionary Principle led to the evolution of the special principle of burden of proof mentioned in Vellore Citizens Welfare Forum. As per this special principle, the burden is on the person wanting to change the status quo to show that the actions proposed will have no injurious effect, the presumption operating in favour of environmental protection. This concept of "reverse onus" requires that the burden of proof for safety rests on the proponent of a technology, and not on the general public - a new technology should be considered dangerous unless proved otherwise.

The Precautionary Principle is reliable in risk assessment and environmental impact assessment. Broadly, it postulates that decisions that may have an impact on the environment need to allow for and recognize conditions of uncertainty, particularly with respect to the possible environmental consequences of those decisions. Under the circumstances, it is essential to take preventive action or avoid effects, which may be damaging even if this cannot be proven.

Another major principle accepted by the Supreme Court is the public trust doctrine. This doctrine came up for consideration in the Kamal Nath case. A rather unusual situation had arisen in this case. The flow of the river was deliberately diverted because it used to flood Span. Merola in the Kala Manali Valley in which a prominent politician's family had a direct interest. The river was also allotted protected forestland by the State Government and land also encroached on protected forestland, which encroachment was subsequently regularized.

The Supreme Court used the public trust doctrine in this case to restore the environment to its original condition. Briefly, this doctrine postulates that the public has a right to expect that certain lands and natural areas will retain their natural characteristics.
Roman law recognised the public trust doctrine whereby common properties such as rivers, seashores, forests and the air were held by the Government in trust for free and unimpeded use of the public. These resources were either owned by none (e.g. nullius) or by everyone in common (free communes).

In English law, the public trust doctrine is more or less the same but with an emphasis on certain interest such as navigation, commerce and fishing which are sought to be preserved for the public. There is, however, some lack of clarity in this regard on the question whether the public has an enforceable right to prevent the infringement of the interest in common properties like the seashore, highways and running water.

Professor Joseph L. Sax imposed these restrictions on governmental authorities as noted by the Supreme Court. These are:

- The property subject to the trust must not only be used for a public purpose, but it must be held available for use by the general public.
- The property may not be sold, even for a fair cash equivalent.
- The property must be maintained for particular types of use.

It was noted that American courts have also accepted the public trust doctrine and applied it in their case law and, the Supreme Court observed, it has now become a part of our environmental jurisprudence also.

Applying the public trust doctrine, the Supreme Court considered the loss of forestland granted in favor of Span Motors and the State Government was directed to take over the area and restore it to its original condition. The motel was directed to pay compensation (damages for restoration of the environment and ecology of the area). It was also asked to show cause why pollution fines be not imposed.

While deciding the above the decision regarding imposition of a pollution fine, the Supreme Court held that in the case, the fine could not be imposed without a trial and that the rule is more stringent of an offense under the Water (Prevention and Control of Pollution) Act, 1974. Accordingly, no pollution fine was imposed on Span Motels but it was asked to show cause why it should not pay exemplary damages. After considering the reply of Span Motels, exemplary damages of Rs. 10 lakhs were imposed.

Specific interventions

Air pollution

Perhaps the most important decision given by the Supreme Court and one that has affected the air quality of life in Delhi is in connection with the Vehicular Pollution cases. This is really a great success story, which began with a White Paper issued by the Government of India which revealed that vehicular pollution contributed 70% of the air pollution as compared to 20% in 1980. Information obtained by the Supreme Court during the pendency of the case showed that air pollution related diseases in India include acute respiratory diseases causing 15% of deaths (largest fraction in the world), chronic obstructive pulmonary disease, lung cancer, asthma, tuberculosis (8% of deaths, larger fraction in the world), perinatal (6% of deaths, larger fraction in the world) and cardiovascular disease (12% of deaths) and blindness. There has been a considerable increase in respiratory diseases especially amongst children. There are nine other cities in India where the air quality is critical. These include Agra, Lucknow, Kanpur, Patna, Jabalpur.

Taking all these factors into consideration, the Supreme Court relied on the Precautionary Principle and issued directions from time to time to control pollution to some extent. Some of the directions include:

- Lowering of sulphur content in diesel, first to 0.5% and then to 0.1%. (1982)
- Ensuring supply of only lead-free petrol.
- Requiring the fitting of catalytic converters in vehicles.
- Directing the supply of pre-mix 2T oil for lubrication of engines of two-wheelers and three-wheelers.
- Directing the phasing out of grossly polluting old vehicles.
- Directing the lowering of benzene content in petrol.
- Ensuring that new vehicles, petrol and diesel, meet Euro II standards.

As a result of these orders of the kind passed by the Supreme Court, an authority called the Environment Pollution (Prevention & Control) Authority has been set up to monitor, inter alia, pollution levels in Delhi and other cities and take remedial steps.

Strict enforcement of orders passed by the Supreme Court has ensured that Compressed Natural Gas (CNG) is introduced in all forms of public transport in Delhi including buses, taxis and auto-rickshaws. All these vehicles have been connected to a single fuel mode on CNG, the time frame having expired on 31st March 2001. Authorities dealing with the production of CNG have also been directed to ensure that its supply is available and steady.

The result of all this has been that the quality of air in Delhi has considerably and visibly improved over the years, as any frequent visitor to Delhi would certify. In fact, as air pollution control is concerned, the Vehicular Pollution cases have shown that measures taken to effectively monitor a clean up of the environment and thereby achieve success in the venture.

Water pollution

In 1977, the United Nations Water Conference passed the following Resolution:

"All people, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantum and of a quality equal to their basic needs."

The Supreme Court relied upon this Resolution while observing that water is a basic need for the survival of human beings and is a part of the right to life and human rights as enshrined in Article 21 of the Constitution.

A new term had appeared in a national daily pointing out that the river Yamuna, which flows through Delhi is highly polluted. The cause of pollution is twofold due to discharge of domestic waste and industrial effluents. The quality of water before the river enters Delhi is not unsatisfactory, but by the time the river leaves Delhi after traversing a distance of 2 km, the water quality undergoes steep and rapid deterioration.

The Supreme Court passed an order to the effect that pollution of the river should be stopped with effect from 1st November, 1999. However, a report given by the Central Pollution Control Board (CPCB), which the Supreme Court considered in January 2000 showed that the situation continued to be alarming. The Attorney General was then requested to take effective steps to achieve the
'desired result' and in the meanwhile, industries located in Delhi were resualced from discharging their effluent into the river.

The Supreme Court later looked into the matter again and found that the parameters laid down by the Government in respect of water quality were not being adhered to. The Delhi Administration was directed to file an affidavit indicating what steps it proposes to take to reduce the pollution level so as to ensure that by March 2003 no untreated sewage enters river Yamuna.

As recently as August 2004, the matter again came up for consideration before the Supreme Court and it was noted that although the Court had directed its attention to cleaning up the river almost a decade ago, there has been no improvement, but the water quality had in fact deteriorated during the last five years in comparison to reports filed by the CPCB.

The Supreme Court then set up a High Powered Committee chaired by the Secretary, Ministry of Urban Development and including several governmental authorities to monitor the situation.

However, newspaper reports have since indicated that despite an expenditure of Rs. 81 crores on what is called the Yamuna Action Plan I and II, the river continues to remain as dirty as it was about a decade ago (and perhaps more) and more people believe it to be nothing more than a sewer.

One of the chief reasons for this state of affairs is that there has been no effective monitoring, unlike the vehicular Pollution cases. The result is that orders passed by the Court are not implemented and deadlines set in the various orders are not met. The second reason is that the focus of the case seems to have got partially diverted. This is clear from at least three orders passed by the Supreme Court which:

- go to show that apart from the question of cleaning up the river Yamuna and treating the matter as a purely environmental issue, the Supreme Court has drawn within its ambit the question of unauthorized construction in Delhi and the revision of the Unified Building Bye-laws for Delhi. It is because of such a lack of focus that undue attention has not been paid to the genuine environmental issues pending in the court.
- The issue of illegal felling of timber in forests in India, particularly in the North-East Region came up for consideration before the Supreme Court in a public interest litigation initiated at the instance of one T.N. Godawarman Thirumaldivadu.
- The initial step taken by the Supreme Court in 1997 was to explain that a 'forest' for the purpose of the Forest (Conservation) Act, 1980 must be understood according to its dictionary meaning and included all forests, irrespective of the ownership or classification thereof, whether designated or reserved, protected or otherwise. Several directions relating to the timber trade, more particularly banning the felling of trees, identification and closure of sawmills were issued. Soon thereafter a High Powered Committee was set up to assess the exact and faithful implementation of the orders of the Court in the North-East Region and for ancillary purposes.

The Supreme Court has since given interim directions from time to time on various issues, including for regulating the timber trade and planting of timber, licensing of wooded-based industries, forest protection, management of forests, action against erring officials, desilting that minor forest products are out of its purview etc. Gradually, but fortunately only for a while, illegal mining activity in forests was also included within the scope of the public interest litigation. Over a period of time more than 1000 applications have been filed in the case apart from a large number of contempt petitions and a massive number of interim directions have been issued. In December 1998, the Supreme Court lamented that many States have either not implemented its directions or breached them and in October 2003 it was observed that the role of judicial considerations in environmental litigation in India symbolizes the antithesis of courts in finding out appropriate remedies for environmental maladies.

If a balance sheet of this case is drawn up, the real benefit that has come out of this litigation over the last several years has been the setting up of a Central Empowered Committee, which has checked, to the extent possible, unlicensed sawmills and helped in regulating the trade of illegal timber. Apart from this, the Committee has also considerably assisted the Supreme Court in passing several orders on environmental related issues from time to time. More recently, the Supreme Court gave its imprimatur to what may be described as a modified approach to the Polluter Pays principle, in cases where forest land is diverted for non-forest purposes, measures must be taken by the State agency not only to compensate for the loss of forest land but also to compensate for its ecological impact. This was achieved by accepting the setting up of a Compensation Arrears Fund Management and Planning Authority (CAMPFA) and the Net Present Value (NPV) of forestland for compensation.

**Cultural heritage**

The Polluter Pays principle came to be applied in the Taj Mahal case in which it was noted that there were as many as 310 industries responsible for air pollution in and near the Taj Mahal. To protect the Taj from being damaged, one aspect of the Polluter Pays principle was applied, namely, the industries were asked to relocate. As a precautionary measure to attack the sources of environmental degradation, the Supreme Court directed as many as 270 industries to run on natural gas. In any case, they were prevented from using coal/coal as an industrial fuel. Since the Taj is a World Heritage Site, the Supreme Court went to the extent of saying that it would itself monitor some issues such as air pollution, proper management of the Mahal's religious, construction of a hospital, a bypass to divert all traffic away from Agra etc.

Subsequently, the governmental Agra Mission Management Board was constituted in 1997 followed by the Taj Trapezium Zone Pollution (Prevention & Control) Authority set up in 1999, inter alia, to monitor progress of the implementation of various schemes for protection of the Taj Mahal and programmes for protection and improvement of the environment in the area, take all necessary steps to ensure compliance with specified emission standards by motor vehicles and ensuring compliance with fuel quality standards etc. but the Supreme Court has still retained the public interest petition on its board and continued to monitor environmental issues relating to the Taj.

Notwithstanding this, a rather appalling scheme was launched to divert the river Yamuna that flows next to the Taj, reclaim land and construct a 'heritage corridor' nearby. The Supreme Court, understandably, has stayed this and asked the Central Bureau of Investigation to investigate all aspects of this scheme and institute criminal proceedings wherever necessary. The issue of protection of monuments and religious shrines due to environmental degradation came up for consideration before the Supreme Court.
in Wasi Ahmed Saeed v. Union of India and Others. To prevent damage to protected monuments, particularly the Dargah of Mumaddud Chisti in Ajmer and the heritage city of Panchgani, the Supreme Court ordered the removal of shops within a certain distance from the monuments so that no damage is caused to them.

**Town planning**

San M.C. Mehta v. Union of India, the Supreme Court considered the issue of industrial activity being carried on in residential/non-conforming areas in Delhi. Earlier, the Supreme Court had directed those hazardous and noxious industries, and other heavy and large industries should be shifted out of Delhi. Since 'extensive' industries were also being shifted out, the question remained as to whether the shifting of light and service industries should be considered.

The facts of the case as they appear in the judgement show that while there was an earlier estimate of 93,000 industries operating in Delhi, in fact there were over 100,000 such industries carrying on industrial activity in residential/non-conforming areas. Some time in 1996, since the Delhi Government was seriously procuring a project of relocating industries, the Supreme Court left the matter for implementation by Delhi Government and directed it to file regular progress reports.

The Supreme Court noted that unfortunate the trust reposed on the Court by the Government was broken as much as industrial activity continued in the areas in question and though a progress report had been filed it was clear that appropriate steps had not been taken by the Government in right earnest.

On the contrary, Delhi Administration came up with an application seeking extension of time till March 2004 to comply with the order for shifting polluting industries. The application also stated that as many as 7,000 families would face dislocation. The question placed before the Court was whether this would be adequate justification to throw to the wind the norms of environment, health and safety of the residents of various localities in Delhi are concerned.

The Supreme Court noted that effectively the Delhi Government had done nothing. For as long as 7 years there was no explanation why industrial activity was still continued in non-conforming areas. On the other hand, the Delhi Administration had recommended a site regulation of the industries. The Supreme Court naturally disapproved of the idea that the bona fide residents of the area would have to suffer pollution emanating from the industrial units and this would violate their right of life enshrined in Article 21 of the Constitution. In fact not only would this be the direct impact on the residents but they would also suffer because of the status and earned status on infrastructure facilities. It was noted that the entire planning activity had gone haywire and persons who abide by the laws are the actual sufferers and polluting industries continue to carry on the area to the cost of health and in utter violation of the Article 21 of the Constitution. The Supreme Court observed that no serious activity had taken place over a period of over a decade since the litigation commenced.

The range of activities associated with town planning is enormous. A mere shifting of industries means with it displacement of workmen, necessity of creating new infrastructure facilities, an increase in the cost of transportation results in an increase in the cost of goods and if the goods are too highly priced, closure of unecumenical units etc. While the Supreme Court may have anticipated this, the Delhi Government found itself incapable of tackling the host of problems that would consequently arise, hence in complete apathy.

**Some concerns for the future**

Judicial activism in environmental matters has been well documented and analysed elsewhere. Nonetheless, it seems appropriate to undertake a comprehensive evaluation, from time to time, of such activism in the development of environmental law in India. Such an evaluation is of relevance not only to India, but to many countries with functioning judiciaries in a post-modern largely post-industrial world in the 21st century amidst a plethora of global, trans-boundary, national and local environmental crises.

In so far as we are concerned, it is quite clear, and unfortunately so, that the development of environmental jurisprudence has been mainly due to the efforts of the Supreme Court. This is not to say that there have not been any important decisions rendered by the High Courts, but only that the latter have not got any major impact on environmental jurisprudence.

To a large extent, the Supreme Court has been pressed or undertaken an active role due to the necessity of the current environmental regime, since even though the statute and legislation are well defined and stringent, their implementation and enforcement have not been efficient.

A major problem with the application of environmental law is the conflict of values and interest - the value of protection of the environment in the interest of all, versus production (industrial and otherwise) for the good of all. The right jurisprudential approach to environmental legislation would only be one that seeks a resolution to the conflict of these values. Ideally, the regulators of the environment and the producers who use natural resources must be one and the same. Only laws which lead to this end can be said to have the right spirit. Seeking co-operation within a democratic set-up necessarily requires that we give up a 'policing the society' theory and adopt may be a 'Managing the Society' theory. For, clearly the question concerning environmental problems is not how best to promote someone, but how to manage society in the best manner possible so that maximum development is achieved with minimal environmental exploitation. In other words, a complete change in our jurisprudential perspective is required if we are to protect the environment and get over the exploitative mentality.

Unfortunately as mentioned above, the present struggle is being waged largely at the level of the Supreme Court, while it would, perhaps, be more appropriate if it were to begin at the grass-root level and then proceed upwards. Otherwise, we would be faced with a situation where the Supreme Court is expected to monitor and find solutions to all the environmental problems of the country, which it cannot do, and the result of this would be that some orders passed by the Supreme Court would remain only on paper. Some live instances of this are orders passed for setting up 'Green Belts' which have not been set up in most High Courts, including Delhi. Similarly, Environmental Courts have not been set up and although a National Environment Authority Act, 1997 and National Environment Tribunal Act, 1995 have been enacted, these authorities are not functional, there is nothing to suggest that any active Environment Protection Fund actually exists. Similarly, while much attention is being paid to forest and wildlife preservation, the fact is that the tiger has disappeared from at least one national park.

It must be recognized that the district judiciary and the local populace are equally capable of dealing with...
environmental issues, if not more so. Municipal Council, Railways a clear pointer to this. It must also be recognized that all citizens of various districts of the country are obliged to chip in their bit to preserve and protect the environment as a part of their fundamental duty - and in fact efforts are being made in this direction by various local interest groups and NGOs. Van Panchayat, for example, have been in existence in large pArts of Uttarakhand where the local populace is managing the forests. Similarly, class actions can be initiated by NGOs working in particular districts and areas.

The focus must shift, therefore, from approaching the Supreme Court for remedial measures to involving the local people and approaching the local courts for relief, for it is they who are in a better position to appreciate the problems and requirements of the area. The Supreme Court has given us adequate guidelines and solutions to macro problems, but we must not forget of overlook micro level problems that also need solutions. Without the active involvement of the people at the grass level, solutions to environmental issues would be difficult to come by and jurisprudential concepts will remain good in theory, but having no practical utility. It is this change that we must strive for in the near couple of decades to develop environmental jurisprudence to make it more effective and people-oriented.

Prevention And Control Of Industrial Pollution: An Approach To Simpler EIA Consent Mechanism

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Abstract

This paper attempts to suggest simplification of EIA and consent process being issued by regulatory bodies. Efforts have been made to suggest ways and means to adopt less cumbersome EIA Process and review of consent procedures with a view to smoothen the system. Emphasis has been made on self-compliance of stipulated conditions through adoption of automatic monitoring and surveillance system leading to better transparency and outreach to the public. There is need to revisit EIA Regulation, 2006, the Water Act, the Air Act & the Environment Protection Act and Rules framed thereunder. Use of economic instruments may be promoted instead of traditional reliance on command & control system.

Introduction

After successive implementation of the various Five Years Plans, the country has made considerable progress in the industrial sector. A no. of industrial complexes and stand alone units were set up in the various part of the country during the last couple of decades. This included large, medium and small scale units which are engaged in the manufacturing of various important products being consumed in the country. Also some of the units are engaged in export as well.

While rapid industrialisation has brought out considerable progress and upliftment in the economic growth and living standards but at the same time it has brought with it the misery of air, water and soil pollution. With a view to control industrial pollution, the Government of India had brought out a no. of environmental laws and also created implementation machinery in the form of Central Pollution Control Board, State Pollution Control Boards in the various States and Pollution Control Committees in the Union Territories. Thus a broad framework of environmental legislation and regulatory regime was set up to oversee the implementation of the various provisions of the environmental laws enacted by the Parliament. Even though there has been considerable improvement in tackling industrial pollution but still much more is required to be done to make the system more effective by way of adopting a multi-pronged approach involving use of economic instruments, automatic monitoring and surveillance system, imposing pollution cost, promoting voluntary compliance and self-governance etc., apart from simplification of EIA process, setting criteria based on 'Go' and 'No Go Areas' concept, redefining consent to establish and operate system as required under the Water & Air Acts.

Intervention of judiciary & Initiatives taken by the government

The Hon'ble Apex Court in its various judgments pertaining to environment has reiterated the precautionary principle, polluter pays principle and principle of sustainable development apart from advocating the Doctrine of Public Trust and Intergenerational Equity. Besides, the various High Courts have delivered a no. of judgements for the protection of environment from time to time and in the recent past NGT has issued various directions for the protection of environment & human health. The judicial pronouncements by various courts include control of environmental pollution by way of adoption of clean technology, recycling and reuse of waste material, installation of pollution control equipment, better house keeping and work practices including adoption of waste minimisation techniques. Besides, the MoEF introduced the concept of environmental audit as a management tool in the industries to move towards self-discipline by way of reducing energy and water consumption and optimisation of raw material. Judgements were also pronounced by the Apex Court to save ground water from contamination including remediation of contaminated sites. Hazardous units were also asked to shift out of NCT of Delhi. A couple of years before MoEF also took the initiative of involving industries under the Corporate Responsibility on Environmental Protection (CREP) to check industrial pollution through voluntary efforts.

Environmental clearance of projects

The project proponents are required to seek prior environmental clearance by following the rigorous and cumbersome process to get final take off to start the industry. Even after commissioning of the units, the management of these manufacturing units is
required to take consent to operate year to year in case of polluting industries and in case of non-polluting units or less polluting units the consent is required to be renewed every after 2.5 years. It is used to introduce a uniform consent procedure as at present it is varying from Board to Board. To overcome these problems, the following strategy is suggested:

- Simplification of EIA Process for Grant of Environmental Clearance (EC).
- Automatic Monitoring and Surveillance System.
- Effective Management of Hazardous Waste.
- Stricter Monitoring of conditions stipulated by MoEF/SEIAA.
- Liberalised grant of "consent to establish" and "consent to operate".
- Cluster Approach/Zoning based development.
- Introduction of "go" and "no go" Areas Concept.

Simplification of EIA process for grant of EC.

4.1. EIA notification 2006, has laid down a cumbersome, time consuming and costly procedure in place for seeking prior environmental clearance for the specified categories of the project as listed in the schedule. Basically, the EIA process involves 4 stages which are shown in the following order:

- Screening (Only for Category B projects and activities)
- Scoping
- Public consultation
- Appraisal

4.2. The projects are categorised in 2 categories i.e.

(a) Category A projects require clearance from MoEF and (b) Category B projects require clearance from the concerned SEIAA in the State/UT. Category B projects have been further classified into 2 categories i.e. Category B1 and Category B2. The category B1 projects will require EIA report whereas Category B2 projects will not require submission of EIA report for approval of the project. As provided in the EIA notification, the first instance, the MoEF prepares the TOR for preparing EIA/EMP report which is often not needed to be stored during the implementation of a large project and hence can be avoided. The TOR, the project proponents are required to prepare draft EIA report which is then submitted to the concerned CPCB for preparing public hearing in consultation with MoEF. CPCB then gets in contact with the District Administration to hold a public hearing meeting which has been proposed by the District Collector or his nominee after giving wide publicity through the newspapers and other means as laid down in the EIA notification. Often, it has been observed that public hearing get influenced by the political agenda rather than discussing the environmental issues pertaining to the project. Also, there are a number of instances that there is no public hearing held in the area and projects being granted consent in the absence of public hearing as a result of political influence. If the project proponent is lucky enough and is able to complete the process of public hearing, the EIA report is then to be updated based on the comments received during the public hearing and the same is sent to MoEF for approval of the proposal along with the proceedings of the public hearing. MoEF then prepares the EIA report and other relevant information including the comments/suggestions received as part of public consultation process as defined in the EIA Regulation, 2006 before the duly constituted respective Expert Appraisal Committee (EAC) for seeking their recommendations. Based on the recommendations of the EAC, the project is processed and the approval or rejection is conveyed to project proponents after seeking the approval of the competent authority in the Ministry. Similar exercise is required to be carried out by SEIAA for Category B projects. Therefore, if the project is approved, a formal environmental clearance stating various general and specific conditions is issued. So it is quite evident from the above that the EIA process is very cumbersome and time consuming and there is need to simplify the process without compromising with the related environmental impacts. After the EC is issued, it is basic to link to the project proponent to implement the project and to follow the process and to undertake effective monitoring and control of the stipulated conditions. Even though, a monitoring mechanism has been put in place through the regional offices of MoEF but that miserably lacks in infrastructure and manpower to undertake effective monitoring of the various conditions stipulated in the EC.

4.3. In view of the above tedious and time consuming EIA process, there is need to simplify the EIA process while making it more effective and less cumbersome. The following conceptual framework could be thought of to reduce the prevailing red tape and smooth the EIA process and shorten the processing time for grant of EC.

- The requirement of prior EC may be dispensed with for those projects which are prepared to go ahead by taking risk on their own by way of giving an undertaking that in case the execution work continues without EIC, they will not claim any equity for the investments made for the project. Such prior consent EICs could be considered in case of those projects which are in consonance with the prescribed site criteria including their location from the National Parks, Sanctuaries and ecologically sensitive areas. This would not delay the implementation of the project schedules in case of prior environmental clearance, if the project is otherwise environmentally compatible and complying to the site criteria. Till EIC is granted, the project proponents may start civil works, invite tenders, evaluate technological options, mobilise financial resources etc., but will not start the construction work of the main plan.

- Presently, the requirement of preparation of EIA report for Category A and Category B1 projects could be reviewed and only major projects such as coal based power plants of more than 1000 MW, coal mining and other major mineral projects, river valley and hydroelectric projects, major industries having toxic and harmful potential etc. should be subjected to preparation of detailed EIA report. This would cut short the time required for EIA process. Minor projects not likely to have significant impact on environment may be appraised based on the appropriately designed Application form for eliciting the essential information including use of secondary but reliable data to reduce time of collection of air & water quality data wherever possible.

(iii) There is also need to improve the quality of EIA report as it has often been seen that the EIA reports are prepared for the purpose of meeting the requirement of grant of EC and may be lacking in terms of substance and may not truly reflect the related environmental issues. Also, the consultants are selected by the Project Proponents for preparation of the EIA report and as such any "conflict of interest" cannot be ruled out. It would be better if the EIA regulator (MoEF/SEIAA) facilitates the process of preparation of EIA report through warranting expert consultants and to insulate the same from the influence of the project proposers.

The Honble Supreme Court in its order dated January 06, 2014 in the matter of T.N. Godavarman v. Union of India & Ores in Writ Petition (Civil) No. 202 of 1997 in case of revisiting EIA process covering the issue of appointment of experts at the Central and the State levels for appraisal of projects from environmental and forestry angles.
with the ultimate idea of protection of environment & human beings. The above said order of the Apex Court is quoted as below.

"Para 7: Hence, the present mechanism under the EIA Notification dated 14.09.2006, issued by the Government with regard to processing, appraisal and approval of the projects for environmental clearance is deficient in many respects and what is required is a Regulator at the national level having its offices in all the States which can carry out an independent, objective and transparent appraisal and approval of the projects for environmental clearances and which can also monitor the implementation of the conditions laid down in the Environmental Clearances. The Regulator so appointed under Section 3(5) of the Environment (Protection) Act, 1986 can exercise only such powers and functions of the Central Government under the Environment (Protection) Act as are entrusted to it and obviously cannot perform as the powers of the Central Government under Section 2 of the Forest (Conservation) Act, 1980, while exercising such powers under the Environment Protection Act will ensure that the National Forest Policy, 1988 is duly implemented as held in the order dated 05.07.2011 of this Court in the case of Laxage Uniam Mining Private Limited. Hence, we also do not find any force in the submission of Mr. Parasram that as under Section 2 of the Forest (Conservation) Act, 1980 the Central Government is the Regulator, no one else can be appointed as a Regulator as directed in the case of Laxage Uniam Mining Private Limited."

Para 8: We, therefore, direct the Union of India to appoint a Regulator with offices in as many States as possible under subsection (3) of Section 3 of the Environment (Protection) Act, 1986 as directed in the order in the case of Laxage Uniam Mining Private Limited and file an affidavit along with the notification appointing the Regulator in compliance of this direction by 31st March, 2014."

It is understood that MoEF is in the process of working out the details of the revised EIA scheme keeping in view the direction of the Hon'ble Apex Court.

Self-compliance through automatic monitoring and surveillance system

The industries should realise their social and environmental responsibilities and should come forward to implement the stipulated environmental conditions. For this purpose, it would be better to adopt more transparent, foolproof and reliable automatic monitoring systems in place for continuous monitoring of stack emissions and discharges of effluents. In particular for stack emission monitoring, online monitoring system or equipment may be provided for continuous monitoring of sulphur dioxide, oxides of nitrogen and particulate matters with data logger and display system in addition to any specific parameters which may be prescribed by the regulatory authorities. The real time data so generated could be uploaded to the website of the industrial units having net working with the regulator. Further improvement in the emission monitoring and applying pollution pays principle could be made by providing the non-compliance in relation to the stipulated standards and simultaneous online billing by the regulator. The details in this regard would have to be worked out so as to make such emissions charges are to be imposed over and above the prescribed limit. The concept of trading of emissions may also be thought of to encourage the industrial units for better adoption of pollution abatement measures as it is already being practised in some of the developed countries abroad. The industries should also upload periodically the compliance status with respect to all specified conditions stipulated in the contract to operate and 'EC' and be connected to the regulator's website through proper networking. It is hoped that the above proposed system would go a long way in making the pollution control compliance more transparent and dependable and also would safeguard the project proponents from the unnecessary harassment of the public, environmentalists and regulators. This would also be helpful in reducing the workload pertaining to monitoring and surveillance being done by the various State Pollution Control Boards, Central Pollution control Board and MoEF with respect to the compliance of consent and EC conditions as these regulatory authorities are grossly deficient in infrastructure for monitoring of the industries.

Effective management of hazardous waste

Industries are required to take authorization from the concerned SPCBs or PPCBs under the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and Manufacture, Storage and Import of Hazardous Chemical Rules, 1989. Self-declaration of information on inventory and compliance status of the conditions stipulated in the authorization issued by the Board be periodically uploaded in the website of the industry which would have networking with the website of the regulator so as to have better transparency and outreach to the public at large and environmentalist in particular.

Strict monitoring of conditions stipulated by MoEF/SEIAAS

Projects proponents should upload the compliance status of the various stipulated conditions in the EC with networking to the website of the regulator. Arrangements for display of air and water quality monitored data be displayed preferably on the gate of the unit concerned for better dissemination of information to the public. This would also reduce the pressure of work load pertaining to the monitoring of the conditions of the EC and consent conditions on the MoEF, CPCB and SPCBs. The regulator should form time to time surprise checklists to see the compliance status. The industrial units which have good track record of complying with the environment standards will enjoy benefit of available concessions/ waivers under the Water & Air Acts, 1973. Other facilitative incentives and economic instruments may also be thought of for promoting pollution abatement measures instead of conventional use of command and control system being normally used by the regulators.

Liberalised grant of 'consent to operate' and 'consent to establish'

As per the provisions of The Water Act & The Air Act the industries are required to take consent to establish and consent to operate from the SPCBs. It is true that a lot of time of the SPCB staff is consumed in renewal of 'consent to operate' every year or every after 2-3 years depending upon the type of industry and the Board Officials are not able to do any other development work pertaining to protection & improvement of environment. It would, therefore, be desirable to do away with the requirement of 'consent to operate' every year/ alternate year and rather stick to one time 'consent to establish'. In case there is change in the production capacity or production technology, then the industries should be required to take fresh 'consent to establish' or get the old one revised. This would not result in any delay in releasing the pollution norms or regulation as the same would be connected to the website of the regulator and the compliance status would be available with them for taking appropriate action including closure of units as per the law in case of non-complying units. The facility of exemption from 'consent to operate' would be available to only those units who have established and maintain automatic monitoring system for both stack emissions and effluents QA/QC, conductivity, etc. Necessary amendments would be needed in the Water & Air Acts accordingly and the rules framed thereunder.

Emission trading

Emission trading concept is already in practice in some of the developed countries and could be adopted in our country also. This would provide an opportunity for those industries to sell their credits whose emissions are already on the lower side in comparison to the stipulated standards and the same could be traded with other industries whose emissions are exceeding the prescribed limits and are willing to buy the same. Non-compliant units may therefore buy the emission credits from...
the complying units to the extent of access credits available with them as it would provide a technoeconomically more feasible option. Introduction of emission trading will provide fiscal incentives to the industries.

Cluster/zoning approach

Cluster / Zoning approach for industries would be desirable so that similar production units may be located in the designated industrial complexes which would have adequate infrastructure in terms of common effluent treatment plant and also would be equipped with automatic ambient air and water quality monitoring and surveillance system. It would be easier and practical to tackle pollution problems for such industrial complexes.

'Go' and 'no go areas'

The policy makers such as MoEF should come forward with the identification of areas where industries can be located and such areas may be designated as 'Go Areas'. Similarly, a detailed exercise would be helpful to identify such areas which are close to the National Parks and Sanctuaries, ecologically fragile and sensitive areas, reserved and protected forests, critically polluted areas, monuments of national importance, religious sites etc., where environmental development can't be allowed should be declared as 'No Go Areas'. Developmental projects should normally be not allowed in 'No Go Areas' unless and until it is absolutely essential keeping in view the defence needs of the country.

Conclusion

At present, the process of obtaining environmental clearance, consent to establish and consent to operate in respect of industrial projects is very complex and time consuming and as such there is need to revisit EIA Notification 2006, the Water (Prevention and Control of Pollution Act) 1974, Air (Pollution and Control Act) 1981 and the Environment (Protection) Act, 1986 and the rules made thereunder. There is need to simplify EIA process as also to do away with the cumbersome process of grant of consents by the regulatory authorities without compromising with the environment. It is hoped that the approach suggested towards simplification of the EIA process and proposed modifications in the consent mechanisms, installation of automatic monitoring system and adoption of self-discipline will lead to better compliance of stipulated environmental conditions and would also reduce pressure of work on regulatory bodies which are already short of adequate infrastructure for undertaking effective monitoring & surveillance of industries. Fiscal incentives and use of economic instruments may also be encouraged for better compliance of stipulated environmental standards.

The Art Of Judging Environmental Disputes

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Abstract

The paper highlights earlier concept of high technique and strict logic in judging environmental disputes. It explains in brief the state of environment at global level and need for its improvement. The paper elaborates that in environmental disputes the final outcome should not be dependent on individual views but on scientific rational. The paper explains in brief three steps involved in environmental jurisprudence. Finally the paper concludes with a statement that the Judges must adjudicate environmental cases in accordance with principle and reason, technique and logic, to ensure consistency and predictability, and public confidence, in the administration of justice.

Introduction

The determination of proceedings by a court or a judge (the two expressions may be here treated as equivalent) may involve more art than science, but it is neither unimportant nor trivial.

Sir Owen Dixon famously referred to the judicial method of the common law as traditionally involving "high technique and strict logic." 1 While Dixon conceded that in more modern times it would no longer be accurate to use the adjectives of "high" and "strict," 2 nevertheless it remains true to describe the way in which the administration of justice proceeds as involving a particular technique and logic. Dixon stated that "courts proceed upon the basis that the conclusion of the judge should not be subjective or personal to him but should be the consequence of his best endeavours to apply an external standard." 3

The standard, Dixon considered, is to be found in the body of positive knowledge which the judge has acquired. 4 The standard might be an identifiable, settled legal rule or principle or an extension of such a rule or principle (such extension itself being determined using the judicial method). But it cannot be an entirely new rule or principle, fashioned by the judge to pursue the judge's personal or subjective views in the name of justice or social necessity or social convenience. 5

The observation that the administration of justice should proceed by technique and logic, and not by the idiosyncratic views of individual judges, has a topical resonance with current environmental issues. The ecological crisis facing the earth, climate change being the recent high profile illustration, triggers demands for action, including for the pursuit of ecologically sustainable development. Which ought to be the role of judges in meeting this crisis, in achieving ecologically sustainable development? It is no doubt true that the law, to be effective, ought to be responsive and adapted to the demands of the society of today, including the environmental issues it faces.

It was Pound who suggested a means by which this can be achieved. He identifies in the legal system two elements: a traditional or habitual element and an encrusted or imperative element. The latter is usually the modern element, exemplified by statute, and is becoming more predominant. The former is the older or historical element upon which juristic development proceeds by analogy. 6

Pound points that we must bring about the infusion of social ideas into the traditional element of the law. 7 In this way there will be a body of law which will satisfy the demands of the society of today. 8 Although care needs to be taken, the courts might take a leadership role in this regard. 9

However, judges ought not base their conclusions on views that are personal or subjective to them. The fate of disputes concerning pressing environmental issues such as climate change, ought not turn on the personal or subjective views of the individual judge assigned to hear and determine the matter. For example, the outcome should not be dependent on whether the judge is a climate change believer or a climate change sceptic. It should not be assumed that reasoned to the judge's own subjective views will necessarily result in decisions in favour

2 Dixon, note 1 at 158.
3 Dixon, note 1 at 157.
4 Dixon, note 1 at 157-158.
5 Dixon, note 1 at 157.
7 Pound, note 6 at 192.
8 Pound, note 6 at 192.
9 Justice P.L. English v. Larmour Homes, 1948, p. 33. (Although see Pound, note 6 at 192, who issues a caution against judge proceeding in the advance point, rather than the main body.)

The Art of Judging Environmental Disputes
Justice P.L. English

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of environmental protection and ecologically sustainable development rather than against them. To avoid ad hoc decision making, judges ought to employ accepted techniques and logic in arriving at their decisions. By conforming to such standards of decision making, judges will have an explicit rationality. Furthermore, the decisions will contribute to a body of law that has integrity. One social need is for a reasonably logical and consistent system of law.

In this short article, I will outline techniques and logic that judges can apply in determining disputes involving environmental issues. I will illustrate the judicial method with examples of judicial decisions regarding ecologically sustainable development.

Differing functions of the judge in environmental disputes

A range of disputes involving environmental issues come before the courts. Some disputes call for the exercise of a jurisdictional function, but others call for the exercise of an administrative or executive function. There is a context as to whether judges, in making their decisions, exercise a legislative or law-making function.

The role of the judge, and the technique used, will vary with the nature of the function being exercised. Adjudication of disputes, in the strict sense, involves the exercise of the judicial function. Adjudication involves the determination of a dispute by the reasoned application of a legal rule or principle to the facts of the matter. The judge acts, not as an arbitrator, but strictly as a judge. The judge's task is to determine what is in the judge's view is fair as between the parties in a given case, but what, according to the applicable rule or principle of law, are the respective rights or obligations. I will elaborate on the steps in the adjudication process below.

Adjudication, and the exercise of the jurisdictional function, is employed in the determination of civil claims, including judicial review claims, and criminal prosecutions. However, in adjudication there may also be a discretion vested in the court as to the remedy, relief or punishment to be granted. The exercise of this discretion involves an administrative or executive function. But even here, discretion needs to be exercised judicially, within accepted parameters laid down by precedent or the statute imposing the discretion.

Other environmental disputes that come before the courts involve, more commonly, the exercise of an administrative or executive function. Many courts or tribunals are vested with the function of reviewing on the merits the exercise of power by officers and bodies of the executive branch of government. An example is the function vested in planning and environment courts or tribunals to review decisions of local or state government in relation to applications for approval to carry out development.

In undertaking merits review, the court may exercise all the powers and discretions that are conferred on the original decision maker. The court is not confined to the material that was before the original decision maker but may receive and consider fresh evidence or evidence in addition to, or in substitution for, the material that was before the original decision maker. The decision of the court is substituted for the original decision maker; it is deemed to be the final decision of the original decision maker.

In making its decision in a merits review, the court, like the original decision maker, acts as an arbitrator, not strictly as a judge. The court in merits review determines what decision is the correct or preferable one on the material before the court. Where the statute empowers the power, the exercise of which is under review, imposes limits on the exercise of the power, such that the power is only exercised if certain circumstances exist or may only be exercised in a particular way if circumstances exist, the court must determine whether the limits on the power are satisfied. There may be only one decision reasonably available on the evidence and that decision will therefore be the correct decision. Where there are a range of decisions reasonably open, all of which would be correct, the court chooses, on the evidence before it, what it considers to be a preferable decision.

Unlike adjudication, the resolution by merits review of a dispute ordinarily does not involve the application of a de facto legal rule or principle. One reason is that the disputes to be determined by merits review raise polytechnic problems. Polytechnic problems are unsuited to resolution through adjudication because their resolution involves "spontaneous and informal collaboration, shifting its forms with the task at hand." Polytechnic problems cannot be resolved by identifying each issue at the start then sequentially resolving each of the originally identified issues. In a polytechnic problem, the resolution of one issue will have repercussions on the other issues; the issues may change in nature and scope depending on how the first issue is resolved.

I will focus in the comments that follow on adjudication. I have sketched elsewhere the role of courts in undertaking merits review of environmental decisions.

Steps in adjudication

Pound identified three steps in the adjudication of a dispute, namely, finding the law, interpreting the law and applying the law.

"Three steps are involved in the adjudication of a controversy according to law: (1) Finding the law ascertaining which of the many rules in the legal system is to be applied, or, if no rule is applicable, reaching a rule for the cause (which may or may not stand as a rule for subsequent cases) on the basis of given materials in some way which the legal system points out; (2) Interpreting the rule so chosen or ascertained, that is, determining its meaning as it was framed and with respect to its intended scope; (3) Applying to this cause in hand the rule so found and interpreted."

These three steps interrelate. As Pound has noted elsewhere, "it is as clear as we historical can make it that interpretation apart from judicial application is impossible, that it is futile to attempt to separate the functions of finding the law, interpreting the law and applying the law."

These three steps constitute a model of syllogistic reasoning. Through the first two steps, the interpreter is identifying the
relevant rule of law which is the major premise. The rule of law typically states that in a given factual situation certain rights, obligations or liabilities exist. The third step, of applying the law so found and interpreted to the parties, involves two stages. The first stage is finding the facts relevant to the identified rule of law, which identify the minor premises. The second stage involves taking the rule of law as the major premise, employing the facts found as the minor premises, and, in the end, coming to a judgment by a process of syllogistic reasoning.

Such a syllogistical model works better in theory than in practice, for a variety of reasons. The rule of law may not be able to be expressed neatly as a categorical proposition as to form the major premise in the syllogistical system. The third term in the syllogism, the conclusion, may not be able to be reached be pure, syllogistic reasoning from the first two terms (the major and minor premises) because of the applicable law. For example, the applicable law may contain a jurisdictional discretion as to whether to grant relief, even if application of the rule to the facts at issue indicates that relief is warranted. And, in the reality of actual judges, judges may work from conclusions to propositions, however herein lies the problem.

Nevertheless, the model has a simplicity and logic that, therefore, will be used to structure the following discussion of the judicial method in adjudicating environmental disputes.

Finding the law

The first step involves ascertaining which legal rule is to be applied. At times, this involves no particular difficulty. The legal rule to be applied may be presented by statute, another primary or subordinate, or be settled by precedent. If a legal rule is applicable, it must be applied and the answer to the question must be accepted. Having found the applicable law, the court must proceed to the subsequent steps in adjudication of determining the meaning of the rule and applying it.

In many cases, however, this first step of finding the law is not so simple. There might be more than one legal rule or principle which might apply and the parties are contesting which should be made the basis of the decision. In that event, several rules or principles must be interpreted in order that a rational selection may be made. If none of the existing rules or principles are adequate to cover the case, then a new one must be supplied. It is this task of supplying a new rule or principle, and whether this involves law-making, that is controversial.

Under the classical, declaratory theory of judicial decision-making, in which Blackstone was the chief exponent, judges do not, and cannot, make law; they merely discover and declare it. The classical declaratory theory has been trenchantly criticized as a fiction or myth.

Post-Enlightenment jurisprudence, from Bentham to Austin through to Hart, accepts that judges may legitimately fill in the gaps left by rules by using their discretion.

As Harskamp puts it:

"[I]n any legal system there will always be certain legally unregulated cases in which some point no decision either way is dictated by the law and the law is accordingly partly indeterminate or incomplete. If in such cases the judge is to reach a decision, he must exercise his discretion and make law for the case instead of merely applying already pre-existing settled law. So in such legally unprovided-for or unregulated cases the judge both makes new law and applies the established law which both confines and constrains his law-making process."

These law-making powers, however, are interstitial and subject to many constraints. Judges must exercise their law-making powers circumspectly, must always have some general reason justifying their decision and must act as a conscientious legislators would by deciding according to their own beliefs and values.

Dworkin challenges this positivist view. Dworkin denies the existence of a strong (that is legally uncontrollable) jurisdictional discretion. Judges do not make law because all the resources for their proper decisions are provided by the existing law, as correctly understood. These resources include the explicit settled law (rules) as well as the implicit legal principles that underlie and are embedded in the settled law. Together, these existing legal resources should be treated as making up a "sensemaking web." The task of judges is to understand the content of the legal system and give effect to it in their judgments to the best of their abilities. This task is "interpretative" but it is partly evaluative; it involves identification of the principles which both form the "fit" or coherence with the settled law and legal practices of the legal system and also provides the best moral justification for them, thus showing the law in its "best light." Irrespective of the jurisprudential debate concerning whether judges find or make law, the process they undertake in articulating the rule or principle to be applied ought to be a principled and rational one.

The judge stirs, with the existing law that is to say, some legal rule or principle the validity of which is admitted. This existing legal rule or principle, by hypothesis, is not directly applicable to the case at hand. It might be found in persuasive precedents in the domestic law of closely related topics. The judge may also find it helpful to consider persuasive foreign decisions which may show how other jurisdictions have solved the problem in question.

As Fuller notes judges of the common law have always drawn their general rules of law from a variety of sources and with a rather free disregard for
political and jurisdictional boundaries. The value of foreign judgments depends on the persuasive force of their reasoning.

The increasing globalisation of environmental law and the harmonisation of international and national environmental law make refere nce to international and other national sources of law of assistance. This is particularly the case in relation to the principles of ecologically sustainable development. These principles have developed in international law but have been domesticated into national laws throughout the world. The precautionary principle, for instance, is found in international conventions and in soft law, such as Principle 15 of the Rio Declaration on the Environment and Development. The formulation of the precautionary principle in Principle 15 of the Rio Declaration has been adopted in many national laws, including in New South Wales. This harmonisation of principles between international and national law, and between the laws of different nations, facilitates a judge drawing guidance across borders and jurisdictions and the cross-fertilisation between laws of different nations and jurisdictions.

Thus, courts in Australia have been able to draw on foreign judicial decisions and learn from academic writings to elucidate the content of the principles of ecologically sustainable development on, to use a metaphor, to provide flesh to the skeletal form in which the principles are expressed in domestic planning and environmental statutes. A clear example is the decision in Telstra Corporation Ltd v Horesa by Shire Council, where guidance was sought on international and foreign sources of law, as domestic decisions in other jurisdictions, to elaborate on the context and process for application of the precautionary principle.

Having considered the existing law on related topics in both domestic and international sources of law, the judge develops competing logical extensions of the potentially applicable rules to meet the new circumstances of the case at hand and makes a choice.

A means of developing logical extensions is reasoning by analogy. Edward Levi posits that the basic pattern of logical reasoning is reasoning by example, that is, reasoning from case to case. Where a precedent is binding, the rule of law derived from the precedent is applied to the case at hand. Where no binding precedent applies, a rule of law described in an earlier case or cases might be extended so as to apply to the case at hand because of "resemblances which can reasonably be defended as both legally relevant and sufficiently close". It is the judge's task to determine the legally relevant similarities and differences. Such analogical reasoning has a logic about it in the sense that it follows the "line of logical progression". The new formulation will be seen as a step in an "evolutionary process or continuum". It should maintain "the logic or the symmetry of the law" and uphold integrity in law.

Such analogical reasoning is not inductive. As Justus Stone notes: "The step between competing starting points cannot be made by logical deduction; it necessarily involves a reference to the facts and to standards of justice (however covert) in order to decide which analogy will give a 'preferable' result in the instant case. The decisive element in such cases of conflicting analogies is not logic, therefore, but the pre-logical choice between the starting points, that is, the premises..." (dissent)." The syllogism does not come into play until after the choice is made.

Analogical reasoning is also not truly inductive, although the direction is from the particular to the general.

Although no analogy is compelling in a purely logical sense as leading to a necessary conclusion, nevertheless, as Lloyd notes, "as a practical matter, human beings do reason by analogy, and find this a useful way of arriving at normative or practical decisions". Apart from using analogical reasoning, which Cardozo describes as the rule of analogy or the method of philosophy, Cardozo also identifies three other methods to guide the selection of a rule or principle to be applied to a new case. Cardozo observes that the directive force of a principle may be exerted along the line of historical development (the method of evolution), along the line of custom of the community (the method of tradition), and along the lines of justice, morals and social welfare, the mores of the day (the method of sociology). Salmond suggests that, in cases involving novel points of law, the judge must look, not only at existing law on related topics, but also at "the practical social results of any decision he makes and at the requirements of fairness and justice". To similar effect, Sir Anthony Mason says that judges "must have an eye to the justice of a rule, to the fairness of its operation in the circumstances of contemporary society".

Sometimes these factors point to the same conclusion. At other times, each may pull in different directions. In this event, the judge will need to weigh the factors against each other and decide between them. Salmond notes, "[t]he rationality of the judicial process makes in fact of explicitly and consciously weighing the pros and cons in order to arrive at a conclusion".

Indeed, this explicit rationalisation is the hallmark of adjudication and is crucial to the judicial decision making process.
An illustration of development of a rule or principle along the line of logical progression, that is, the use of the rule of analogy, is the series of decisions of the Land and Environment Court of New South Wales holding that the principles of ecologically sustainable development (ESD) are relevant matters to be considered in determining an application for approval to carry out development that is likely to impact the environment.

The first case in which one of the principles of ESD, namely the precautionary principle, was applied was Leach v National Parks and Wildlife Service.9 A local council granted development consent to itself to construct a link road through native vegetation. The road construction was likely to take or kill endangered fauna. The Council applied to the National Parks and Wildlife Service for a licence to take or kill endangered fauna under the then applicable provisions of the National Parks and Wildlife Act 1974 (NSW). The Service granted the licence but an objector appealed to the Court against the decision.

The appeal was by way of merits review of the Service's decision to grant the licence. One issue on the appeal was whether the Court, exercising the functions and discretion of the Service, could take into account the precautionary principle. The National Parks and Wildlife Act 1974 at that time did not expressly refer to any of the principles of ESD, including the precautionary principle, either in the specification of the matters required to be considered or in the objects of the Act. Nevertheless, there was applicable a 92% of the National Parks and Wildlife Act 1974 required the Court to take into account on an appeal the public submissions made, some of which had argued that the precautionary principle was appropriate to the case, and any other matter which the Court considers relevant, having regard to the subject matter, scope and purpose of the Act, would include the precautionary principle. In addition, the Land and Environment Court Act 1979 provided that the Court on an appeal is to have regard to "the circumstances of a case and the public interest." Stein J held that, while there was no express provision requiring consideration of the precautionary principle, nevertheless it was a relevant matter to be considered by means of the statutory provisions and having regard to the subject matter, scope and purpose of the Act.10

The issue subsequently arose under a different enactment, the Environmental Planning and Assessment Act 1979 (NSW), in Curran v Pittwater Council.11 By this time, that Act had been amended to add the encouragement of ESD as an object of the Act.12 However, the list of matters in s 90C(1) that a consent authority (including the Court on a merits review appeal) is required to take into account in determining a development application did not expressly refer to the principles of ESD, although the list did include "the public interest" (s 90C(1)(c)).

A commissioner of the Court had dismissed the applicant's appeal on the basis that the Court, exercising the functions and discretion of the Service, could take into account the precautionary principle. However, the applicant argued that an application is made on a question of law to a judge of the Court. To succeed in establishing an error of law, the applicant had to show that the principles of ESD were an irrelevant matter that the commissioner was bound to ignore.

Lloyd J held that the principles of ESD could not be said to be irrelevant for two reasons: first, it is not an irrelevant consideration for a decision maker to take into account a matter relating to the environment, one of which is to encourage ESD and, secondly, one of the considerations expressly mentioned is "the public interest" and it is in the public interest, in determining a development application, to give effect to the objects of the Act.13 The rule that a principle of ESD may be considered under the heading of "the public interest" was therefore transposed to a different statutory enactment and case as a non-irrelevant consideration.

In the next case, Hutchison Telecommunications Australia Pty Limited v Baulkham Hills Shire Council,14 Pain J held that the precautionary principle is a relevant consideration under s 79C of the Environmental Planning and Assessment Act 1979, given the reference to ESD in the Act's objects.15 Although Pain J stated that this approach was also taken by Lloyd J in Curran v Pittwater Council, in fact, Pain J's decision was an extension of Lloyd J's decision. Lloyd J held that the principles of ESD were irrelevant matters under s 79C(1) (which is different to holding that they were relevant matters). Pain J extended this to hold that the principles of ESD were relevant matters under s 79C(1).

Pain J also had regard to the definition of the precautionary principle given in another statute, namely in s 6(2) of the Protection of the Environment Act 1991 (NSW), to give content to the relevant matter to be considered, the precautionary principle, under the Environmental Planning and Assessment Act 1979.16 At that time, there was no definition of the principles of ESD in the Environmental Planning and Assessment Act 1979. Subsequently, a definition was inserted which adopted, as Pain J had held was appropriate, the definition in s 6(2) of the Protection of the Environment Act 1991.

In BGP Properties Pty Limited v Lake Macquarie City Council,17 McColl J examined in detail whether the principles of ESD were relevant matters to be considered when determining a development application under the Environmental Planning and Assessment Act 1979. The judgment does not refer to Pain J's decision in Hutchison Telecommunications Australia Pty Limited v Baulkham Hills Shire Council. McColl J agreed with Lloyd J's conclusion in Curran v Pittwater Council,18 but went further to hold that "by requiring a consent authority (including the Court) to have regard to the public interest, s 79C(1)(c) of the EP&AA obliges the decision maker to have regard to the principles of ecologically sustainable development in cases where issues relevant to those principles arise." Again, this holding is cast in positive terms (the principles of ESD are relevant matters to be considered, not the double negative terms that Lloyd J had used (the principles of ESD are not irrelevant matters).
ESD are relevant matters, McClellan J had regard to a variety of sources of law, both domestic and international. Domestic sources of law included other statutes referring to the principles of ESD, quasi-judicial policy documents, persuasive precedents in prior decisions of the Court and of courts in other Australian jurisdictions while the international sources of law consisted particularly of international soft law on the principles of ESD.

Subsequent cases have affirmed the rule that had now been articulated, that is, that the principles of ESD are relevant matters to be considered by a consent authority when determining a development application under Part 4 of the Environmental Planning and Assessment Act 1979, subject to the public interest.

The next phase in the evolution of the rule came when the issue had to be determined with respect to applications for approval under different parts of the Environmental Planning and Assessment Act 1979, namely Part 3A concerning major infrastructure and other projects. The prior decisions had concerned development applications under Part 4. As noted, one of the matters a consent authority is required to consider is determining whether the development is a public interest in the sense of the Act. In contrast, Part 3A is in its express specification of matters to be considered by the Minister in determining an application under this Part. There is no express specification of the public interest as a relevant consideration.

In Gray v Minister for Planning, Pain J held that notwithstanding the absence of express specification that the public interest is a relevant matter, nevertheless there is an implied obligation to consider these matters. In Gray, the decision challenged was that of the Director-General to accept the proponent’s environmental assessment as adequately addressing the Director-General’s requirements. Pain J held that the Director-General was required to exercise the discretion as to whether to accept the proponent’s environmental assessment, in accordance with the objects of the Act, which include the encouragement of the principles of ESD. Pain J also accepted the applicant’s argument that the Director-General was required to take into account the public interest and that consideration of the public interest encouraged encourage the principles of ESD.

By this decision, the rule was extended from decisions under Part 4 of the Environmental Planning and Assessment Act 1979 to any type of decision under Part 3A of that Act. The next extension came in Wallace v Minister for Planning. Bussie J held that the principles of ESD were relevant matters to be considered in another type of decision under Part 3A of the Act, namely that of the Minister in approving a concept plan. Bussie J’s reasoning applied the development in prior decisions concerning Part 4 of the Act that the public interest can include the principles of ESD, and extended it to the circumstances of the submission of the statutory power three in question. Bussie J noted that s 75O of the Environmental Planning and Assessment Act 1979 mandates that the Minister must consider, when approving a concept plan, the Director-General’s report on the project and the reports and recommendations contained in the report. Clause 68 of the Environmental Planning and Assessment Regulation 2000 requires the Director-General to include in the report “any aspect of the public interest that the Director-General considers relevant to the project.” Bussie J held that the reference to “public interest” in s 68 includes the principles of ESD.

The decision is an appeal to the New South Wales Court of Appeal.

This line of decisions illustrates the process of logical progression by which a rule can be extended by reasoning from case to case.

Interpreting the law

The second step involved in adjudication is interpreting the law, that is, determining its meaning and intended scope. This task arises commonly in deciding where the rule of law has its source in statutes (whether primary or subordinate), but can also arise under the common law.

The need for judicial interpretation of the law arises for a variety of reasons. First, all rules involve classifying particular cases as instances of general terms. For any rule it is possible to distinguish clear cases, where the rule certainly applies, and cases where there is doubt as to when the rule applies, there being both asserting and denying that it applies. Hart says that “nothing can establish this duality of a core of certainty and a penumbra of doubt when we are engaged in interpreting particular situations under general rules. This implies: to all rules a fringe of vagueness or ‘open texture’.”

Secondly, indeterminacy arises from the need to use ordinary English words. Drafters of a statute, however expert, have no special resources at their command to express the core meaning of both substantive and definitional provisions, except those available to any user of the language. Lon Fuller eloquently conveyed this dilemma as follows:

In projecting his intention into the future he must, like the layman, launch on the shifting currents of a fragile vessel built from the materials that are available to everyone.

The English language is indeterminate and “irreducibly open textured.” Just like the rules, words used to formulate the rules can be seen to contain a core of certainty and a penumbra of doubt.

Thirdly, legislators can have no knowledge of all the possible combinations of circumstances which the future may bring. As Hart notes “[t]his inability to anticipate brings with it a relative indeterminacy of aim.” It is impossible to have “a complete legislative provision in advance covering every case, and authoritative extra-judicial interpretation.”

Fourthly, the rules, whether in statutes or the common law, may use very general standards, such as “reasonableness, fairness or what is just and equitable,” thereby incorporating extra-legal norms into the law. These standards are predicated, Julius Stone says, “on facts, values, concepts, or on more facts.” For this reason, the use of these standards enables changes in society’s values to be “taken bodily into the law.” As Oliver Wendell Holmes pointed out, the standards direct the court to “derive the rule to be applied from daily experience.” The standards, therefore, “are relative to time and place.”

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1 Hart, The Concept of Law, p. 116.
3 Stone, The Concept of Law, p. 152.
5 Stone, The Concept of Law, p. 152.
7 Stone, The Concept of Law, p. 152.
result, Stone observes, is that "[i]n such cases if these standards are properly administered the 'propositions of law' will vary in content from time to time."

Finally, there is indeterminacy inherent in the common law system of precedent.69

The task of interpreting the law is a necessary incident of the judicial function. As Marshall CJ memorably pronounced in Marbury v Madison,70 "[i]t is emphatically the province and duty of the judicial department to say what the law is." This task includes stating authoritatively what the words of a statute mean.

In undertaking the task of interpretation, the Court will be guided by the principles of statutory interpretation.71 There have been, and still are, different judicial approaches to statutory interpretation. The three main ones are the literal rule, now called nominalism, the golden rule, now called contextualism, and the mischief rule, now called purposive interpretation. Austin and Pound have discussed the distinction between genuine or proper interpretation, and spurious or improper interpretation.72 Gasman interpretation includes determining which of two or more co-ordinate rules to apply and what the law-maker intended to prescribe by a given rule. Spurious interpretation includes meeting deficiencies or omissions in rules imperfectly conceived or enacted.73 Spigelman has explored the ramifications of legitimate and spurious interpretation in the context of statutory interpretation and human rights.74

In the environmental context, it would be spurious interpretation for a court to enquire what is perceived to be deficiencies in the statute by making, unmaking or remaking the law to promote or better implement environmental goals, however worthy, such as achieving ecologically sustainable development. However, this is not to say that a court cannot adopt a construction of the statute which promotes or better implements environmental goals, if to do so is consonant with and required by the principles of genuine interpretation. Indeed, courts have, through genuine interpretation, construed many planting or environmental laws to require consideration of the principles of ecologically sustainable development. The line of decisions referred to earlier is an illustration.75

The effect of the exercise by the court of its interpretative role may be to make law, even though this may be incidental.76 As a result of this constitutional process, Puller observes, "no enacted law ever comes from its legislator wholly and fully 'made.'"77

Application of law

As I have observed above, through the first two steps of finding and interpreting the law, the judge identifies the relevant rule of law which is the major premise in the model of syllogistic reasoning usually involved in adjudication. The rule of law typically states that in a given factual situation certain rights, obligations or liabilities exist.

The third step of applying the law so found and interpreted to the matter, encompasses two stages. The first stage is to find the facts relevant to that identified rule of law. The facts identify the minor premise. The duty of the court in determining questions of fact is to "exercise its intellectual judgment on the evidence submitted to it in order to ascertain the truth."78 The second stage is to apply the identified rule of law (the major premise) to the facts as found (the minor premise) and "determine the existence or non-existence of rights, obligations and liabilities depending upon the accord or refusal of remedy as the case may be."79

In the second stage, consideration needs to be given to whether the applicable law accords a judicial discretion as to the remedy, relief or punishment, if any, to be granted by the court if, upon application of the law to the facts of the matter, a breach of the law were to be found. The judicial discretion may have its source in statute, the common law or in equity. The duty of the court in matters of judicial discretion is to exercise its moral judgment as to what is right, just, equitable or reasonable in the circumstances. The exercise of the judicial discretion permits individualization in the application of the law.80

In the environmental law context, statutes commonly permit a court that has found a breach of the statute to make "such order as it thinks fit" to remedy or restrain the breach.81 Such a phrase empowers the court "to mould the manner of its intervention in such a way as will best meet the practicalities as well as the justice of the situation before it."82 The discretion extends to withholding relief if the court does not think any order is fit to remedy or restrain the breach.83

The court may take into account a range of considerations, pertaining to both private interests of the parties and third parties, as well as the public interest. A breach of a planning or environmental law involves a breach of a public duty, the orderly development and use of the environment in the public interest.84 Obligations imposed on public authorities to assess and approve applications under planning or environmental laws also impose public duties and are important in the public interest.85

The subject matter of the litigation may itself raise issues concerning the public interest. Natural resources such as the air, waterways, forests and national parks can be seen, to use the language of the Roman law, as res publicae, being held by the
Conclusion

Adjudication of environmental disputes does not stand in a unique position, separate from the adjudication of other disputes. The art of judging environmental disputes involves the same technique and logic as judging other disputes. The role of the judge is, simply, to uphold and apply the law. This task involves the steps of finding, interpreting and applying the law. These are, in each of these steps, choices of choice. But the choices are constrained. Judges must adjudicate in accordance with principle and reason, technique and logic, to ensure consistency and predictability, and public confidence, in the administration of justice.

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Abstract
This article focuses, in the first instance, on the writing of Harry T. Edwards, Emeritus Circuit Judge, United States Court of Appeal for the District of Columbia, Washington Circuit, by specifically addressing his paper entitled, "The Effects of Collegiality on Judicial Decision Making" (2003)151 Pennsylvania Law Review 1639. Thereafter the article proceeds to apply to his theory the empirical data recorded in the interviews conducted with bench members in Delhi, Pune, Bhopal, Chennai and Kolkata. This combination of theory and practice offers an account of the processes by which judges reach their conclusions through a process that Edwards describes as "collegiality." This article deals with the issues that contribute towards the composite of collegiality: leadership, the bench (composition and team work practices), dissent, precedent and inter personal communication.

Introduction
Justice Oliver Wendell Holmes wrote his understanding of "the law" was simply "the philosophy of what the courts will do in fact."[1] It was the American Realist who promoted the principle that the courts' decisions constitute the law. Whilst outcomes may constitute the law, what is less well known is the process by which these decisions are reached. The secrecy of judicial decision making is shrouded in mystery. The concomitance of confidentiality and legal ethics preclude the possibility of academics listening to the judicial deliberations that lead to judgments. What happens behind those closed doors? Do the judges argue, shout at or rage at or do they remain silent in the face of a senior or determined colleague? Is conviviality the order of the day over sweetened tea and biscuits? Are political positions silently advanced to underpin a legal argument and how important is ideology in the decision making process? It is consensus reached by a process of attrition, time constraints, simple exhaustion, personal domination or gentle discussion and debate amongst a group of equals who carefully review and collectively consider the relevant facts and law? Historically, judges have been very reluctant or unwilling to discuss such issues with academics or indeed anyone. Pandora's judicial Box has remained firmly shut.

More recently, senior judges in UK have been willing to talk, lecture and even write about their professional lives and discuss their judicial decision making with academics. Indian judges have been similarly reluctant to engage in open discussions about their judicial decision making. However, in 2013 I contacted the Honourable Mr. Justice Swatantar Kumar, Chairperson National Green Tribunal for permission to interview him and also approach fellow bench members of the National Green Tribunal (NGT). He graciously agreed to support my research and provided a letter of support regarding a research application I subsequently made to the British Academy, UK.

At the beginning of 2014 I was informed that I was a successful applicant for a British Academy Research Grant. This allowed me to travel to India and conduct nationwide research on the NGT. I spent July and August 2014 visiting the five benches where I interviewed the Chairperson and Bench Members.\footnote{Registrar General and the Registrars of zonal benches, advocates and litigants.}
Collegiality

Edwards is clear that ‘collegiality’ reflects best practice that results in good appellate judgments. He bases his conclusion on his bench experiences over a period of many years. Collegiality results in a ‘process’ that creates conditions that ultimately produce a principled agreement. He does not accept that collegiality is founded simply upon formalism, hypocrisy or conformity. Instead, it is a matter of common consent to get the law right. To quote, ‘collegiality plays an important role in mitigating the role of partisan politics and personal ideology by allowing judges of different perspectives and philosophies to communicate with, listen to, and ultimately influence one another in a constructive and law-abiding way."

This is not to deny that individuals have personal, social or political positions that might influence their decisions but rather the overriding process of collegiality helps ensure that decisions are not pre-ordained as a consequence of these extraneous relationships, thoughts and influences. This process is not unidirectional. It is a sophisticated combination of rules, customs, routines, legal obligations, leadership skills, mutual trust, personal confidence and the shared belief in common goals. Together, they create the process of collegiality.

The elements of collegiality are as follows:

Leadership

Successful companies reflect the decisions of informed individuals, organizations similarly benefit from the guidance of able leaders as do courts from strong leadership. Professor David Danielski applied 'small group' analysis to the decision making process in the US Supreme Court. He identified two roles associated with a leader seeking effective decision making. The first is 'task leader' and the second is 'social leadership.' Tasking requires the 'exercise of effective leadership concerning decisional outcomes. Leadership is affected by personality, esteem within the court, intelligence, technical competence and persuasive ability. On the other hand, social leadership looks to the emotional needs of the court and tend to be warm, receptive, responsive and respectful. He argued that it is possible for the 'leader' to undertake both roles successfully.

I now apply this analysis to the NTO and in particular to the role of the Chairman. Justice Swatanter Kumar, Justice Swatanter Kumar told me that he saw himself as the leader of a team that he was involved in selecting. He sought experience, character and awareness that would make them effective judges of environmental matters throughout India. Justice Swatanter Kumar stated, ‘I am really very happy with the experts. All the experts have been picked up by me. I was a judge of the Supreme Court and the Chairman of the Selection Committee. So I have made some contribution in this regard. I find these people extremely good in their field.’

Justice Swatanter Kumar’s standing is described by the members of the bench and the bar in the following terms: “He is a great judge. He is well known for his honesty, integrity and excellent behaviour. In his court the analysis of judges have always been even and it has been a great source of justice. He is a clear example of a judge in the court which is unaffected by the turbulent sea and approaching ship. He has been a great source of inspiration to his colleagues and members of the bar. In the quest for justice he has never wavered or swayed and has maintained an unbiased approach in delivering justice. His dedicated hard work, sincerity and unbiased attention to the matters before him are well known.”

After assuming his position at the NTO the International Union for Conservation of Nature Academy of Environmental Law reviewed his contribution in the following terms: “Since taking over chairmanship of NTO from 20th December, 2012, he has contributed tremendously in the growth of the NTO providing it requisite infrastructure and jurisdiction."

The inevitable conclusion is that the leadership qualification is not identified by both Edwards and Danielski and are abundantly present in the current Chairman.

The bench: composition and team work practice

Strong, positive collegial relationships allow and promote judicial independence of mind and discussion resulting in an independent decision making process. This independence ensures that each person’s intellectual and judicial strengths are recognized and introduced to the collective decision making process. It allows each judge to check his personal position with that of an alternative view from a possibly better informed or experienced colleague. Edwards welcomes and promotes diversity. He welcomes “differences in professional and personal background, areas of expertise... diversity among the judges make for better informed discussion.”

A unique feature of the NTO’s adjudicative process involves legally qualified judges working alongside scientific and technical experts with environmental knowledge as joint evaluators and markers of equal standing.

The principal bench has five members (two judicial and three expert) whereas the regional benches are comprised of one judicial and one expert member. This duality of legal and scientific expertise produces a coherent and effective institutional mechanism to apply complex laws and principles in a uniform and consistent manner. It reinvigorates and expands the judicial function and existing remedies by seeking to solve the basic environmental problem at source rather than being limited to the predetermined legal remedies.

The value of expert bench members to the collective decision making process is acknowledged and appreciated by the Chairman and the judicial members. Justice Swatanter Kumar opined, “the expert members come with wide knowledge. Professors, technocrats and administrators with wide environmental knowledge are a part of the NTO decision making process. Their contribution is very substantial.” Justice P Jeevananthan stated, “the real solution comes from the expert members. The input of expert members is much more valuable than the joint evaluation.” Justice U Dholakia commented, “this is the speciality of the Tribunal which has not only judicial talent but also expert talent. This is a possibility of the Tribunal. It is a balanced way of doing work.”

Me R C Trivedi, an expert member stated, “in expert members we have equal standing with the judicial members and we are part of the judge.”

1Judge Edwards served as Chief Judge of the D.C. Circuit from October 1991 until July 2001 and is a Professor of Law at the New York University School of Law, and a Fellow at the Federalist Society, a national non-profit, educational group.
2See Edwards address, 8 Nov 2011
3As Edwards observed, 8 Nov 2011
5David Danielski, "Clarifying and Reassessing in the Supreme Court" 61 Journal of Conflict Resolution 71 at 78 (1967); Sawyer, Larry A. Street, Judges as Attributed Hierarchies" 43 Wn. U. Law Rev. 135 (2005), http://scholarship.wnulaw.edu/law_facpub/12
6www.talkshowtime.com/justices/.../Swatanter Kumar.pdf accessed 19.5.2014. This forward speech was delivered in the Jai Sahab Swatanter Kumar's address to the Indian High Court on the occasion of his 70th Birthday.
7http://articles.timesofindia.indiatimes.com/2012/5/11/judiciary/articles/20120511_judiciary_3_3847636.html. See also, infra, comments for Chairman and other Judges who were part to the same.
8The Beef Composition and Trade Practice and other Personal Communications.
9See Edwards address, 8 Nov 2011
10Section 5(2) of the NTO Act 1992 provides that the judicial members will have equal legal expertise and experience and the expert members will include at least one expert from the fields of law, science, technology or law.
Deliberation is one of the most valued components of collegiality. The rules that structure this activity bring the judges together as a group. Collegiality has a function in institutionalizing judges into a shared understanding and action, particularly if the size of the bench is small. Chief Judge James Harvie Wilkinson of the Fourth Circuit argued that “one engages in more fruitful interactions with colleagues whom one sees twice a day as with judges who are simply listed in the book.” Smaller courts can and may encourage more substantial investments in relationships and in the reciprocal respect for differing views that lie at the heart of what appellate justice is about.”

For example, Edwards cites that the senior judge may preside over or coordinate discussions between the judges. A draft opinion might be written, circulated in advance and then considered by the bench members. This is an example of a structure that is established by agreement and then applied. The procedures and standards allow for a routine and understanding of how to work together. Thereafter, new members of the bench are introduced to an established procedure based on collaboration and collegiality.

The NGT is collegial as illustrated by its deliberative process of drafting a judgment. Conformity and cohesion is reflected in the team work and collective practice exercised throughout the five benches. The lead provided by Justice Swantan Kumar to the team work is based on a collaborative approach. According to the Chairperson, what we do is to have a pre-hearing conference and a post-hearing conference. Normally even while passing a small order, I like to interact with the judicial and expert members to ensure that there is complete coherency and unanimity because sometimes what you think may be wrong and what the other person may suggest is right. I give full margins to that possibility. Secondly, whatever authors the judgment, we have a pre-working session where we discuss the facts and I and other judicial members state what is the law and the legal position. Then the experts tell us the technical aspects. I ask the technical members to give me a short note. Then we consider it. Then I or another judicial officer or expert member prepares a draft. Next we deliberate the draft. Then we get in writing an agreement by each expert and judicial member. Ultimately, the judgment is finalised. It is a process so far as we are handling well. I hope that things will go ever smoother with time.”

The three experts, Mr. R.C. Trivedi, Mr D K Agarwal and Mr. G K Pandey sitting on the Principal Bench in Delhi find this process of drafting a judgment extremely valuable. All agreed that “we always have a discussion before we go to the court on the important issues in the morning at 9.30 am in the Conference Room. We sit together and talk. This is one platform. But also for writing every judgment a technical note is required by the judicial member who is writing the judgment. Many a time the entire technical note is reproduced and forms part of the judgment. We have never had a dispute as we always discuss and have an agreement before pronouncing the judgment. The final judgement is always written in a draft form circulated to all the members who will sign the judgement. Every member reads it and has a right to correct or delete or modify even if it is a major part of the judgement. This is allowed at this point. Finally, the judgement is signed and pronounced. This is a practice followed in NGT and is a procedural requirement as stated by our Chairperson. Though there are no written rules it is a practice we follow. The Chairperson always says that you have the full right to take an addition or deletion or suggestion. Everything is allowed.”

The Kolkata Bench follows a similar procedure. According to Justice P Jadhavali and Prof (Dr) P C Miro “before the matter is taken up, the papers are circulated to us. Individually we go through the papers. Both of us come prepared. We sit in the court with an open mind. We hear the parties. In a case where technical issues are raised, we discuss the matter in the court. After the hearing is concluded we sit together in the chamber and discuss the way the judgment is to be delivered and environmental material given by the expert members. Based on that the judicial member drafts a judgment and that is circulated to the expert member. Sometimes the judicial member also invites the expert member to draft the judgment. Additions, deletions and modifications or suggestions are permissible in the draft judgment. Then the final judgement is formulated and delivered.”

Team work spirit is acknowledged by the Bhopal Bench. For Justice U D Sabri and Mr. P S Rao, “before the matter is heard, we do not engage ourselves in any type of discussion. We hear the matter.

Before hearing the matter, we go through the record and prepare ourselves before hearing. After the matter is heard, we enter into discussion. In the NGT, we are helped by the advocates. There is no original trial but being a Tribunal, we have to hsten the process and not necessarily decide any case where we can call witnesses. First assistance is by way of advocates. Many advocates are not familiar with environmental issues. There may be gaps. These gaps are recognized and accommodated by the Expert Member. Merely reading an affidavit would not make sense. The expert member provides the technical knowledge. A technical note is submitted by the expert member. Thus, with this assistance, we come to a conclusion and then we discuss and come to our answer so that we can arrive at a decision. This is reflected in the judgement. The judgements are drafted and circulated. As we understand each other, it becomes easier to reach a conclusion and dispose of the case.

At the Chennai Bench, presided by Justice M. Chokalingam and Professor R. Nagendra, concensus and clarity lead to an amalgam of views that seek to deliver environmental justice. According to the bench “most of the cases involve a technical point of view and technical expertise is required. Prior to the time of decision making both the judicial and technical members must necessarily have an in-depth discussion on the matter. A clear mind and consensus is needed for a judgment. It must not only unpalatable but also stand and answer the question. We must work before sitting a judgment. A clear discussion, consensus and the frame of mind being a good judgment. The judgment at no point of time should reflect on two different worlds that are placed juxtaposed on a vertical or a horizontal continuum. It should be an amalgamation of the whole thing; a blend of everything. Before the admission stage both of us go through the papers. We discuss the matter and after hearing counsel we decide whether it is a fit case for admission or not. Once admitted, we hear the arguments. We have a list of questions raised from technical and legal points for which we seek answers from the advocates. We note the answers given by the advocates. After the arguments are over and before the judgment is discussed, we take a decision whether it is to be granted or not. We have a thorough discussion with a free mind, not committed to anything. As our minds are open, it helps us in deciding the matter.

We always have a discussion. We have followed this procedure and want to continue with it. We never debate. Our thoughts are always clear as to where we are. Then we make a nice decision and brew the judgment.”

The blending of opinions and expertise is the essence of drafting a good judgment according to Justice V K Ragunath and Dr A Pande of the Pune Bench. “Our thinking is not to a logical end and it is only possible with the blend of judicial and technical minds. We are in number. In Pune we meet regularly around the evening. Communication is an issue. Formally as well as informally we discuss the issues before going to the hearing as well as before settling any judgement or theme of a judgment. We discuss and all the time we are on the same track. The technical and judicial inputs are given by the respective members. This happens because there is a regular communication. The thought process is the same. A common blend amounts to qualitative judgment and delivers justice from such a combination.”
Dissent

Edwards claims that interpersonal attrition and fixed positions are likely to produce ideological differences, intransigence and thereafter dissent. Judgments in such cases are clear statements of the law rather than a collection of differing opinions.

With this point in mind it is important to note that the NGT has yet to carry a dissenting judgment. For instance, the judgment of the southern bench, Chennai, stated: “As we are of the same mind, frequency and are on the same track there is no reason for dissent. We go through the papers, in bulk, have discussions and thereafter we reach agreement. We have no occasion to dissent from one another. We hope that it will continue. We do not know the meaning of dissent in this context.

The same procedural view was expressed by the Kolkata bench: “We arrive at a conclusion. As per the NGT Act 2010 every member gives his opinion. There has been no occasion where there is dissent. However, if there is a disagreement we discuss with the other members to solve the matter. Dissent may happen in course of time but at present there is consensus.”

Bhopal bench members reported: “It is not that we don’t agree. We have to arrive at a conclusion. Therefore, we consult and arrive at a conclusion. Till this time we have not come across dissent. We are making law. We cannot say that everybody is 100% correct. Our judgments are going to be tested by the Supreme Court. So ultimately, the best thing will come out. In some cases, we may not agree on some points, but ultimately in the interest of environment, we come to an agreement.”

Precedent

For Edwards the importance of precedent is associated with collegiality.30 Collegiality functions as a catch phrase that captures these norms of judging. Justice Cardozo said “precedents fix the point of departure from which the labor of the judge begins.” In Allied General Hospital v National Labour Relations Board31 the United States Court of Appeals for the Third Circuit stated “a judicial precedent attaches a specific legal consequence to a detailed set of facts in an adjudged case or judicial decision, which is then considered as furnishing the rule for the determination of a subsequent case involving identical or similar material facts and arising in the same court or a lower court in the judicial hierarchy.”

The NGT applies precedent in deciding cases. In Nirma Limited v Ministry of Environment and Forest, Justice Swarup Kumar, Chairman stated “from the above discussion it is clear that the doctrine of precedent is strictly followed. The already decided cases such as who is an aggrieved party, who can prefer an appeal, who can give an application under the Act, what is the decision of principal bench and the decisions of other regional benches is definitely taken into account. We have the benefit of our NGT journal in terms of the view taken by our brother judge on a particular bench.”

The Pune bench opined the judgments of the Supreme Court of India are binding. The judgments of the NGT benches including the principal bench are judgments of the coordinate bench and are to be respected. One has to go by them unless there are strong reasons to give it a go by. In such a case reference of the judgment is to be given and the principal bench has to be informed. Reasons for such a dissent need to be given. This is our view.”

For the Bhopal bench “doctrine of precedent plays an important role in exercising their responsibility on the bench.”

The Kolkata bench observed “we do not ignore the judgments of the other benches. We definitely refer the judgment. If we do not agree, we give our own view and supply reasons for not following the already decided cases. All benches are of the same value.”

Precedent only applies to Supreme Court judgments. One bench is not binding on the other benches. There is nothing like the principal bench superior or zonal benches inferior. Appeal is made to the Supreme Court against an order of the benches.”

Inter-personal communication

The experience of shared custom, procedures, rules, shared court; working and dining room along with regular formal meetings conducted either through personal contact or through video conferencing and common bench hearings produces, according to Edwards, a cross fertilization effect between collegiality and internal rules.

The cross fertilization effect has been good for collegial relations and collaboration among the judges of the NGT. Formal full court meetings on a regular basis is one way of maintaining collegiality.

The Chairperson explained “we hold full court meetings. We call all members together in Delhi or some other place. We do not discuss the administrative matters but also judicial matters with respect to improving the justice delivery system.”

Moving into the world of technology through video conferencing and the NGT’s website connects the benches in real time despite the significant geographical distances. Justice Swarup Kumar introduced video conferencing to the NGT. For the Chairperson, “even if there is a small problem. I put them on video conferencing and have all the members deliberate on it and thereafter take the decision. This leads to a uniform and consistent approach.” The zonal benches appreciate the video conferencing facility. It not only provides a confidential, secure connection but also offers instant communication across the expanse of India thereby encouraging discussion between the benches.

Informal discussions and consultations through exchange of emails and reference to NGT’s websites32 provide collegial environment. This is helpful in terms of sharing new information or broadening the knowledge base with respect to the environmental developments taking place nationally and internationally. Regularly connected helps promote objectivity, as Edwards, quoting Sharon Teare, describes “in empleado in physical sciences... [Objectivity is tacitly recognized as impossible], but error can be estimated and minimized. The means is peer review, or collective

30See Edwards, above.
31Id at 1684
32Benjamins N Cardozo, "The Nature of the Judicial Process" (Yale University Press 1964) 20
33Id at 1684 (1970)
34Id at 1680-1681
35Judgment dated 10 September 2010, page 5
sustenances, the final degree of order comes from human institutions. This applies equally to the disciplines of environmental studies, environmental management and environmental law.

Conclusion

The nature of judge-craft is that ultimately the court is constrained to arrive at a decision and thereby establish the law. Over time judges become more confident in their roles and in their colleagues. They may become more flexible, open to persuasion and less entrenched. They may also become more ambitious in their thinking and thereby in their decisions. Initially, a new court such as the NOT may commence with narrow statutory interpretations and strict rule application. However, over time such thinking might be joined by purposive interpretations of statutes, policy-based decisions and even policy development suggestions or requirements. Edwards' assessment is that an experienced court, led by a strong leader, with a small, diverse bench that has worked together over a period of time, enjoys a clear understanding of purpose and of the internal court rules will through the process of collegiality find common ground and arrive at better and better decisions. Such an analysis appears to this author to identify the NOT as "collegial" in terms of its establishment, strong leadership, small, diverse bench membership, its decision-making processes and ultimately its decisions which reflect commitment to the environment and sustainable development and also to the larger interests of the people.

Sustainable Development In A State Of Unconstitutional Economics

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NOT: Judge Craft, Decision Making and Collegiality
Dr. General Naveed
Abstract

State lawlessness has put India on a path of unconstitutional economic development. The Constitution of India mandates that primary education, public health, nutrition and an adequate means of livelihood shall be principles "fundamental in the governance of the country." Under the international economic model marking a country as developed on the basis of the percentage of its population in agriculture, industry or services, official economists of India's Planning Commission have successfully pushed through successive Central Governments, the pushing out of the majority of India's village population from agriculture to city slums without any information, consent, law or executive order. Even though the official economists knew this consequence of driving millions into illegality to occupy any urban land, yet no planning/resource allocation was done for this massive migration. This debate of the constitutional principles, leaving no hope for sustainable development based on official quantification, research and advertising of the Indian way of life of living with and not against nature. The officially documented corruption of the political class explains why sustainable development is never an issue in Parliament or in the elections. Official legal aid for the poor has still to wake up to this unconstitutional treatment of India's villages and the fundamental rights issues of sustainable development that it raises. Consequently the 1995 Supreme Court's binding judgment on how any ruling political party is to allot natural resources for ensuring sustainable development, remains unimplemented. The Supreme Court in 1999 confirmed the sustainable development and precautionary principles but its subsequent judgments in 2000 and 2006 doubted these. With the Supreme Court refusing to find time for the Ganges and the Taj Mahal pollution cases there is little hope of revival of even the legal debate on sustainable development.

Introduction

The context of sustainable development in India is the political economy created by the Indian State through its rule of law institutions under the Constitution of India. The Constitution itself declares those Directive Principles to be "fundamental in the governance of the country." The Constitution itself mandates the Directive Principles to be "fundamental in the governance of the country." The result has been an unconstitutional national economy functioning on the basis of a chitfund, where the state is not a guarantor. The courts have frequently negated the legal ground reality of the law without any rule in its operation, either through various colours and shades of bribery or through violence. Can sustainable development exist in such a situation?

Unconstitutional economies

The hallmark of the lawless State is the unconstitutional economies on which its economic development rests. The lawless or rule of law State under the Constitution of India is one whose fundamental principle of governance is the Directive Principle to strive to secure and protect a social order for all Indians in which justice, social, economic and political shall improve all the institutions of national life. Hence the Union and State Governments or all ruling politicians, the administrative officers and the police under the ruling politicians, the Parliament or legislative assembly to which they have been elected and the judiciary are constitutionally bound under Art. 37 of the Constitution to strive only for that kind of economic development which will produce a social order in which justice social economic and political shall improve all the institutions of national life. The essence of achieving this revolutionary goal are the Fundamental Rights of the people of India in the Constitution as also the Fundamental Duties which according to the binding judgment of the Supreme Court create rights in the people.

Keywords: Ganges, Lawlessness, Taj Mahal, Unconstitutional
Planning commission

The Indian State has been created by the Government of India's Planning Commission1 pursuing economic development minus this mandatory requirement of social justice as Article 37 as the beginning point and as an integral part of economic planning. This mandatory constitutional obligation required the Planning Commission to make a separate Five Year Plan for the economic development of the Indian social justice implications of each segment of the plan. It also required the Union Government to state the social justice implications of each segment of its annual financial statement (Budget), initially quantifying its proposed expenditure outlays and revenue raising proposals, before Parliament, as correlated to the Five Year Plan. In short, the Constitution mandated social justice for all Indians beginning with the expected social justice deliverables of each segment of the Plan correlated to the annual budget and ending with the social justice impact or annual output of official economic planning. The Directive Principles mandated an economic development based on such planning and the raising and spending of money for this purpose through Consolidated Fund of India under Art. 265 and Appropriation Bills under Art. 114 of COII.

This sole and mandatory constitutional method has never been adopted by the Indian State since independence. The Indian State through its Planning Commission and Annual Budget has kept economic development and social order in separate compartments instead of one integral unit which required it to think what is a just social, economic and political order required and then tailor economic development policy accordingly. Instead, the mandatory constitutional principle of Article 37 has been turned on its head by executing an economic development policy and dealing with its adverse social consequences as and when they become politically viable or internationally embarrassing. Accordingly, the Indian State's economic development policy, proposals, planning and funding rest on unconstitutional economies by taking social justice out of economic development to render such development inherently unsustainable for all Indians.

This duality continued the pre-Constitutional British rule culture of the governing culture, language and law having nothing to do with the Indians as subjects and was reinforced by the constitutional continuation of existing British laws, British power and privileges for the governing class, the British cabinet system run through the British style administrative structure, British police and armed forces and British court systems without any accountability, meant for subjects and not for citizens. Hence national governance and economic planning system in independent India had nothing to do with the political system of elections in independent India based on the communal and the local in which people demanded economic goods to end their suffering, as part of their share of justice social, economic and political against their participation through the vote, without anyone informing them about the Directive Principles. Law and legality binding the governments to reorganize governance for decent delivery of development with justice is never an issue in the elections. So politicians become visible manufacturers of social justice in what they give, law or no law, and the ease of governance system becomes a manufacturer of formal law, subject in actual implementation to the same ruling politician's culture of personal patronage.

This duality by taking the social - justice for all - component out of justice, economic and political or out of political controlled economic development sharply manifested itself in the Sixth Five Year Plan. The Congress government under Prime Minister Mrs Indira Gandhi, on coming into power in 1980, promptly dropped the already running Five Year Plan (1978-1983) of the previous Janata Government and put in its own Sixth Plan (1980-1985). The anti poverty political plank of the new Government manifested itself in schematic distortion from the weak process of the new Ninth Five Year Plan. The Directive Principle of Article 38 remained ignored in terms of an effort to put the planning process on a constitutional basis by constituting the entire Plan and assuring it from the only permissible legality of justice social, economic and political informing "all the institutions of national life". Such effort as per Article 37 was "fundamental in the governance of the country", especially when economic planning governance was controlled by ruling politicians and their administration and not by any law enacted by Parliament. Continuing this logic, the Union Government's industrial policy resolution of July 24, 1991, which replaced the earlier one of 1950 and 1948, made no reference to Articles 37 and 38 of COII. This unconstitutional economies continued. The United Progressive Alliance (UPA) in May 2004 brought in the National Common Minimum Programme keeping mainstream agriculture, industry and services sectors planning and investment free of Art. 31 and 37. Hence infrastructure, foreign Direct Investment and Disinvestment in public sector undertakings had no Art. 37 terms. This pattern continues for the Twelfth Five Year Plan, 2012-2017.2

The Annual Economic Survey 20133 again called for "environment sustainability", as does the Twelfth Five Year Plan, but not of sustainable development for a just social order based on Articles 29 and 37 of the COII. This inability of the Indian State to forsake its own Constitution for its own people carried it the antithesis of the "soft State".4

Unconstitutional economies & Article 29

The first consequence of unconstitutional economies in Indian official economic planning has been to completely ignore the vast and diverse culture of India or its ways of life.5 This has deprived Indians of their fundamental right to this culture under Art. 29 of COII. This composite culture constitutes the way of life of India evolved over thousands of years by taking into account: local climate, soil and water to create local livelihoods and thereby the shortest demand and supply chains.

An example of this is the local tree twig (neem or other) used by millions of Indians every morning for cleaning teeth and for oral hygiene. Unlike the chemical toothpaste and non-biodegradable toothbrush, the twig is a non-polluting and least water using method that provides some livelihood to those who collect, clean, make pieces and sell this twig in the local market at a price which no toothpaste or brush can match.

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This example occurs in local materials-based house construction by local methods and local architecture, local foods for their natural nutritional and protective against disease values, washing of clothes by local plant-based materials, customization of production of cloth, leather, shoes, clothes, using water for manual abrasion instead of paper, vegetable dyes instead of chemical, indigenous methods of keeping houses cool in extreme tropical temperatures indigenous methods of water storage and conservation, of dispute settlement and so on.

The Planning Commission or the Union Ministry of Culture have never examined under Art. 29 of COI, the quantification, recording and investigation of the ecological costs health benefits of this varied culture of living with nature to make this national funding and revenue raising resource for ensuring a just socio-economic and political national order based on the composite national culture of consumption and demand in India. As this Act 29 enacts Art. 38 approach of the COI was never quantified by the Planning Commission, there was no possibility of Art. 38 becoming the fundamental principle of governance of Indian economic policy. This is clearly shown by the various growth models used from the First Five Year Plan onwards.

The First Five Year Plan, 1951-56, had declared that "the future of land ownership and cultivation constitutes perhaps the most fundamental issue in national development. To a large extent, the pattern of economic and social organization will depend upon the manner in which the land problem is resolved and that sooner or later the principles and objectives of policy for land cannot but influence policy in other sectors as well." The way of life and social order revolve around land. But since the Planning Commission simply ignored Article 29 and 38, culture and the social order as the basis of social, political and economic justice, the land reforms, after some initial success at nemadari abolition, ended in failure.

Consequently the prevailing official Indian science establishment of agriculture and industry was never turned to apply research and scientific methodologies to improve the living cultural heritage of India with its livelihoods and felt economic and ecological benefits. In short, the modern scientific knowledge of that minority segment of the population, called the highly qualified Indian, was used to extravagantly chemicalize and plastinize Indian consumption, demand and life style by calling it modernization. Research, the application of science and advertising was turned only towards this modernization and completely away from the Indian way of life and its products. At the most such products were given a separate slot by the State under the Khadi & Village Industries Act to create long supply chains from villages to urban concentrations. The mandatory Directive Principle of governance is that the State becomes a social order for all of social, economic and political justice — thus stands unconstitutionally bypassed, no such social order is possible which ignores the cultural heritage of the evolved social organization of the Indian people.

The cultural base of sustainable development for all Indians exists but remains unrecognized by the State. The State recognizes a portion of it by law or by funding a scheme the integrity of socio-economic planning is broken as only some part of the social is recognized as a stand alone item. In the absence of a social policy that drives economic policy, as required by the directive principles, the Indian state is only an economy driven by the demonstration effect and the demand for western style of living by about 200 million urban Indians out of 1.2 billion, regardless of the differences of climate, numbers and ways of life, as compared to the advanced countries.

Wiping out Art. 29 & 38

Having set in motion planning by ignoring Art. 29 and 38, the Planning Commission effectively wiped out these two Articles, by the sub silentio, visible adoption of the international model of development. This model treats a country as a developed economy or otherwise on the basis of the percentage of a country's population in the primary, secondary and tertiary sectors. Hence planned development now had to push out people from the agricultural sector to manufacturing or the services sector. This was to be done regardless of the effect on the social order, since that constitutional factor of Art. 38 read with the Directive Principles of the Indian Constitution under Art. 29 had already been ignored by the Planning Commission.

The absence of recognition and support by the State to traditional livelihoods and products ensured the disappearance of these livelihoods in rural India. The failure of the implementation of land reform laws ensured that rural families could not continue to live in rural areas seen for their meager survival. Landless unemployed numbers rose. Hence in violation of the mandatory Directive Principle in Article 38(2) the State increased inequalities of income, status, facilities and opportunities. Consequently there has been probably one of the largest internal migrations in history, in the Indian State.

Rural unemployed have left back and home for the cities to earn a livelihood denied to them by the State and not applying the instruments of modernization in situ by recognizing the rural cultural heritage or way of life. This compelled migration has been affected by the Indian State without any information to the millions affected, without their consent and without any law or executive order. The result has been huge encroachments of urban land by those so compelled to migrate and the development of massive slums as silt which they could never have afforded in urban areas. Their illegal existence is ensured because of the vote bank they constitute for the professional political class. While their way of life or cultural heritage remained unquantified and therefore unrecognized by the economics of the Indian State, now as slum dwellers they became quantified and recognized initially for slum demolition and clearance and then for slum improvement. This economic quantification meshed with the vote quantification as the basis of the democratic Indian State selecting its political rulers by majority vote.

Urban India became a divided place between unplanned slums with sub-human existence and planned areas with Western style amenities. Both areas laid claim to the same public resources to result in a breakdown of the municipal rule of law. Both areas are united by the slums supplying menial labour and technicians to the other areas. The question now raised by the Indian State is no longer of sustainable development but as to who sustains whom under what conditions of living — a new social order of illegal slums or of legal cities. Once again under the COI, the issue is whether the Indian state will follow the constitutional mandate of social policy as given in the directive principles to derive its economic policy or will it continue the other way around. The Planning Commission in adopting implicitly this international standard of development must have had from international experience that this would be the consequence of their economic policy. Yet it did not plan for the residence of those compelled migrants for their shelter, livelihood and health. Slumming and sustainable development could not coexist. The result is a breakdown of urban legality as a corresponding point to rural illegality sponsored by the State.
Consequence of effacing Art. 29 & 38

Having created these problems by violating the directive principles, the retention of legality of the legal system has become highly problematic. The autonomy directive principle of free and compulsory primary education for all children in India till the age of fourteen was not implemented. The Supreme Court while dealing with a case of collect technical education17 addressed this issue of illiterate children in India despite the Directive Principle. Without any facts before it of the scale of the problem and the finance required for it and without any analysis of the economic development model that had led to this state of national illiteracy, the Supreme Court declared that free primary education was a fundamental right.

This conversion of the Directive Principle for free primary education into a Fundamental Right meant that India's 0-14 children and their parents could now move the court for enforcement of this Directive Principle, since the Constitution declares that the Directive Principles are not enforceable in a court of law but the Fundamental Rights can be enforced. This further means that against State violation of this fundamental right the victim of the violation, children and their parents, could claim compensation from the State. While declaring primary education to be a fundamental right without such education the fundamental right to life becomes meaningless, the Supreme Court shut its eyes to the question as to how an admittedly illiterate and poverty ridden population will enforce this declaration made by it.

The National Legal Aid Scheme18 administered by the Supreme Court itself, under the Legal Services Authority Act, 1987, was not directed by the Supreme Court to ensure the enforcement of the newly created fundamental right by the Supreme Court. When petitions were filed before it against the non-compliance with its order on primary education as a fundamental right, the petitions were orally held to be filed from high court to high court throughout India and seek orders for implementation of the Supreme Court's order. Their petitions were dismissed.

As the official language of the Supreme Court, even sixty years after independence, continues to be only English,19 the order making primary education a fundamental right against the Indian State was in English. The Supreme Court while recognizing the illiteracy and the need for a literate population as the base of democracy, did not direct the country wide machinery of public to translate its order in various languages and communicate the same to rural India.

Truly illiterate India—in the vernacular, in English and in elementary law of fundamental rights under the Constitution—was denied by the Supreme Court of the knowledge of an order that could have enabled its citizens to understand the development process, which reduced them to subjects from the constitutionally guaranteed status of citizens and thereby to claim their right to sustainable development based on their culture, their way of life, and enriched by its application in the villages of the State funded modernizing science and technology.

Twin consequences

Having excluded citizens effectively and without their knowledge from the economic development process initiated through the Five Year Plans, two consequences arose. Firstly, fraud and corruption were conducted against the State. To counter the violence, the Five Year Plans now started speaking in inclusible growth and several schemes by Union or Central Government ruling politicians were launched for enforcement through State Governments. The fundamental problem of unconstitutional economic development creating en masse citizens who cannot sustain themselves and who thereby automatically ensure unsustainable development, was still not recognized. The Indian planning State run by politicians did not recognize the fundamental right of the citizens to be informed of the planning or even of their legal entitlements under the concept of inclusive development introduced to keep going the unconstitutional economic development process. Inclusive growth was to be achieved for citizens kept systematically uninformed and without the existing countrywide governmental network of publicity and legal aid being turned into ensuring receipt by them of what they legally had, but did not know about having it. The State seemed to be operating on the principle that citizens cannot know what they do not know they have. Hence the prerespects of sustainable development, even within the unconstitutional economic development framework enforced for over forty years since independence from the British, were ignored by the officials operating process. Sustainable development was expected to happen through a citizenry to be kept uninformed and triply illiterate. Short-sight sustainable economic development was to be achieved without the rule of law—the fundamental rights of the citizens and the mandatory principles of constitutional governance in the Directive Principles of the Constitution.

When such inclusible growth and official planning of environmental sustainability with business models were forecast to succumb to the ruling politicians in power it ended with predictable results. The politicians first altered the governance rule of free education for all children from 0-1420 which the Supreme Court had now declared as a fundamental right. The Constitution was amended, with effect from April 1, 2010, by Parliament to grant the fundamental right only to children from 6-14 and not from 0-14. The mass of poverty ridden, malnourished children after being alienated from 0-14 would suddenly be able to join school from the age of six. Those below six were pushed into the Constitution, under the Fundamental Duties of the parents to provide opportunities for education for their children.21 The State washed its hands from its earlier duty, converted into a fundamental right by the Supreme Court, of children from 0-6. This ensured the basis for the 'without information without consent' mode of unconstitutional economic development, thereby continuing with unsustainable citizens and unsustainable development. Udaipur India now had another duty—a minor legal right with children in schools of quality education and the majority illegal right with children in schools having shoddy or poor education.

The suffering this entails for the citizens remains unquantified and in economics that which is unquantified does not exist. Economic planning of the Planning Commission can keep its eye shut to this suffering.

Election legality viol illegality

But the other limb of the rule of law, representative democracy based on voting by each individual citizen, must be maintained to give legitimacy to the "democratic republic" concept of the Constitution. While unquantified suffering is conceptually foreign by the economists in the Planning Commission, the Reserve Bank of India and the Union Finance Ministry, the sufferers as voters are compellingly recognized by the ruling politicians. The suffering and deprivation resulting from the unconstitutional economic development policy is now addressed by mass schemes of guaranteed minimums of food, employment, women and child care, purifying holy rites of the toxic waste of such development and the promise of modern urban facilities in rural areas on the continuing basis
of no right to be informed and no right to legal help from the State to ensure the receipt of all this by those for whom it is legally meant.

Ruling politicians and cabinets consisting of smart internationally educated economists, lawyers and business administrators as Ministers, do not bother to consult the voter in their election campaign to seek alternative constitutional development, to tell them what unconstitutional has done to them, to mention them towards demanding the right to be informed and merely the right of information. Politics in India is not the logic of ideas but the logic of getting votes somehow through competitive shamming, running down and unaccounted funding. Unqualified suffering at the hands of official economists and quantified voting attracting welfare schemes, through politicians seeking votes from the suffrages of economic planning, plans the political economy of Bharat.

Efficient legality: corruption

The logical result of this is another blow to sustainable development—large scale corruption. Almost every single scheme to collect the votes of the voters kept uninformative and without legal help to secure their entitlement under the schemes, ends up in public money disappearing in the succession of these schemes by the ruling politicians and their civil servants, even though India has one of the most edifying and skilled administrative services at the all India and the State levels for delivering these schemes to Bharat. The reports of the constitutional authorities, called the Comptroller and Auditor General document the scheming away of such schemes, whether for the allocation of natural resources to private enterprise for tackling water pollution or for taking care of poverty under the National Rural Employment Guarantee Act, or of constitutionally protected categories like women, children, Scheduled castes and Scheduled tribes.

But can anything be done if the entire election system on which democracy is based, becomes corrupt. According to the publication "Urgency of Electoral Reforms" Dr. S.T. Quraishi, former Chief Election Commissioner of India, stated on April 1, 2015, during the Vajpeyi Memorial Lecture of the Media India Centre for Research & Development, Gurgaon, Haryana, that the money for political parties comes from "a nexus with black money, money of the criminals with a specific purpose wanting a return on the investment. Obviously, the day such a member of Parliament becomes a Minister, he will call his bureaucrats and say, I have spent Rs.50 crore on election and have to return this money, so please start paying me. Obviously a bureaucrat who will collect money for the minister will pocket some and that is how the nexus between the bureaucracy and the politician begins. When that happens there is no stopping corruption. Unfortunately and ironically, election has become the root cause of corruption."

The main speaker at the Memorial Lecture, Dr. Shishir C. Kaur, former Secretary General of the Lok Sabha, declared: "During recent years, the composition of our legislatures, the conduct of our legislators and Ministers and the goings on in the House of the Legislatures have been matters of disgrace for democracy. Governments have lost their credibility, legitimacy and even representational credentials. People have seen the so-called democratic governments become governments of the corrupt, by the corrupt, for the corrupt, often surviving through politics of brinkmanship, bluff and blackmail. There is a tremendous distance between the people and the politicians. He pointed out that in 2004-2006, 32% of Lok Sabha members had criminal antecedents. At the time of the 2009 elections, the number rose to 36%. The number of correpottas in the Lok Sabha which was 145 in 2004 rose to 314 in 2009.

A study conducted across a dozen major transport hubs in India, by the Centre for Media Studies, published on November 23, 2013, concluded that Rs.22,000 crore bribe is paid on roads every year by truck drivers, with 50% of it going to policemen and transport department personnel.

In the Supreme Court Justice V. Ramaswami was found guilty of corruption by the statutory inquiry committee headed by a retired judge of the Supreme Court under the Judges Inquiry Act. But nothing could be done about him as under the voting procedure in Parliament for his removal, as prescribed under the Act, the requisite majority votes on the committee's report were not cast by the MPs, as the ruling Congress had issued a whip to its MPs to abstain from the voting.

Supreme court: no time or no intervention

Does going to the Supreme Court against any of this help? The Ganges Pollution case, the Bandhua Mukti Morcha case and the Taj Mahal environmental pollution cases show that does not.

In the Ganges Pollution case the official reports of the Comptroller and Auditor General, specifying the monetary and other maladministration of the river's pollution, reports of the Industrial Toxicology Research Institute of the Union Govt about the entry of antibiotic and chemical in the Ganges waters, and other medical survey reports of the disastrous health consequences of the river's polluted waters, have been pending for years without any action by the Ganges Authority, in charge of the funds allocated for cleaning the river, was headed by the Prime Minister. The Court has not bothered to even look at the alternative legal solutions given to it in written submissions. Initially whenever the case came up it was simply pushed aside to take up the next case. Now it hardly figures even for a hearing.

The Taj Mahal case raised major issues of allowed toxic munitions waste to the citizens of Agra city wherein the Taj Mahal is located, of the arbitrary change of land use granted by the Agra Development Authority to vary the Master Plan around the Taj Mahal, which is admitted by the Agra administration to be a legitimate site of illegal constructions permitted on the banks of the Yamuna river on which the Taj Mahal is located, of the complete non compliance by the Union Government of its order on non-erration passed by the Court concerning the mountains of mud dug up by the State Government to create a fun city and food places behind the Taj Mahal. For the last several years this is simply pending with the court not giving it any time.

The court simply accepted the fait accompli of irreversibly on major issues of environmental sustainability which had been raised before it of
private development projects converting thousands of hectares of agricultural land into roads and projects under the State of Uttrakhand without the prior consent of the Union Agriculture Minister’s agricultural land use boards.

Corruption and environment were found to be major issues in the Taj Mahal case where the Supreme Court as the petitioner filed an FIR against the Chief Minister of Uttrakhand concerning the public money spent on the mismanagement of public funds. A city project led to the Taj Mahal and the contracts awarded and purely executed thereunder till the Supreme Court ordered a stop to the execution of the contracts. India’s premier investigation agency, the Central Bureau of Investigation, did the entire investigation against the Union Environment Secretary and other State officials. The CBI filed its final report against the Chief Minister under the Prevention of Corruption Act. The district court judge refused to proceed with the case according to him the CBI was required to take action on the Governor of the State for presenting the case in the Supreme Court. The CBI instead of coming to the Supreme Court, which was still monitoring the case, went to the Governor to get his sanction under the Criminal Procedure Code. The Governor refused the sanction. When the case in the CBI was brought to the attention of the Supreme Court, the Governor held that as a federal dealing with the Taj Mahal case it could not interfere in the matter, but perhaps some other branch of the Supreme Court could deal with the matter.

The man was accused of using the bonded labour in the illegal blasting and breaking of stones at Badiyal (fifteen kilometers from the Supreme Court). The case is still pending today.

State responds to violence

Some of India’s educated young concluded that the Indian State is so structured that it is unable to deliver justice to the poor, despite its laws and despite orders of courts. A Naxalite movement started from the State of West Bengal that advocated armed overthrow of the Indian State. This spread to the forest, mining and tribal areas of India, resulting in the formation of armed cadres that attacked the security forces of the Indian State. The response of the Indian State was to create a heavy deployment of special security forces and provisions for infrastructure as also Interstate Area Development which earlier had never been deployed to these areas. After having ignored Art. 29 and 38 for an economic development that would usher in a just social order, the Planning Commission now made schemes for the same purpose under the compulsion of this “internal security threat”.

Sustainable development: judicial will falters

Meanwhile the Supreme Court in State of Himachal Pradesh vs. Ganesh Wood Produce held that it is impossible to separate economic development issues from environmental issues and laid down that government before giving permission for the use of raw materials must assess the existing raw materials and then allocate the same on the basis of sustainable development and intergenerational equity. But this judgment has not been utilized in any of the subsequent cases of allocation of resources like land, mines and water. A year later the Supreme Court in Vellore Citizens Forum vs. Union of India declared that the Pollution Act and the Precautionary Principle along with sustainable development were part of Indian environmental law as clear air, water and ecology had already been declared to be a fundamental right of Indian citizens under Art. 48 of the Constitution. In M.C. Mehta vs. Union of India, the court made the Precautionary Principle more specific by stating that the principle makes it mandatory for the State Government to anticipate and prevent the causes of environmental degradation. Simultaneously the Supreme Court was lamenting in Indian Council for Enviro Legal Action vs. Union of India and in M.C. Mehta vs. Union of India that the quality of the environment constitute to deteriorate. In another NDRP Pollution Control Board vs. M.V. Nynida, the Supreme Court on the basis of Principle 15 of the Rio Conference declared that the uncertainties of science make it better to err on the side of caution and prevent environmental harm which may indeed become irreversible. The burden of proof in environmental case as to the absence of injurious effect on the environment of the actions proposed would be put on those who wanted to change the status quo. But all this was wiped out when the Supreme Court in Narsimha Raju Andolan vs. Union of India held that the sustainable development principle will apply only where the effect of an infrastructure project on the environment is known. In none of those cases did the Supreme Court recognize or tackled the root problem of unconstitutional economic development that ignores the very citizens in whose name the development is being undertaken by the State and hence the possibility of ensuring sustainable development on citizens made unsustainable by such development.

Conclusion

In the analysis above we have tried to show how the concept of sustainable development questions the constitutional morality of the Indian State in basing its economic development on unconstitutional economising that brazenly violates Articles 29 and 38 of the Constitution of India. The Indian State is now caught in a vicious circle: India’s ruling politicians, the civil service and police in United Nations and the new ruling elected politicians have ushered in unconstitutional economising as the basis of the country’s economic development, by grand executive orders and enacted laws. The consequent unjust social order of increasing inequality has brought in corruption and violence as the means of negotiating the Indian State. The morality of the population who can negotiate by corruption issues the majority that cannot find for themselves by violence. Since the executive orders and laws are not implemented as part of the absence of legality ushered in by...
unconstitutional economies, some persons turn to the Supreme Court. The Supreme Court is in serious problems concerning its appointments, transparency of its judges, its administration, and conduct of its judges. It passes glorious orders if and when it chooses to hear on a priority basis cases reflecting suffering or corruption. It does this by even claiming the right to legislate via interim guidelines till Parliament passes a law on a subject. Like the grand laws of Parliament the glorious orders of the Supreme Court are not implemented. Nothing effective can now be done through the constitutional institutions of governance since the Constitution of India gives powers privileges and immunities to those manning these institutions without any provision to hold them accountable for the constitutional obligations in their own jurisdiction. Hence sustainable development interrogates the constitutionalism of the Indian State in terms of the fundamental principle of constitutional governance of having an economic development that ensures a social order of social, economic and political justice for all Indians.

Critical Review Of Environment Impact Assessment Regulation In India

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Abstract

For sustainable development, it is absolutely necessary to have effective environmental policy design with in-built control mechanisms such as Environmental Impact Assessment (EIA), to minimize the hazardous impacts of the developmental activities on the environment. Keeping this in mind, the Government of India, made EIA mandatory in 1994 and subsequently amended and elaborated its scope in 2006. However, there are large deficiencies in the procedures resulting in weak assessment, improper decision, and poor implementation. A major weakness of EIA is the general lack of follow-up monitoring, which results in EIA being ineffective and futile. The EIA are generally carried out on individual projects, their cumulative impacts are hardly assessed. Impact of agriculture on environment is very large, is not in view of EIA. EIA is carried out by the project proponent or a consultant hired by him whose primary interest is to procure clearance for the project proposed and thus chances of EIA being biased is high. There are large number of procedural deficiencies pointed out in the present practice of EIA in the paper.

Introduction

Environmental Impact Assessment (EIA) is an exercise to be carried out before any project or major activity is undertaken to ensure that it will not in any way harm the environment on a short term or long term basis. Any developmental endeavour requires not only the analysis of the need of such a project, the monetary costs and benefits involved but most important, it requires a consideration and detailed assessment of the effect of a proposed development on the environment. The main objective of Environmental Impact Assessment (EIA) is to identify and evaluate the potential impacts (beneficial and adverse) of development activities on the environment. It is a useful tool for decision making based on detailed study and analysis of the environment impacts including social, cultural and aesthetic concerns which could be integrated with the project cost-benefit analysis. This exercise is undertaken early enough in the planning stage of projects for selection of environmentally compatible sites, process technologies and such other environmental safeguards. While all industrial projects may have some environmental impacts all of them may not be significant enough to warrant elaborate assessment procedures. The need for such exercises will have to be decided after initial evaluation of the possible implications of a particular project and its location.

Why EIA?

The important objectives of EIA can be divided into two categories:

- The immediate aim of EIA is to inform the process of decision-making by identifying the potentially significant environmental impacts and risks of development proposals as follows:
  - improve the environmental design of the proposal;
  - ensure that resources are used appropriately and efficiently;
  - identify appropriate measures for mitigating the potential impacts of the proposal, and

- facilitate informed decision making, including setting the environmental terms and conditions for implementing the proposal.

The ultimate (long term) aim of EIA is to promote sustainable development by ensuring that development proposals do not undermine critical resources and ecological functions or the well being, lifestyle and livelihood of the communities and peoples who depend on them. These includes:

- protect human health and safety;
- avoid irreversible changes and serious damage to the environment;
- safeguard valuable resources, natural areas and ecosystem components;
- enhance the social aspects of the proposal.

Variations in environment impacts

- Environmental impacts can vary in:
  - type – biophysical, social, health or economic;
  - nature – direct or indirect, cumulative, etc.
  - magnitude or severity – high, moderate, low
  - extent – local, regional, transboundary or global
  - timing – immediate/long term
  - duration – temporary/permanent
  - uncertainty – low likelihood/high probability
  - reversibility – reversible/irreversible
  - significance – unimportant/important
Guiding principles of EIA good practice

Purpose - EIA should meet its aim of informing decision making and ensuring an appropriate level of environmental protection and human health.

Focused - EIA should concentrate on significant environmental effects, taking into account the issues that matter.

Adaptive - EIA should be adjusted to the realities, issues and circumstances of the proposals under review.

Participative - EIA should provide appropriate opportunities to inform and involve the interested and affected publics, and their inputs and concerns should be addressed explicitly.

Transparent - EIA should be a clear, easily understood, open, and accessible process, with early notification, access to documentation, and a public record of decisions taken and reasons for them.

Rigorous - EIA should apply the 'best practicable' methodologies to address the impacts and issues being investigated.

Practical - EIA should identify measures for impact mitigation that work and can be implemented.

Credible - EIA should be carried out with professionalism, rigour, fairness, objectivity, impartiality and balance.

Efficient - EIA should impose the minimum cost burden on proponents consistent with meeting process requirements and objectives.

Present practice of EIA in India

Environmental impact assessment (EIA) was first introduced in India based on the Environmental Protection Act (EPA), 1986. But formally it came into effect when Ministry of Environment and Forests (MoEF) has passed a major legislative measure under EPA in January 1994 for Environmental Clearance (EC) known as EIA Notification, 1994.

Subsequently, EIA processes have been strengthened by MoEF through a series of amendments. The legal regime of EIA in India is said to have developed through three important phases namely, Phase I consisting of the pre-1994 era, Phase II consisting of 1994-2006 era and Phase III consisting of post-2006 era. Since its inception the scope of EIA norms in India has gone through massive transformation.

The current practice is adhering to EIA Notification, 2006 and its amendments. The process of evidence collected and analysis in the present assessment suggest that, despite a sound legislative, administrative and procedural set-up, EIA has not yet evolved satisfactorily in India. An appraisal of the EIA system against systematic evaluation criteria, based on discussions with various stakeholders, EIA expert committee members, approval authorities, project proponents, NGOs and consulting professionals, reveals various drawbacks of the EIA system. These mainly include, inadequate capacity of EIA approval authorities, deficiencies in screening and scoping, poor quality EIA reports, inadequate public participation and weak monitoring.

Overall, EIA is used presently as a project justification tool rather than as a project planning tool to contribute to achieving sustainable development. The EIA system in the country is undergoing progressive refinements by steadily removing the constraints. The paper identifies opportunities for taking advantage of the current circumstances for strengthening the EIA process.

Procedure for EIA

The entire procedure of EIA is summarised in Figure 1 and 2 as follows (the details are available on MoEF Website).

Major drawbacks in existing EIA procedure

7.1 EIA studies responsibility

The impact study is to be carried out by the project proponent. He may hire consultant or institution for the service. This is a big drawback. Since the consultant is hired by project proponent,
Procedural deficiencies

- As per the EIA notification, some projects may not need EIAs, such projects are screened-out during screening. However, they may cause socio-economic changes harmful to the environment. Hence, the indirect impact on the environment and public health should also be considered.

- Production capacity based criteria for exemption of projects from EIA is not environmentally justified in some cases. We do not have scientific evidence to demonstrate that environmental impacts are always insignificant for projects under a given production capacity of site. Many times small-scale industries could do more harm to the environment.

- Many times the team formed for conducting EIA studies is lacking the expertise in various required fields.

- The first task in EIA is scoping. The primary aim of scoping is to ensure that all the aspects are being addressed adequately. The main aim of scoping is to ensure that the study addresses all the aspects important from decision-making point of view. This requires extensive consultations and discussions among the project proponents, decision makers, the regulatory agency, scientific institutions, local community representative and others. There is a lack of exhaustive ecological and socio-economic indicators for impact assessment. Public comments are not taken into account at the early stage, which often leads to conflicts at the later stage of project clearance.

- The EIA attempts to answer following questions:

  - How the project is going to affect the environment and social aspects of the area?
  - What is the magnitude of the effects?

7.4 Cumulative EIA

The present practice of EIA does not address comprehensively the cumulative impacts of all the activities in an area at local or regional level. This is leading to environmental damage inspite of compliance by all the projects in an area. For example, groundwater depletion due to cumulative withdrawal by all the activities including agriculture could be very large leading to depletion of water table and drying up of many surface water bodies leading to serious damage to the environment. Similarly cumulative impact of air or water pollution in an area is very important to assess before giving clearance to a project.

7.3 Compliance monitoring, institutional arrangements.

While granting environmental clearance several conditions are imposed on the project proponent. The compliance of these conditions has to be effectively monitored. The regional offices of the MoEF are to monitor the compliance of these conditions. It has following main drawbacks:

- The jurisdiction of the Regional Office of MoEF is very large and they have only few officers to look after that large area, hence cannot cover the monitoring effectively. While the increased threat to the environment is matched by the enactment of an increasing amount of legislation, the responsibilities and capacities of the various agencies, including the regional offices of the MoEF, to monitor compliance has not been appropriately defined and strengthened.

- Compliance can be best monitored by the local population is generally ignorant about these conditions. Hence, they are not even aware if the true picture of the compliance is reported by the monitoring agency.

- In the IT Age it is easily possible to make these reports public, which will give more confidence to the report and monitoring program.

- Lack of access to compliance reports may violate the rights of people who are affected by the project and for whose benefit certain conditions were imposed.

7.2 EIA applicability:

There are many projects having high impacts are exempted from the EIA as follows.

- Agriculture
- Projects with investments less than what is provided for in the notification.
- Defence-related road construction
- Railway projects are explicitly exempted from the EIA notification
- Nuclear establishments

- The consultant always tries to defend the project proponent and justify the project site. He may not include the most vulnerable aspects of environment in the EIA.
The predictions are on physical, chemical, biological, socioeconomic and anthropological environment. In quantifying impacts, different mathematical simulation models, physical models, socio-cultural models, economic models, experiments or expert judgments are employed. So along with each attempt to quantify an impact, the assessment should also quantify the predictions uncertainty in terms of probabilities or margins of error.

The next step is to assess and predict the nature and magnitude of impacts. The impacts are predicted scientifically based on the various relations that are established through research all over the world and considering the complexity of the synergistic/antagonistic consequences under the prevailing environmental conditions. Many times the predictions are based on simulation models using single environmental parameter into many permutation combination conditions.

Due to lack of reliable data both primary and secondary, not considering the indigenous knowledge and doubtful credibility of data collected by study team, this exercise is always weakest in the whole EIA. The impacts are predicted scientifically based on the various relations that are established through research all over the world and considering the complexity of the synergistic/antagonistic consequences under the prevailing environmental conditions. Many times the predictions are based on simulation models using single environmental parameter into many permutation combination conditions.

The EIA reports ignore several very significant aspects while carrying out assessments and significant information is found to omit.

Finally, the EIA report culminates into a well-reasoned scientifically sound Environment Management Plan (EMP). A wide range of options are proposed to prevent, reduce, remediates or compensate for each of the adverse impacts evaluated as significant. The options like alternative projects, routes, processes, raw materials, operating methods, disposal methods, disposal routes or locations, timing or engineering designs, adoption of pollution control measures, waste minimization, monitoring, phased implementation, landscaping, personal training, special social services or public education. The third option which is generally considered is compensation of the damage, restoration of damaged resources, money to affected persons, concessions on other issues, offset programmes to enhance some other aspects of the environment or quality of life for the community. The mitigation measures are generally cost-intensive and thus, our need is to be worked out in detail. The measures are then compared and cost-effectively validated. (Table 4) may be chosen. The mitigation plan may include all the technical aspects, management schemes, monitoring mechanisms, contingency plans, operation procedures, project scheduling, or even joint management (with affected groups). An EIA report, details regarding the effectiveness of a measure and implementation plan of mitigation measures are often not provided. Emergency preparedness plans are not discussed in sufficient details and the information not disseminated to the community.

The information so collected or generated should be presented in easy to read and understand form e.g. graphs, description, points etc in form of report. Following important deficiencies are common:

- The reports are generally incomplete and provided with incomplete or unreliable data.
- The reports ignore several very significant aspects while carrying out assessments and significant information is found to omit.
- Many EIA reports are based on single season data, which may not be the representative condition of the area, and are not adequate to determine whether environmental clearance should be granted.
- As the responsibility of EIA lies with the project proponent, which means the entire study either is carried out by the proponent himself or by a consultant being funded by the proponent. Which means the EIA is actually funded by an agency or individual whose primary interest is to procure clearance for the project proposed. In such case there is every chance that the report is biased.
- Many times it is observed that a consultant has no specialization in the concerned subject. For example many marine EIA projects are carried out by universities having very little or no expertise in marine science.
- The EIA document is generally very large and it is difficult to comprehend the entire document while taking the decision.
- There are many cases of fraudulent EIA studies where false data used, and conclusions are drawn. Even in such cases data is used for two totally different places. This is possible due to lack of a centralized baseline data base, where such data can be crosschecked.
- Generally it is hard for a consultant, who is paid lakhs of rupees, to prepare a report, which goes against the proponent. Hence, in nearly every case, the consultants try to interpret and tailor the information looking for ways and means to provide their clients with a report that goes their money's worth.
Conclusions

An EIA concentrate on problems, conflicts and natural resource constraints which might affect the stability of a project. It also predicts how the projects could harm to people, their homelands, their livelihoods, and the other nearby developmental activities. After predicting potential impacts, the EIA identifies measures to minimize the impacts and suggests ways to improve the project stability. The aim of an EIA is to ensure that potential impacts are identified and addressed at an early stage in the projects planning and design. To achieve this aim, the assessment findings are communicated to all the relevant groups who will make decisions about the proposed projects, the project developers and their investors as well as regulators, planners, affected people and the politicians. Unfortunately this is not happening in effective manner. Thus, there is a need to bring more effectiveness in the procedure already in existence.

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Environmental Impact Of Pesticides
- An Overview

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Abstract

Pesticides are group of chemicals that are purposely applied to the environment with aim to suppress plant and animal pests and to protect agricultural and industrial products. However, the majority of pesticides during their application also affect non-target plants and animals. Repeated application leads to loss of biodiversity. Many pesticides are not easily degradeable, they persist in soil, lead to groundwater and surface water and contaminate wide environment. Depending on their chemical properties they can enter the organism, bioaccumulate in food chains and consequently influence human health. Overall, intensive pesticide application results in several negative effects in the environment that cannot be ignored. Several steps have been taken to regulate the use and restrict the concentration in the environment. This paper summarizes some of the important regulations on pesticide use and also spells out the effects of the pesticides on environment.

Introduction

Pesticides are group of chemicals that are selectively toxic to target organisms, which are pests. They are purposely applied to the environment with the aim to suppress plant and animal pests and to protect agricultural and industrial products. Pesticides are the only toxic substances released intentionally into our environment to kill living beings. This terrestial substances that kill weeds (herbicides), insects (insecticides), fungus (fungicides), rodents (rodenticides), and others.

Although majority of pesticides are selectively toxic to target pests at a given dose, however, at such dose large number of unintentional organisms like bacteria, fungi, having vital role in the ecosystem, may be killed, thus disrupting the ecosystem function. Repeated application of pesticides leads to loss of biodiversity. Many pesticides are not easily degradeable, they persist in soil build up by repeated application, leach to groundwater and surface water and contaminate wide environment. Depending on their chemical properties pesticides can enter the organism and bio-accumulate and then bio-magnify in food chains and consequently influence human health. Overall, intensive pesticide application results in several negative effects in the environment that cannot be ignored.

In 1962, Rachel Carson, an American scientist, wrote down her observation and pointed out sudden dying of birds caused by indiscriminate spraying of pesticides (DDT). Her book, Silent Spring, became a landmark. It changed the existing view on pesticides and has stimulated public concern on pesticide and their impact on health and the environment. Silent Spring facilitated the ban of the DDT in 1972 in the United States. More research has been done and several dangerous and persistent organic pesticides like Dieldrin, Endosulfan and Lindane have been banned or restricted since that time.

Environmental Impact of pesticides:

1. Effects on soil

Excessive use of pesticides can bring about soil pollution. When pesticides are retained in the soil, the general biodiversity of the soil is greatly reduced. This is because pesticides can obstruct chemical signals which facilitate functioning of nitrogen-fixing bacteria in soil. This may at times cause the soil to become infertile, which necessitates addition of fertilizers to boost productivity.

Persistent organochlorine pesticides (OC) in soils can vary from few hours to many years in case of OC pesticides. Despite OC pesticides were banned or restricted in many countries, they are still detecting in soils. Sorption is the most important interaction between soil and pesticides and limit degradation as well as transport in soil. Pesticides bound to soil organic matter or clay particles are less mobile, bio available but also less accessible to microbial degradation and thus more persistent.

Soil organic matter is the most important factor influencing sorption and leaching of pesticides in soil. Addition of organic matter to soil can enhance sorption and reduce risk to water pollution. It has been demonstrated that amount and composition of organic matter had large impact on pesticides sorption. For example soil rich in humus content are more chemically reactive with pesticides than non humified soil (Pesthouse 2008).

2. Effects on water

Pesticides used in agriculture can cause pollution both to surface water and ground water. Once water is contaminated, it may be unsafe for drinking and may cause adverse effect on health. Pesticides can
get into water via drift during pesticide spraying, by runoff from treated areas, leaching through the soil. In some cases, pesticides can be applied directly onto water surfaces, e.g. for control of mosquitoes. Rapid transport to groundwater may be caused by heavy rainfall shortly after application of the pesticide to wet soils.

During 1990, herbicide atrazine and endosulfan were found most often in surface waters in the USA and Australia due to their widespread use. Other pesticides detected included pendimethalin, dimethoate, chlorpyrifos, dinoseb, prometryn, and fluometuron (Cooper 1996).

More recent studies also reported presence of pesticides in surface water and groundwater close to agricultural lands over the world. High levels of pesticides chlorinated were detected in coastline, rivers, sediments and groundwater in the Caribbean island of Martinique due to its massive application on banana plantations (Boege and Francis 2005).

3. Effects on organisms

a. Soil organisms

Soil microorganisms play a key role in soil. They are essential for maintenance of soil structure, transformation and mineralization of organic matter, making nutrients available for plants. Although soil microbial population is characterized by fast flexibility and adaptability to changed environmental conditions, the application of pesticides (especially long-term) can cause significant irreversible changes in their population. Inhibition of species, which provide key processes, can have a significant impact on function of whole terrestrial ecosystem.

A few studies show that some organochlorine pesticides suppress symbiotic nitrogen fixation resulting in lower crop yields. Researchers found out that alachlor, pendimethalin, oryzalin, and substituted bipyridilium compounds such as paraquat are causative factors for soil degradation. In fact, these pesticides are known to compete with nitrification inhibitors for the same target sites on the microbial communities and inhibit their activity.

b. Soil invertebrates

Nematodes, springtails, mites and other microarthropods, earthworms, spiders, insects and other small organisms make up the soil food web and enable decomposition of organic compounds such as leaves, manure, plant residues, and other organic matter. Soil organisms enhance soil aggregation and porosity and help to retain moisture and nutrients. Earthworms represent more than 80% part of biomass of terrestrial invertebrates and play an important role in soil ecosystem. They are used as bioindicative of soil contamination by providing an early warning of decline in soil quality. They serve as model organisms in toxicity testing. Earthworms are characterized by high ability to stimulate a lot of polynuclear aromatic hydrocarbons (PAHs) from soil in their tissues, thus they are used for studying biodegradation potential of chemicals. A recent review of pesticides effects on earthworms showed that negative effects on growth and reproduction by many pesticides (Smith and D'Vin 2001).

Decrease in number of species and diversity, and species richness of Collembola after application of inactivator chlorpyrifos has been reported on grassland pasture in UK (Fountain et al., 2007).

4. Other non-target species

a. Effects of pesticides on bees are closely watched because of their crop pollination use. However, little is known about the impacts of pesticides on wild pollinators in the field. Researchers detected decline of wild bees after repeated application of insecticide fenitrothion. Lower bee abundance and butterfly species richness was found in the more intensively farmed sites with higher pesticide loads (Brittain et al., 2010).

It has been shown that using herbicides to control of invasive plants can significantly reduce survival, wing and pupa weight of butterflies at treated areas.

b. Water organisms – invertebrates, amphibians, fishes

Pesticides can enter fresh water streams directly via spray drift or indirectly via surface runoff or drain flow. Many pesticides are toxic to freshwater organisms. Acute and chronic effects are derived from standard toxicity tests.

A large-scale investigation of pesticides effects on stream macroinvertebrates community structure was conducted in France and Finland. Authors proved that pesticides stress was associated with a decrease in the relative abundance and number of sensitive species and suggested that effects may also occur below levels that are commonly thought to be protective. They also found out that undisturbed upstream reaches improve the quality of impacted downstream reaches. This finding could be used to constitute a valuable measure for future risk mitigation of agricultural practices (Schäfer et al., 2007).

Impact of Malathion a broad spectrum insecticide, on aquatic ecosystem has been demonstrated. Malathion is the most commonly applied insecticide around the world and can be legally directly sprayed over aquatic habitats to control the mosquitoes. This study showed that relatively small concentration of malathion caused direct and also indirect effect on aquatic food web. Changes in plankton and phytoplankton abundance and composition consequently affected growth of fish and reduced predation rates on amphibians (Kejra and Hesman 2008).

c. Birds

Decline of farmland bird species has been reported over several past decades and often attributed to changes in farming practices, such as increase in agrochemical inputs, loss of mixture farming or unfarmed structure. Besides lethal and sub-lethal effects of pesticides on birds, is also a matter of concern. These effects are mainly via reduction of food supplies (insects, invertebrates), especially during breeding or winter seasons. As consequence inactivator and herbicide application can lead to reduction of chick survival and bird population. Time of pesticides application also plays important role in availability of food.

Several practices (generally integrated crop management techniques) can be used to minimize unwanted effects of pesticides on farmland birds, such as use of selective pesticides, avoiding spraying during breeding season and when crops and weeds are in flowers, minimise spray drift or creation of landfills.
Laws safeguarding against pesticides

Pesticides regulations are governed in India under following Acts/Rules:
- The Insecticides Act, 1968 and Rules, 1971
- The Environment (Protection) Act, 1986
- Hazardous Waste (Management & Handling) Rules, 1989
- Water (Prevention & Control of Pollution) Act, 1974
- Air (Prevention & Control of Pollution) Act, 1981
- Prevention of Food Adulteration Act, 1954
- The Factories Act, 1948
- Bureau of Indian Standards Act.

Use and Regulation of Pesticides

The Ministry of Agriculture regulates the manufacture, sale, import, export and use of pesticides through the Insecticides Act, 1968 and the rules framed thereunder. Central Insecticides Board (CIB) constituted under Section 4 of the Act advises Central and State Governments on technical matters. The Registration Committee (RC) constituted under Section 3 of the Act approves the use of pesticides and new formulations to tackle the pest problem in various crops. The monitoring of pesticide residue levels in food comes under the purview of Union Ministry of Health and Family Welfare.

Conventions on pesticides

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade was adopted on 10 September 1998 by a Conference of Plenipotentiaries in Rotterdam. The convention promotes open exchange of information and calls on exporters of hazardous chemicals to use proper labeling, include directives on safe handling, and inform purchasers of any known restrictions or bans. Signatory nations can decide whether to allow or ban the importation of chemicals listed in the treaty, and exporting countries are obliged to make sure that producers within their jurisdiction comply.

The Stockholm Convention on Persistent Organic Pollutants, a global treaty entered into force in May 2004, aims to eliminate the production and use of twelve priority POPs including organochlorine pesticides such as aldrin, dieldrin, DDT and metabolites, endrin, heptachlor, chlordane, mirex and toxaphene. In August 2010, F and E organohalogenobenzene, lindane, chlordane and pentachlorobenzene were added.

Under Montreal Protocol, is declaration of obligation to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.

The Basel Convention is a convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal. The principal goal is to reduce transboundary movements of hazardous waste to a minimum consistent with their environmentally sound management. The convention sets up strict operational controls based upon prior written notification procedures.

Present status in India

Some potentially lethal pesticides that have not yet been banned in India*

<table>
<thead>
<tr>
<th>Pesticide in use in India</th>
<th>Countries where it is banned</th>
<th>Side-effects (acute/chronic exposure)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorpyrifos</td>
<td>US, Sweden, Finland</td>
<td>Harmful for nervous system. Inhibition or ingestion may result in vision, seizures, coma and even death</td>
</tr>
<tr>
<td>Lindane</td>
<td>Denmark, Germany, Sweden, Finland, Indonesia, New Zealand, the Netherlands</td>
<td>Causes damage to the nervous and immune systems. Leads to hormone disruption, birth defects and breast cancer</td>
</tr>
<tr>
<td>DDT (Allowed in India only for public health control measures)</td>
<td>US, Canada, Chile, South Korea, Singapore, Cuba and most EU countries</td>
<td>Causes liver cancer. Affects the central and peripheral nervous systems.</td>
</tr>
<tr>
<td>Endosulfan</td>
<td>Germany, Denmark, Indonesia, Bulgaria, Norway, Sweden, Colombia, Singapore and the Netherlands</td>
<td>Damage reproductive organs</td>
</tr>
<tr>
<td>Carbaryl</td>
<td>Austria, Germany, Sweden, Denmark</td>
<td>Leads to high acute toxicity.</td>
</tr>
<tr>
<td>Parathion</td>
<td>Austria, Germany, Sweden, Denmark</td>
<td>Causes kidney, developing fetus and liver. Causes testicular and breast cancer.</td>
</tr>
</tbody>
</table>

Conclusion

Farmers use chemical pesticides to eliminate insects and diseases that destroy crops and diminish food supply. These compounds work very well in killing the insects that feed on the roots, leaves and seeds of both food crops and garden flowers. Using these pesticides saves the crops that feed nations all around the world. They can often mean the difference between a healthy, expanding population and malnutrition and death.

- Chemical pesticides are linked to a number of illnesses including cancer, lymphoma, reproductive abnormalities, endocrine disorders and neurological problems. According to Science Daily, scientists in a UCLA study have discovered links between Parkinson's disease and the use of two common pesticides, Manab and Fungus. Health experts are particularly concerned about pesticide exposure in children because they proportionally consume more food during their growing years and are often in contact with floor surfaces where pesticide residues are found. Pesticides also kill insects indiscriminately, destroying insects that are beneficial to plants and an important food source for other creatures. Some farmers are adopting more organic methods of pest control, such as introducing natural predators of the insects and using of plant extracts to repel insects. These methods reduce effects of pesticides on human health and the environment. The use of pesticides thus remains as a never ending debate and humans remain in control of affects and uses of pesticides, air and soil are the transporters and the other microorganisms the silent sufferers.

*Drawing Scott March 15, 2003

Environmental Impact Of Pesticides - An Overview
Sheetal Bajwa
Lecture by Hon’ble Chairperson On
“Mitigation Of Climate Change:
Law, Policy And Governance”

Hon’ble Mr. Justice Swatanter Kumar
Chairperson, National Green Tribunal
New Delhi, India
Inaugural Address by Hon’ble Mr. Justice Swatanter Kumar
On the occasion of International Conference on
“Mitigation of Climate Change: Law, Policy and Governance”

organized by
Campus Law Centre, Delhi University
at New Delhi on 29th April, 2014

Dr. Dinesh Singh, Vice Chancellor,
University of Delhi.
Ms. Pindy Ahamed, Senior Advocate,
Supreme Court of India.
Dr. Usha Tandon, Professor, Campus Law Centre,
University of Delhi.
Dr. S.C. Raina, Professor, Campus Law Centre,
University of Delhi.

Respected Faculty members of the University, Participants, Delegates, ladies and gentlemen and,
most importantly, my dear students,

‘Law, Policy and Governance’ are simplistic terms.
Often held to be the modus operandi through which a
civilised state and its citizenry is obliged to adhere
to a code of conduct which would empower them to
enjoy their rights, fundamental and otherwise, to the
best of their abilities while, making sure that such
enjoyment does not large into or infringe the rights
of others.

Law, for instance, traditionally took as development
to avoid what the famous Social Contract Thinker
John Locke termed the ‘state of nature’, a state in
which each individual enjoyed his right with little
regard to others, leading to total anarchy. Hence, Law
and Policy are aspects to curb the apprehended
damage to state, its citizenry and the society at large.

Governance, on the other hand, relates more to the
necessary of such law and policy. Law, and policy
without proper governance, would hardly solve the
object, the mischief that is trying to be curbed.

However, all of us present here are aware, that
Law is dynamic in nature, changing as per the
necessities of the time, as per the policies that the
government or the state deem fit to be implemented
to help the society better. This is because the society,
the environment and the needs of the people are ever
changing.

Change, ladies and gentlemen, is inevitable. So
they are. And it is an accepted fact that everything
in this world is dynamic in nature. The climate,
being one of them, is no exception. With the advent
of industrialisation, of development, a tug of war
between economies of the world, the environment
started taking a back seat. Today, climate change is
a reality and it must be dealt with head on. In an ideal
world, in a world that is healthy, whose inhabitants
are in the pink of health, in a world where flowers
blossom and rivers run their course to meet the
oceans, we would not need such conferences. But
our race, while treating life as a trade-off between
environment and development, lost sight of the
principles of balancing and sustainable
development. We cut trees, built dams, polluted the
rivers that we drink from and the air that we breathe,
but somewhere along the line, we forgot what was so
aptly described by the great American revolutionist,
Martin Luther King, that “For in the true nature of
things, if we rightly consider, every green tree is
far more glorious than if it were made of gold and
silver.” Consequently, today we are at the brink of
continuous harm to our race.

The present generation is a trustee of the environment, having inherited it from our forefathers and to be passed on to the next generation i.e. inter-generational equity. It is only through conferences like these and the knowledge we imbibe from it 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.

Therefore, I must, at the very threshold, congratulate
the Campus Law Centre, Delhi University, a leading
institution in the field of Law for its efforts in
organising this International Conference to address
the burning topic of present times, ‘Mitigation of
Climate Change: Law, Policy and Governance’. The
same is deeply appreciated.

‘How cunningly nature hides
every wrinkle of her inconceivable
antiquity under roses and violets
and morning dew!’

Ralph Waldo Emerson, the famous American poet,
so eloquently put, what we have here to discuss.
Despite the fact, our race has had little or no
regard for nature, while industrialisation and
development took place at rampant speed, nature
remained beautiful, its true state only visible over
comparison of the past. However, now, a time has
come that climate change, that global warming has
visible affects on the nature. Our Polar Caps
are depleting, our glaciers are melting, due to the
pollutants and smoke produced by the industries,
black carbon is depositing on mountains, causing
further melting of the same.

Recently, we, at the National Green Tribunal,
encountered a situation relating to the one of the
most significant gifts of nature to mankind in the
wide Himalayan range, the Rohtang Pass, which is
at a height of 13,500 feet above the sea level. This
tourist spot, often termed as the ‘Crown Jewel of
Himachal Pradesh’, attracts a large number of
tourists. Heavy tourism, besides being a boon to
the economy of Himachal Pradesh, is also the cause
for adverse impacts on ecology and environment
of the State. Diverse and devastating impacts were
visible on the melting glaciers and were attributable
to unregulated and heavy tourism, over crowding,
mining of natural resources, construction of
buildings and infrastructure, littering of waste
and other activities associated with tourism. Studies
suggested that 40% of the glacial water could be
attributed to Black Carbon impact and Black
Carbon emission reduction can lead to near term
impact on warming and thus reduce glacier melting.

As per the latest reports available, as a country,
Indiaennis 554 million of Black Carbon annually with
major contributions from domestic usage, burning of
crop residues, sugar industry, dung cake burning,
vehicles, brick kilns, steel industry and power
plants. Dust and Black Carbon from forest
fire also accelerate melting of snow and glaciers in the
Himalayas. This is because black carbon absorbs
all colours of light. The light absorbed by the black
material interacts with atoms and molecules and
converts the light energy into heat energy. This
heat energy accelerates melting of glaciers. So much
so, that the Padum Glacier in the Killa Valley of
Himachal Pradesh has been receding at the rate of
52 metres per year based on a study from 1990 to 2001.

The Tribunal, in a landmark judgment in Drupa
Dutt v. The State of Himachal Pradesh and Ors.,
addressing this issue, laid down guidelines for
tourism, setting up a green tax fund, curbing
vehicular pollution and Black Carbon emission.

"Mitigation Of Climate Change
Law, Policy And Governance"
Hon'ble Mr. Justice Swatanter Kumar
shifting to biodegradable waste etc, in order to better preserve the nature, environment and atmosphere of the pristine glacier. However, the problem is a lot larger than a single issue.

As per the Second national Communication submitted by India to the UNFCCC, it is projected that the annual mean surface air temperature rise by the end of the century ranges from 3.5°C to 4.3°C whereas the sea level along the Indian coast has been rising at the rate of about 1.3 mm/year on an average. These climate change projections are likely to impact human health, agriculture, water resources, natural ecosystems, and biodiversity. These are serious statistics. And what should concern us further is, that this is just the tip of the iceberg. The impact of climate change and global warming is even more evident in other parts of the world. According to NASA, Global sea level rose about 17 centimeters (6.7 inches) in the last century. The rate in the last decade, however, is nearly double that of the last century. All three major global surface temperature reconstructions show that Earth has warmed since 1880. Most of this warming has occurred since the 1970s, with the 20 warmest years having occurred since 1981. Even though the 2000s witnessed a solar output decline resulting in an unusually deep solar minimum in 2007-2009, surface temperatures continue to increase. The Greenland and Antarctic ices sheets have decreased in mass. Data from NASA’s Gravity Recovery and Climate Experiment show Greenland lost 190 to 230 cubic kilometers (68 to 88 cubic miles) of ice per year between 2002 and 2006, while Antarctica lost about 152 cubic kilometers (56 cubic miles) of ice between 2002 and 2005. The Arctic has been heating up, and studies show that this is happening at two to three times the global average. This rising temperature in the Arctic has served to reduce the region’s floating ice layer by more than 20%. And as you would expect, when the reflective ice and snow layer is stripped away, it leaves a dark blue sea.

Now, what does the effect of the dark blue sea being exposed have on the Arctic area? Well, the ice and snow layer reflects the majority of the sun’s rays harmlessly back into space. But the dark blue of the exposed sea absorbs the rays, aiding the heating process.

These are just some of the instances which show us how Global Warming and Climate Change is menacing not just the quality of life around the globe, but by virtue of its magnitude, the very existence of life on planet earth.

The need of the hour is to devise policies, and as stated previously, implement them through clear, unambiguous laws and good governance to slow down the rate of climate change as much as possible, keeping concepts of sustainable development, intergenerational equity and doctrine of balancing at the very centre. I sincerely feel, that the next age of legal and economic developments should and will be, with the interests of environment at heart.

As President Boman, the famous English author and jurist once said, ‘Nature, to be commanded, must be obeyed’.

I hope that this remains the mantra of the times to come, while congratulating Campus Law Centre for organising a conference on an issue of such gross significance.

***Thank You***
Hon’ble Mr. Justice Swatanter Kumar, Chairperson, with
Hon’ble Members, (Principal Bench, New Delhi) National Green Tribunal

Sitting Left to Right: Hon’ble Dr. Ramnik Chandras Tripathi (Expert Member), Hon’ble Prof. A.R. Vasant (Expert Member),
Hon’ble Prof. (Dr.) P.C. Mishra (Expert Member), Hon’ble Mr. Justice M.S. Manohar (Judicial Member),
Hon’ble Mr. Justice Dr. B. Sujanaman (Judicial Member), Hon’ble Mr. Justice Swatanter Kumar (Chairperson),
Hon’ble Mr. Justice U.D. Salvi (Judicial Member), Hon’ble Dr. D. K. Agarwal (Expert Member),
Hon’ble Dr. Gopal Krishna Pundir (Expert Member), Hon’ble Mr. B.S. Sodani (Expert Member),
Hon’ble Shri Rajender Chauhan (Expert Member).
Hon'ble Mr. Justice Swarajt Kumar, Chairperson, National Green Tribunal with Hon'ble Members. National Green Tribunal

Standing Left to Right: Hon'ble Dr. Anup A Dharmaprasad (Expert Member), Hon'ble Mr. B S Sajwan (Expert Member), Hon'ble Mr. P S Rao (Expert Member), Hon'ble Dr. O K Jindal (Expert Member), Hon'ble Prof. Dr. P Nagendra (Expert Member), Hon'ble Prof. A K Yadav (Expert Member), Hon'ble Mr. Justice M S Member (Judicial Member), Hon'ble Justice Dr. P Pratibha (Judicial Member), Hon'ble Mr. Justice M S Chakravarty (Judicial Member), Hon'ble Mr. Justice Santosh Kumar Charan, Chairperson, National Green Tribunal (NGT), Hon'ble Mr. Justice V R Kangasakar (Judicial Member), Hon'ble Mr. Ramjan Chatterjee (Expert Member), Hon'ble Mr. Justice U D Salvi (Judicial Member), Hon'ble Ms. Justice Dilip Singh (Judicial Member), Hon'ble Dr. D K Agrawal (Expert Member).
Hon’ble Mr. Justice Swantanter Kumar
Chairperson, NGT

- Was Legal Advisor/Standing Counsel for the Central Pollution Control Board for a number of years. Practised in various High Courts, particularly in Delhi High Court on the Original Side, Appellate Side, Extraordinary Ordinary Jurisdiction (Writ) and other different fields including environment.
- Appointed as Chief Justice of Bombay High Court on 31.3.2007.
- Appointed as Judge, Supreme Court of India on 28.12.2008.
- Dealt with and disposed of large number of cases in various High Courts and the Supreme Court. Various judgments delivered include cases relating to land acquisition, Public Interest Litigation, Environment, both under Criminal and Civil jurisdiction.
- Upon being appointed as Chairperson, NGT, resigned as Judge of the Supreme Court of India on 30.12.2012.
Deputy Registrars
National Green Tribunal

Mr. Sheetal Sharma
Deputy Registrar
Principal Bench
National Green Tribunal

Ms. Sudhakar Krishna Kumar
Deputy Registrar (cum PPS to Hon’ble Chairperson)
Principal Bench
National Green Tribunal

Mr. S. Kumar
Deputy Registrar
Southern Zone Bench, Chennai
National Green Tribunal

Mr. Subodh Sharma
Deputy Registrar
Eastern Zone Bench, Kolkata
National Green Tribunal

EVENTS
NATIONAL GREEN TRIBUNAL
Inauguration of Kolkata Bench
National Green Tribunal

Hon’ble Mr. Justice Madan B. Lokur
Judge, Supreme Court of India

Hon’ble Mr. Justice Swatanter Kumar,
Chairperson National Green Tribunal

Hon’ble Mr. Justice Madan B. Lokur,
Hon’ble Mr. Justice Pankaj Chandrashekhar Ghosh,
Hon’ble Mr. Justice Arun Mishra along with Hon’ble Mr. Justice Swatanter Kumar,
Chairperson National Green tribunal at the Ceremonious ribbon cutting ceremony on inauguration of Kolkata bench National Green Tribunal on 24th May 2014

Dignitaries present at the time of the Inauguration of Kolkata Bench National Green Tribunal on 24th May 2014

Hon’ble Mr. Justice Madan B. Lokur,
Hon’ble Mr. Justice Swatanter Kumar,
Chairperson, NIT, Inaugurating the Vol-I of National Green Tribunal International Journal on Environment at the inauguration of Kolkata bench National Green Tribunal on 24th May 2014

Hon’ble Mr. Justice Madan B. Lokur,
Hon’ble Mr. Justice Pankaj Chandrashekhar Ghosh,
Hon’ble Mr. Justice Arun Mishra and other dignitaries along with Hon’ble Mr. Justice Swatanter Kumar, Chairperson, NIT releasing the Vol-I of National Green Tribunal International Journal on Environment at the inauguration of Kolkata bench National Green Tribunal on 24th May 2014

Hon’ble Mr. Justice Swatanter Kumar,
Chairperson National Green tribunal delivering inaugural address at the inauguration of Kolkata Bench National Green Tribunal on 24th May 2014
Sitting Left to Right: 1. Yograna Agrawal, Advocate (Member Executive),
Ms. Anupriya Sarli, Advocate (Joint Secretary), Ms. Rekha Datta, Advocate (Hon. Secretary),
Mr. Raj Purohit, Sr. Advocate (President), Ms. Namrata Rathore, Advocate (Vice-President),
Ms. Rehul Gunjan, Advocate (Treasurer), Mr. R. Sreedhar, Scientist (Member Executive),
Ms. Akshayana Shrestha, Advocate (Member Executive).
GREEN REPORT

Sanjay Kumar

Matthi pustineh manya kanchiadii chinnayya;
Mai servamian piyaa koote marigamaa ava.

Know that these two (My higher and lower Nature) are the \textit{yoke} of all beings. So, I am the source and dissolution of the whole universe.

Raso \textit{hamsa} kantuyya prabhaa ekaashocorvadh.
Pranabam savvavedeshu abdabha kee pruthanam maah.

There is nothing whatsoever higher than \textit{Me}, O \textit{Arjuna!} All this is strong on \textit{Me} as clusters of gems on a string. There is no other cause of the universe but \textit{Me}. I alone am the cause of the universe.

Puru\textit{y}a gandhada prithyaan chha tejaschamaan vaibharpanam;
Jeevanam savvabhooshenai tapaschamaan tapasvishu.

I am the speed in water, O \textit{Arjuna!} I am the light in the moon and the sun, I am the syllable \textit{Om} in all the Vedas, sound in ether, and vitality in man.

Beej\textit{man} maan savvabhoosham\textit{a} vich\textit{cha} pura\textit{tha samarthaam;
Buddh\textit{ach}\textit{c}\textit{c}\textit{h}a\textit{m}\textit{a}ma naap\textit{tha}\textit{na} h\textit{naa}meeh.}

I am the sweet fragrance in earth and the brilliance in fire, the life in all beings, and I am austerity in ascetics.

The globalisation of environmental concerns and the internationalisation of environmental law have resulted in the development of environmental justice discourses\textsuperscript{8}. Concerns about environmental justice can be traced in the history of environmental law to key moments including the Trail Smelter Arbitration in 1941\textsuperscript{4}, events in Warren County, North Carolina\textsuperscript{9}, nuclear testing at Maralinga and early uranium mining in Australia\textsuperscript{10}, and saltwater infiltration into Dutch agricultural fields from potassium mines in Alasse, France\textsuperscript{11}. These environmental struggles, embedded within a framework of social justice and civil rights, have helped to create a pathway towards environmental \textit{Wall justice}.

THE ESTABLISHMENT OF THE NATIONAL GREEN TRIBUNAL\textsuperscript{8}

The NGT Act 2010 institutionalised the procedural element of environmental justice by establishing the NGT, thereby enhancing the principles of environmental democracy that include fairness, public participation, transparency, and accountability.

The NGT is a creation of a statute, its jurisdiction, powers, and procedures are constructed with reference to the language of its provisions. It is bound and controlled by the provisions of the statute (the NGT Act 2010)\textsuperscript{9}. The NGT is empowered to decide cases relating to environmental protection and the conservation of forests and other natural resources (excluding the enforcement of any legal right relating to the environment) and to give relief and compensation for damages to persons and property. The NGT was established on 18 October 2010 as a specialised body exercising the jurisdiction, powers and authority to promote the efficient disposal of environmental cases\textsuperscript{8}. The principal benches sit in New Delhi, although Bhagalpur had been moved earlier in recognition of the environmental industrial cluster of 1980\textsuperscript{11}. The NGT held its first hearing on 25 May 2011 and became fully operational on 4 July 2011\textsuperscript{11}.

Subsequently, the Ministry of Environment and Forests, Government of India, issued a notification dated 17 August 2011 appointing regional benches of the NGT, thereby extending jurisdiction throughout India\textsuperscript{9}. The effect is a significant step towards the regional and circuit bench development that enables access for aggrieved parties, an aspect discussed later in this article. The courts have gone to the people rather than expecting the people to travel to the courts\textsuperscript{11}.

\textsuperscript{7}Sanjay Kumar, Register General, National Green Tribunal, Principal Bench, New Delhi
\textsuperscript{8}[Bhagalpur Ch. 7 & 12]
The principal bench in Delhi covers the northern zone; the Pune Bench handles the western territory; the Central Zone Bench is based in Bhopal; Chennai covers the southern part of India; and the Kolkata bench is responsible for the eastern region. Currently, there are five benches dealing exclusively with environmental issues. All benches are operational.

COMPOSITION OF TRIBUNAL

CHAIRPERSON

Hon’ble Mr. Justice (Retd.) L.S. Punta was appointed as first Chairperson of National Green Tribunal on 18th October, 2010 who held office till 31st December, 2011.

Hon’ble Mr. Justice A. Suryanarayanan Nadar was appointed as the Acting Chairperson w.e.f. 01.01.2012 to 19.12.2012.

Hon’ble Mr. Justice Santanu Kumar, a Sitting Judge of Supreme Court of India assumed office as Chairperson w.e.f 20th December, 2012.

JUDICIAL MEMBER

The following Judicial Members were appointed from time to time with the approval of Central Government:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>NAME</th>
<th>DATE OF JOINING/TENURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hon’ble Mr. Justice M. N. Kittur</td>
<td>01.04.2012 (Acting)</td>
</tr>
<tr>
<td>2</td>
<td>Hon’ble Mr. Justice A. Suryanarayanan Nadar (Acting Chairperson)</td>
<td>02.01.2011 - 31.01.2013 (Acting)</td>
</tr>
<tr>
<td>3</td>
<td>Hon’ble Mr. Justice G.V. Ramalingam</td>
<td>16.05.2011 - 05.09.2012 (Acting)</td>
</tr>
<tr>
<td>4</td>
<td>Hon’ble Mr. Justice A. Sanyal</td>
<td>08.08.2012 - 19.12.2012 (Acting)</td>
</tr>
<tr>
<td>5</td>
<td>Hon’ble Mr. Justice M. Choudhary</td>
<td>04.05.2012 (Acting)</td>
</tr>
<tr>
<td>6</td>
<td>Hon’ble Mr. Justice A. Sanyal</td>
<td>18.04.2012 - 09.07.2012 (Acting)</td>
</tr>
<tr>
<td>7</td>
<td>Hon’ble Mr. Justice O.P. Khandelwal</td>
<td>08.02.2013 (Acting)</td>
</tr>
<tr>
<td>8</td>
<td>Hon’ble Mr. Justice R. Prakash</td>
<td>22.07.2013 (Acting)</td>
</tr>
<tr>
<td>9</td>
<td>Hon’ble Mr. Justice P. K. Pant</td>
<td>24.07.2013 (Acting)</td>
</tr>
<tr>
<td>10</td>
<td>Hon’ble Mr. Justice G.V. Ramalingam</td>
<td>12.09.2013 - 25.10.2013 (Acting)</td>
</tr>
</tbody>
</table>

EXPERT MEMBER

The following Expert Members were appointed from time to time with the approval of Central Government:

<table>
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<th>S.No.</th>
<th>NAME</th>
<th>DATE OF JOINING/TENURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hon’ble Prof. Dr. R. Nigam</td>
<td>06.05.2011</td>
</tr>
<tr>
<td>2</td>
<td>Hon’ble Dr. D.K. Agarwal</td>
<td>06.05.2011</td>
</tr>
<tr>
<td>3</td>
<td>Hon’ble Mr. V. Sharma</td>
<td>06.05.2011 - 01.03.2012 (Acting)</td>
</tr>
<tr>
<td>4</td>
<td>Hon’ble Dr. G.K. Pandey</td>
<td>05.06.2011</td>
</tr>
<tr>
<td>5</td>
<td>Hon’ble Prof. (Dr.) P.C. Mishra</td>
<td>14.11.2012 (Acting)</td>
</tr>
<tr>
<td>6</td>
<td>Hon’ble Mr. P.S. Rao</td>
<td>14.11.2012</td>
</tr>
<tr>
<td>7</td>
<td>Hon’ble Prof. A. R. Yousof</td>
<td>23.11.2012</td>
</tr>
<tr>
<td>8</td>
<td>Hon’ble Mr. Bikram Singh Sajwan</td>
<td>07.01.2013 (Acting)</td>
</tr>
<tr>
<td>9</td>
<td>Hon’ble Dr. Ramesh Chandra Trivedi</td>
<td>09.02.2013 (Acting)</td>
</tr>
<tr>
<td>10</td>
<td>Hon’ble Mr. Ranjan Chatterjee</td>
<td>02.01.2013 (Acting)</td>
</tr>
</tbody>
</table>

COMPOSITION AND FUNCTIONING OF BENCHES

As on 01.10.2014, there are presently two Benches functioning at the Principal Bench. Their composition is as under:

**COURT NO. 1**

- Hon’ble Mr. Justice Santanu Kumar (Chairperson)
- Hon’ble Mr. Justice M. S. Nathwani (Judicial Member)
- Hon’ble Dr. R. K. Agarwal (Expert Member)
- Hon’ble Prof. A. R. Yousof (Expert Member)
- Hon’ble Dr. R. C. Trivedi (Expert Member)

**COURT NO. 2**

- Hon’ble Mr. Justice P. K. Pant (Judicial Member)
- Hon’ble Mr. Justice U. D. Salvi (Judicial Member)
- Hon’ble Dr. G. K. Pandey (Expert Member)
- Hon’ble Mr. B. S. Sajwan (Expert Member)
- Hon’ble Mr. Ranjan Chatterjee (Expert Member)
Southern Zone Bench, Chennai

As per the MoEF Notification dated 17th August, 2011, Southern Zone Bench at Chennai has become functional w.e.f. 30th October, 2012, presently there is only one Bench functioning at Chennai in its jurisdiction which is Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Union Territories of Pondicherry and Lakshadweep.

The composition of the Southern Zone Bench at Chennai is as under:
- Hon'ble Mr. Justice M. Chokkalingam, Judicial Member
- Hon'ble Dr. R. Nageswara, Expert Member

Central Zone Bench, Bhopal

As per the MoEF Notification dated 17th August, 2011, Central Zone Bench at Bhopal has become functional w.e.f. 07.04.2013, presently there is only one Bench functioning at Bhopal in its jurisdiction which is Madhya Pradesh, Rajasthan and Chhattisgarh.

The composition of the Central Zone Bench at Bhopal is as under:
- Hon'ble Mr. Justice Dalip Singh, Judicial Member
- Hon'ble Shri. P.S. Rao, Expert Member

Western Zone Bench, Pune

As per the MoEF Notification dated 17th August, 2011, Western Zone Bench at Pune has become functional w.e.f. 25th August, 2013, presently there is only one Bench functioning at Pune in its jurisdiction which is Maharashtra, Gujarat, Goa with Union Territories of Daman and Diu and Dadar and Nagar Haveli.

The composition of the Western Zone Bench at Pune is as under:
- Hon'ble Mr. Justice V.R. Kingsonkar, Judicial Member
- Hon'ble Dr. A.M. Deshpande, Expert Member

Eastern Zone Bench, Kolkata

As per the MoEF Notification dated 17th August, 2011, Eastern Zone Bench at Kolkata has become functional w.e.f. 24th May, 2014, presently there is only one Bench functioning at Kolkata in its jurisdiction which is West Bengal, Orissa, Bihar, Jharkhand, seven sister States of North-Eastern Region, Sikkim, Andaman and Nicobar Islands.

The composition of the Eastern Zone Bench at Kolkata is as under:
- Hon'ble Mr. Justice Pratap Kumar Ray, Judicial Member
- Hon'ble Prof. (Dr.) P. C. Mohra, Expert Member

Circuit Benches

The National Green Tribunal also held circuit bench sittings at the following places:

1. Shimla
- Five sittings on 29th & 30th July, 2013
- 16th & 17th September, 2013
- 21st & 22nd November, 2013
- 2nd & 3rd January, 2014 and
- 27th & 28th March, 2014
- 25th & 26th June, 2014
- 13th & 14th August, 2014

2. Jodhpur
- Three sittings on 8th & 9th December, 2013 and
- 5th, 6th & 7th March, 2014
- 1st & 2nd May, 2014
- 10th & 11th July, 2014

3. Shillong
- Two sittings on 24th January, 2014
- 4th April, 2014
- 9th June, 2014
- 1st & 2nd August, 2014

Composition and Functions of Registry

The Central Government vide Notification dated 17th May, 2011 sanctioned 93 posts for the National Green Tribunal and notified Recruitment Rules for these posts vide Notification dated 17th June, 2011. On 18th January, 2013, 21 posts of Driver were sanctioned and Recruitment Rules were notified on 17th April, 2013.

Four additional posts of Registrar were sanctioned vide the latter dated 18th September, 2013. Further, vide Order dated 03.09.2014, MoPMECC accorded sanction for creation of 41 posts in the National Green Tribunal.

In Vimal Shah (supra), the Supreme Court vide order dated 17th May, 2011 directed the High Court of Delhi to depute two officials in the rank of Additional District Judge to act as Registrars (Appropriate designation of the officer was to be determined by the Chairperson of the National Green Tribunal). Accordingly, the Hon'ble Chairperson, National Green Tribunal designated the Registrar posted at the Principal Bench as Registrar General.
The present composition of the Registry is as under:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>NAME</th>
<th>DATE OF JOINING/TENURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>REGISTRAR GENERAL</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mr. Sarjey Kumar, DMS</td>
<td>15.10.2013</td>
</tr>
<tr>
<td>II.</td>
<td>REVISERS</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Dr. Arvind Shekhar, DMS</td>
<td>(18.07.2012 – 30.12.2013)</td>
</tr>
<tr>
<td>2</td>
<td>Shri. M.K. Verma, Registrar, CEB Bhopal</td>
<td>16.03.2013</td>
</tr>
<tr>
<td>3</td>
<td>Shri. K.V. Vaidya, Registrar, WSF Pune</td>
<td>17.05.2013 – 18.12.2013</td>
</tr>
<tr>
<td>4</td>
<td>Shri. K.L. Vyas, Registrar, WSF Pune</td>
<td>18.12.2013 (Retd)</td>
</tr>
<tr>
<td>5</td>
<td>Shri. S.K. Singh, Registrar, CEB Kolkata</td>
<td>04.12.2013</td>
</tr>
<tr>
<td>6</td>
<td>Dr. A.D. Peter, Registrar, SBI Chennai</td>
<td>03.06.2013</td>
</tr>
<tr>
<td>III.</td>
<td>DEPUTY REGISTRARS</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mr. Shekhar Sharma</td>
<td>02.09.2013</td>
</tr>
<tr>
<td>2</td>
<td>Mr. S. Kumar, SBI Chennai</td>
<td>09.09.2012</td>
</tr>
<tr>
<td>3</td>
<td>Mr. S. Kumar, SBI Chennai</td>
<td>30.04.2014</td>
</tr>
<tr>
<td>4</td>
<td>Mr. Subodh Sharma, CBI Noida</td>
<td>05.04.2014</td>
</tr>
<tr>
<td>IV.</td>
<td>PrINCIPAL PRIVATE SECRETARY TO CHAIRPERSON</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mr. S. Kumar, SBI Chennai</td>
<td>19.01.2013 – 24.04.2018</td>
</tr>
<tr>
<td>V.</td>
<td>UNDER SECRETARIES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(MedR officers posted in the NGT in diversified cases)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Shri. M. Sharma</td>
<td>03.01.2014 – 17.01.2014</td>
</tr>
<tr>
<td>2</td>
<td>Dr. V. Sharma</td>
<td>25.10.2013</td>
</tr>
<tr>
<td>VI.</td>
<td>ASSISTANT REGISTRARS</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Dr. A. V. Pradeep Kumar, CEB Chennai</td>
<td>05.03.2014</td>
</tr>
<tr>
<td>2</td>
<td>Shri. Suresh Singh, CBI New Delhi</td>
<td>05.03.2014</td>
</tr>
<tr>
<td>3</td>
<td>Mr. Rakesh Singh, CBI New Delhi</td>
<td>05.03.2014</td>
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<tr>
<td>VII.</td>
<td>ACCOUNTS OFFICER</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Mr. Chetan Chawla</td>
<td>28.09.2012</td>
</tr>
<tr>
<td>VIII.</td>
<td>SECTION OFFICER</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Shri. Ravi Sonkar, CEB Bhopal</td>
<td>25.03.2013</td>
</tr>
<tr>
<td>2</td>
<td>Shri. V. Sharma, SBI Chennai</td>
<td>11.07.2013</td>
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<td>3</td>
<td>Shri. Suresh Singhal, NBI New Delhi</td>
<td>17.01.2014</td>
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<tr>
<td>4</td>
<td>Mrs. N. Shankar, CEB Kolkata</td>
<td>24.04.2014</td>
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<tr>
<td>5</td>
<td>Mrs. L. Shashidhar, NBI New Delhi</td>
<td>01.07.2014</td>
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<tr>
<td>IX.</td>
<td>PRIVATE SECRETARY</td>
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<tr>
<td>1</td>
<td>Mr. Immanuel Alexander, NBI New Delhi</td>
<td>09.05.2014</td>
</tr>
<tr>
<td>2</td>
<td>Mr. S. Kumar, SBI Chennai</td>
<td>06.05.2014</td>
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<tr>
<td>X.</td>
<td>ASSISTANT</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Shri. S. Kumar, SBI Chennai</td>
<td>14.02.2013</td>
</tr>
<tr>
<td>2</td>
<td>Mrs. Anu Malhotra, SBI Chennai</td>
<td>10.04.2013 – 01.10.2013</td>
</tr>
<tr>
<td>3</td>
<td>Shri. S. Kumar, SBI Chennai</td>
<td>15.02.2013</td>
</tr>
<tr>
<td>4</td>
<td>Shri. S. Kumar, SBI Chennai</td>
<td>15.02.2013</td>
</tr>
<tr>
<td>5</td>
<td>Shri. S. Kumar, SBI Chennai</td>
<td>15.02.2013</td>
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## ACTIVITIES
### DISPOSAL OF CASES

#### 2011 (Principal Bench, New Delhi)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Disposal</th>
<th>Pending</th>
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<tbody>
<tr>
<td>Transferred Cases from NIAA/Appeal/Applications</td>
<td>168</td>
<td>163</td>
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<tr>
<td>Misc. Application including Review Applications</td>
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<td>Total</td>
<td>168</td>
<td>163</td>
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#### 2012

<table>
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<tr>
<th>Institution</th>
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<tbody>
<tr>
<td>Principal Bench, New Delhi</td>
<td>500</td>
<td>438</td>
</tr>
<tr>
<td>Southern Zone Bench, Chennai (1st November, 2012)</td>
<td>45</td>
<td>NA</td>
</tr>
<tr>
<td>Total</td>
<td>545</td>
<td>438</td>
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#### 2013

<table>
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<th>Institution</th>
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<th>Pending</th>
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<tbody>
<tr>
<td>Principal Bench, New Delhi</td>
<td>503</td>
<td>438</td>
</tr>
<tr>
<td>Southern Zone Bench, Chennai</td>
<td>45</td>
<td>NA</td>
</tr>
<tr>
<td>Central Zone Bench, Bhopal (7th April, 2013)</td>
<td>331</td>
<td>247</td>
</tr>
<tr>
<td>Western Zone Bench, Pune (25th August, 2013)</td>
<td>146</td>
<td>16</td>
</tr>
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<td>Total</td>
<td>3116</td>
<td>1585</td>
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#### 2014 (upto 31.08.2014)

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<tr>
<td>Principal Bench, New Delhi</td>
<td>786</td>
<td>695</td>
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<tr>
<td>Southern Zone Bench, Chennai</td>
<td>515</td>
<td>192</td>
</tr>
<tr>
<td>Central Zone Bench, Bhopal</td>
<td>760</td>
<td>433</td>
</tr>
<tr>
<td>Western Zone Bench, Pune</td>
<td>241</td>
<td>100</td>
</tr>
<tr>
<td>Eastern Zone Bench, Kolkata (24th May, 2014)</td>
<td>46</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>2240</td>
<td>2458</td>
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</table>
The way forward

National Green Tribunal is becoming more vibrant and increasing its ambit of activities with every new day. The metamorphosis of India’s environmental jurisprudence reflects the judgement of the National Green Tribunal. It has opened the discourse through environmental decisions that have brought participation standing and address sustainable development involving economics and environment. It is contributing plurality of environmental justice. It is enhancing access to justice route for both economic growth and protection of environment. In very short span National Green Tribunal has able to attract expectations of all stakeholders of environmental justice.

National Green Tribunal has been growing vertically and horizontally under the dynamic and multi-dimensional guidance of Hon’ble Chairperson Justice Swatanter Kumar, whose motivational force and energy contributes all the achievements till today. I am certain that the passion with which our Chairperson leading the team, it would cover many a milestones in future.

However, National Green Tribunal is still to enhance its status and popular expectations of the citizens of the country.
NATIONAL GREEN TRIBUNAL
Faridkot House, Copernicus Marg, New Delhi