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Lex Terra

News Updates on Environmental Law

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"The environment is where we all meet; where all have a mutual interest; it is the one thing all of us share."

—Lady Bird Johnson

"**Lex Terra** is an initiative by the members of Centre for Environmental Law, Advocay and Research(CELAR) of National Law University. Through *Lex Terra*, we are making an effort to put forward the various facets related to Environment from different sources which is published every fortnight among the society so that a community of environmentally conscious people emerge out of the legal and non-legal fraternity.

Each edition of *Lex Terra* highlights some noteworthy eco-news, both at global as well as national arena.

This newsletter is extensively prepared by the members and researchers of CELAR, the members of NLUA.

INSIDE THE ISSUE

Edited by: *Sweden Doley , Akanchha Srivastava & Lidia Kharmih*

Designed by: *Sucheta Ray*

Photo courtesy: Pushpanjali Medhi

About CELAR

The primary mission of Centre for Environmental Law, Advocacy amd Research (CELAR) of National Law University, Assam is to engage in advocacy and research on public interest environmental issues. For the purpose, it will organize workshops and seminars to educate and develop skills, convene conferences to promote exchange of ideas, conduct training programmes for capacity building in environmental law issues, undertake research on legal concerns and publish periodically, newsletters and journals.

The objectives of the CELAR are as follows:

- To inspire and educate students by providing hand-on advocacy experience and direct exposure to the issues.
- Strengthen access to justice by undertaking high quality multi– disciplinary research on contemporary legal issues pertaining to environment.
- Advocate for reforms in environmental law through scientifically sound legislative proposals.
- Organise training programmes for strengthening the legal capacity building on environmental laws doe civil servants, law enforcement authorities, non-governmental organizations and media personnel.
- Publish periodically journals and newsletters on environmental law.

— Professor (Dr.) Yugal Kishore,

Centre Head, CELAR

Message from Team *Lex Terra*

Dear Readers,

It is with much joy and anticipation that we present to you the fourteenth issue of CELAR's fortnightly newsletter, *Lex Terra.*

We congratulate the team for its continuous and praiseworthy collective efforts.

The team of *Lex Terra* wishes to thank all of those who supported this initiative. We would like to express out gratitude to our respected Vice– Chancellor, Prof. (Dr.) Vijender Kumar for his continuous support and timely inputs. We would like to thank Prof. (Dr.) Yugal Kishore, the Centre Head of CELAR for his help and encouragement. We would like to thank Mr. Chiradeep Basak, Centre Co-ordinator of CELAR, who has been a source of inspiration from the outset, along-side his unrelenting contribution to all phases of the job, from planning, to setting clear goals and appraising the outcome. Lastly, we would also like to extend our gratitude to our faculty advisors, Ms. Shannu Narayan and Mr. Nayan Jyoti Pathak for their ideas and relentless support.

Based on our publication's impact factor as well as some requests and suggestions by academicians from other law schools, we have decided to share our publication with all law schools, administrators along with a pool of eminent environmental activists, researchers and lawyers in India and overseas. Since we are not having triskaidekaphobia, we are also accepting contributions from all over India. **So if you are willing to be part of this venture, kindly contribute.**

Our issues goes online every 1st and 16th of each month.

Please keep pouring down your support and concern for mother nature.

Thank you

Happy Reading!

ENVIRONMENT AT STAKE: EXPLORING THE CONGRUITY BETWEEN THE INDIAN CONSTITUTION AND THE ISLAMIC LAW: AN ENVIRONMENT ANALYSIS

Bushra M. Chawla,
Research Scholar,
Aligarh Muslim University

Satisfaction comes with utilization,
Enough is enough of deterioration.
Justifications are too many,
Aftermaths are too deadly.
Sufficiency is for man's need,
And not for man's greed.

"It is Allah who made for you the earth a place of settlement and the sky a ceiling and formed you and perfected your forms and provided you with good things. That is Allah, your Lord; then blessed is Allah , Lord of the worlds."

– Qur'an (40:64)

Man has been endowed with numerous bounties of which he is been made the manager. Environment today has become more of a concern than to be cherished. Indeed man has developed, civilized and is ahead in all the advances of life. Yet this advance is a pernicious step towards the civilization's doomsday.

Water Wrangle

"Fierce national competition over water resources has prompted fears that water issues contain the seeds of violent conflict." – *Kofi Annan*

One of the priciest possessions of mankind is Water. The state of this gift is being deteriorated by the users themselves, unknown of the boon it is for whole of the universe that has reached a pitiful state due to the constant human interruptions. Consequently, the recourse is made to the underground source of water. The existing groundwater bores in many areas can no longer be relied on as an alternative to surface water, the lack of replenishment from the rains is exposing the simple fact that the water table has fallen too quickly due to over-extraction. Groundwater is a critical resource in India, accounting for over 65% of irrigation water and 85% of drinking water supplies. However, on current trends it is estimated that 60% of

groundwater sources will be in a critical state of degradation within the next twenty years.

The problem of shortage of water is grave. Gone are the days when water used to be abundant. Human progress has left the percentage of water so minimal that for this natural resource, abundant at one time, payment has to be made. It is a regretful condition that when a news piece informs that few states are making resolution to install the water meter and charge for excess usage of the same.

Entry 56 of List I (Union List) - Regulation and development of inter-State rivers and river valleys to the extent to which such regulation and development under the control of the Union is declared by Parliament by law to be expedient in the public interest.

Entry 17 in List II (State List) in Schedule VII - Water, that is to say, water supplies, irrigation and canals, drainage and embankments, water storage and water power subject to the provisions of Entry 56 of List-I. It can be seen immediately that it is not an unqualified entry.

Article 252 - 1) Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any Inter-State river or river valley.

This is the legal aspect of water sharing and its management which the constituent assembly envisaged.

The rationale behind the water being made the basic sustenance is provided by the Qur'an- **"And Allah has sent down rain from the sky and given life thereby to the earth after its lifelessness. Indeed in that is a sign for a people who listen." – Qur'an 16:65**

Sooner or later when we introspect we'll surely conclude Thomas Fuller's statement that "We never know the worth of water till the well is dry."

Climate Change - A Chime for a Reaction Time

"Do you not see that Allah sends down rain from the sky and makes it flow as springs [and rivers] in the earth; then He produces thereby crops of varying colors; then they dry and you see them turned yellow; then He makes them [scattered] debris. Indeed in that is a reminder for those of understanding." - Qur'an (39:21)

Man is so occupied in his advancements that he forgot where he is thriving and on what. Results are glaring. India is racing ahead of China when it comes to pollution. Indeed, **"...it is He who sends the winds as good tidings before His**

mercy until, when they have carried heavy rainclouds, We drive them to a dead land and We send down rain therein and bring forth thereby [some] of all the fruits. Thus will We bring forth the dead; perhaps you may be reminded." Qur'an (7:57). How perfect is the nature. So sublime is its mechanism. But least the man knew that his state will be regretful.

The resolution of 'going green' in every aspect seems to strike freshly in the minds of the developed nations. By 2100, global temperatures may rise by 8^0C. Huge levels of temperatures are evident from the rampant floods and earthquakes thus, posing a great threat to the energy sector and more on the agriculture sector which is why the Conference of Parties (CoPs) are being taken seriously by the world powers. Where many debated that the Paris COP21 isn't enough and that odd-even plan seems an odd agenda but something is better than nothing. State is now taking pains to operate the really operative legislative provision i.e. Article 47 of the Constitution of India which mandates the duty on the State to raise the level of nutrition and the standard of living and to improve public health. The state's endeavor can be realized through Article 48 Constitution of India which provides for protection and improvement of environment and safeguarding of forests and wild life.

Unarmored Animals

We have armed ourselves with the latest technological advancements in such a way that we fail to observe advancement of extinction that is taking toll on the wildlife. We have surely devastated the basic homes of the animals while we were building more than what is needed to us. Beatles, birds, tigers, elephants are facing serious extinction. Very recent is the case of Pangolins, often called scaly anteaters, have large keratin scales. Poaching remains the major reason. 'Birds die, as Government turns a blind eye' as reported, truly reflects the scenario which could be acted on time and save those endangered species. And here is the reality check – **"And there is no creature on [or within] the earth or bird that flies with its wings except [that they are communities like you. We have not neglected in the Register a thing. Then unto their Lord they will be gathered." Qur'an (6:38).** That is what is envisaged in the Article 48A of the Indian Constitution to protect the wildlife as the state's policy.

Diminishing Trees and Forests – The Green Beings

Man is playing with the nature by thrashing the forest cover ruthlessly. Protection of trees and forests are much talked about and discussed in black and white but has man felt it ever. Is there ever regret for doing so? The environmentalists are shouting to preserve the environment but least do the developers listen. The situation prevailing in these years is so pathetic that the forests covers are being used as the disposal sites. The law remains unimplemented in spite of that fact that forests rights are being violated. The value of trees and plants can be seen in the Prophet Muhammad (PBUH) teaching - **If a Muslim plants a tree or sows seeds, and then a bird, or a**

person or an animal eats from it, it is regarded as a charitable gift (sadaqah) for him." Moreover he said - **Plant a tree even if it's your last deed.** Such is the status of green beings in reality which is being ignored.

Our Indian Constitution has sufficiently embodied the provisions of the basic sustenance thus, marking its congruity with the Islamic Law that is the Green Revelations to be aptly called.

"The insufferable arrogance of human beings to think that Nature was made solely for their benefit, as if it was conceivable that the sun had been set afire merely to ripen men's apples and head their cabbages." - Savinien de Cyrano de Bergerac

It is to be reminded again that our environment is at stake. We can emancipate our earth from the clutches of pollution by following a simple rule which is 'don't think, just do it' attitude. 'Care for the air' and preserving our green beings. It is to be noted that taking individual responsibility is the need of the hour.

This is the final call to be an environmentalist and step up and actually go green. For we need earth and earth needs us.

GLOBAL WARMING AND CLIMATE CHANGE: CHALLENGES AND POLICY PRESCRIPTION FOR LOCAL INITIATIVES

Varsha Pande,
Semester- VI,
Hidayatullah National Law University

"The process and effects of global warming are a lot like a pressure cooker being heated on the stove."

-Lawrence Wollersheim

Global Warming

Climate change, also called global warming, refers to the rise in average surface temperatures on Earth. An overwhelming scientific consensus maintains that climate change is primarily due to the human use of fossil fuels, which releases carbon dioxide and other greenhouse gases into the air. These gases trap heat within the atmosphere, which can have a range of effects on ecosystems, including rising sea levels, severe weather events, and droughts that render landscapes more susceptible to wildfires.

To understand global warming and its processes, it is necessary to understand the following key definitions:

"Global warming is a term used for the observed century-scale rise in the average temperature of the Earth's climate system and its related effects. Scientists are more than 95% certain that most of global warming is caused by increasing concentrations of greenhouse gases and other human caused (anthropogenic) activities."

Greenhouse gases (GHGs) are gases in the atmosphere that absorb and emit heat radiation within the thermal infrared range. The main greenhouse gases in the Earth's atmosphere are water vapour, carbon dioxide, methane, nitrous oxide, and ozone.

The heat absorbing and emitting process of the greenhouse gases in our atmosphere are the fundamental cause of what is called the greenhouse effect.

Global Warming is the increase of Earth's average surface temperature due to effect of greenhouse gases, such as carbon dioxide emissions from burning fossil fuels or from deforestation, which trap heat that would otherwise escape from Earth. This is a type of greenhouse effect.

Our local weather and global climate is agitated, whirled, and "boiled" with each increase of carbon and methane we add to the atmosphere. This also increases the unpredictability of the weather and climate, and dramatically affects the severity, scale, and frequency of storms, droughts, and extreme temperatures.

If man-made dust is unimportant as a major cause of

climate change, then a strong case can be made that the present cooling trend will, within a decade or so, give way to a pronounced warming induced by carbon dioxide. By analogy with similar events in the past, the natural climatic cooling which, since 1940, has more than compensated for the carbon dioxide effects, will soon bottom out. Once this happens, the exponential rise in the atmospheric carbon dioxide content will tend to become a significant factor and by early in the next century will have driven the mean planetary temperature beyond the limits experienced during the last 1000 years.

Runaway Global Warming

Irreversible global warming (aka runaway climate change or runaway global warming) is hypothesized to follow a tipping point in the climate system once accumulated global warming initiates a reinforcing positive feedback loop. This is then thought to cause the global climate to rapidly change (destabilize) until it reaches a new stable state at a new level and range of temperature. This new stable state and new level and range of global temperature within the global climate may stay in that new condition for hundreds or thousands of years or, remain that way permanently.

Astronomers use the expression runaway greenhouse effect which describes the worst state of irreversible global warming as the situation where the climate deviates and destabilizes *catastrophically and permanently* from its original state—as happened on Venus, causing Venus to lose its complete atmosphere out into space.

Effects of Global Warming and Climate Change

Some impacts from increasing temperatures are already happening:

- Ice is melting worldwide, especially at the Earth's poles. This includes mountain glaciers, ice sheets covering West Antarctica and Greenland, and Arctic sea ice.
- Researcher Bill Fraser has tracked the decline of the Adélie penguins on Antarctica, where their numbers have fallen from 32,000 breeding pairs to 11,000 in 30 years.
- Sea level rise became faster over the last century.
- Some butterflies, foxes, and alpine plants have moved farther north or to higher, cooler areas.
- Other effects could happen later this century, if warming continues:
- Sea levels are expected to rise between 7 and 23 inches (18 and 59 centimeters) by the end of the century, and continued melting at the poles could add between 4 and 8 inches (10 to 20 centimeters).
- Hurricanes and other storms are likely to become stronger.
- Species that depend on one another may become out of sync. For example, plants could bloom earlier than their pollinating insects become active.
- Some diseases will spread such as, malaria carried by mosquitoes.
- Ecosystems will change—some species will move farther north or become more successful; others won't be able to move and could become extinct. Since the mid-1980s, with less ice on

which to live and fish for food, polar bears have gotten considerably skinnier.

Role of Local Government in Environmental Policy Formulation

"Think globally, act locally" is a concept that has been applied to the environmental movement for decades. The concept encourages local strategies for protecting the earth, including conservation, recycling, restriction of environmental pollutants and reduction of greenhouse gas emissions.

Climate and Energy: Local governments can reduce greenhouse gas emissions in their communities by implementing policies that improve energy efficiency. According to the EPA, the amount of energy used for government operations can be reduced by up to one third by adopting energy conservation strategies.

Pollution Reduction: Local government officials need to be aware of toxic pollution that damages the environment and affects the health and well-being of residents in their communities. Government officials can apply for federal grants to help reduce toxic pollution. Some program also provides resources to help community leaders understand the risks of pollution and organize efforts to investigate and eliminate the emission of toxins.

Transportation: The EPA reports that older diesel engines are a major source of air pollution due to the emission of nitrogen oxide and particulate matter. These pollutants contribute to serious health issues, including asthma, cancer and heart and lung disease. Local government officials can address diesel engine pollution in their communities by collaborating with environmental groups and private industry. They can also spearhead clean diesel projects and lobby state lawmakers who are responsible for air quality regulations.

Recycling: Local governments can reduce the amount of waste generated by their communities by implementing recycling policies. This can include instituting a residential recycling program; providing recycling support in public areas like parks, stadiums and shopping centres; and purchasing recycled materials for government operations. The EPA Wastes program provides Conservation Resources and Tools that can help local government officials promote resource conservation in their communities.

Natural Disasters: Preparing for natural disasters like floods, hurricanes and earthquakes has become a critical issue for local, state and federal government agencies. Too many communities have had a difficult time recovering from a natural disaster because there was no recovery plan in place. Planning ahead can help lower the cost of environmental cleanup and reduce the risk of contamination from raw sewage, chemicals and other hazardous materials.

Challenges in Implementation of Environmental Policies

Excluding the very ancient period of Rishis and some period of Indian Kingdoms, right from the onset of the Mughal period and thereafter British rule in India, there has been unscrupulous exploitation of natural resources and consequential

degradation of nature. A very big chunk of mineral wealth has already been extracted. Forest was destroyed for building ships and railways. Now, a period has arrived for India to conserve nature and natural resources not only for the present generation but also for the generations to come.

The problem that India faces is its unlimited development aspirations and its limited natural resources. This has given rise to a conflict between the State committed to development in the name of "the greater common good" with catastrophic effects on the rural population mainly the marginalized, poor, women, tribes and peasants. The life-support systems in addition to clean air are common property resources of water, forests and land on which the majority of the people of India depend for survival. Thus, the diversion of resources from sustenance needs to the demands of the market generate conflicts between commercial interest and people's survival. Conflicts on natural resources are therefore conflicts over rights. These conflicts between development plans of the State requiring exploitation of nature and the people dependent for their survival on nature, have given rise to demands for protecting nature and the need to strengthen people's collective rights to common natural resources. A life support system can be shared; it cannot be owned as private property or exploited for private profit.

At state level

Looking at the structure and functioning of SPCBs in all the States in a detailed and critical manner. It explores the pros and cons, and the rules overturned and the impediments the SPCBs face.

Essentially, it says that political appointees who have no scientific or technical background are placed in leading positions. For instance, under the Water (Prevention and Control of Pollution) Act, 1974, the chairman of an SPCB should be "a person having special knowledge or practical experience in respect of matters relating to environmental protection or a person having knowledge and experience in administering institutions dealing with the matters aforesaid".

Looking at rural India, now-a-days industries are being set up in the rural parts of the country, thereby; spreading pollution to the unpolluted areas of the country, the problem at rural level is that they are often unaware of the pollution that is present in their environment.

They are also unaware about the various legislations for the protection of environment.

They don't have financial aid to curb the pollution and to prevent it from spreading or for repairing the damage already done by the polluters.

In the rural areas, usually there is a lack of institutional mechanism for fighting with problems like pollution.

There are fewer than the required number of officials on the boards, inadequate number of meetings held, paucity of training programmes, and low staff strength. For example, the Bihar, Chhattisgarh and Odisha state pollution control boards have not

recruited even one person in the last five years.

The political parties have a vital role to play in rural development. But unfortunately this role has not been effectively realized by any democratic political party so far. The political parties, today, are guided more by party interests rather than by national interests.

Non- governmental actors are not so active at the local level.

Legal Loopholes in Environmental Legislations

It is often argued that our enforcement mechanism is very weak although the laws are very well drawn up. But, a careful analysis of the laws may reveal their inherent deficiencies which are closely linked to lapses in enforcement. Referring to the Water Act, 1974, the key person for enforcement of this Act is the Chairman of the State Pollution Control Board who should be professionally qualified and appointed on a full time basis. How-ever, the Act does not stipulate such requirement. Several State Pollution Con-trol Boards are headed by a part-time Chairman without requisite qualifications and experience. Also, the Member Secretaries of the Pollution Control Boards are often drawn either from administrative service or even forest service who do not have the requisite technical background in pollution control. As a result, it becomes difficult for them to provide proper leadership and guidance to their sub-ordinates. In accordance with the Act, the State Pollution Control Board has to file a case before the lower court for action against a polluting unit and the "onus of proof is vested with the Board. Unlike the Public Interest Litigations (PILs) where the Supreme Court and the Green Benches of the High Courts have been pay-ing special attention in recent years, the lower courts are too busy to devote enough time for environment related litigations.

As a result, thousands of cases filed by the State Pollution Control Boards are still pending for years together. In a good number of cases where decisions are taken, the polluters have been given the benefit of doubt because of technical reasons as the Boards could not adequately meet the "onus of proof.

There are various provisions of the Act, though well-intentioned, are difficult to enforce. For instance, according to Section 18 of the Act, the Central Pollution Control Board can issue direc-tions to the State Boards, which are binding on them. However, at the same time, the Act makes it obligatory for the Boards to comply with the directions of the concerned State Governments. There are oc-casions when the directions of two authorities are not mutually complementary and, at times, totally contradictory. The Act also provides that in the event of failures on the part of the State Boards, the Central Board can take over such functions of; the State Boards with the approval of the Central Government. But, in reality, it is impractical to enforce such provision of the Act.

Policy Prescription for Local Initiatives

Before liberalisation, the licence raj was blamed for preventing fast and equitable growth. Similarly, although environmental regulation is blamed for creating roadblocks for industrial activity, we are

simultaneously failing to protect the environment. A 2014 study by Yale University ranked India 155th out of 178 nations on an overall environmental performance index. On air pollution, we ranked last. The costs of these failures are high. A recent report in the New York Times estimated that air pollution in India may cost us over three years in life expectancy. This does not even count the costs of air pollution in infant mortality, disease and reduced productivity.

We need to recognise the need for reform. The new government has a unique opportunity to revisit environmental law and regulation, left stagnant for decades. The Ministry of Environment and Forests should introduce a structured programme of regulatory reform and follow a three-pronged approach of identifying innovative ideas, testing them in the field to rigorously establish their usefulness, and then scaling up the changes that work well. This is a pathway that both environmentalists and industry would support.

There are many areas where reform can begin. Take air pollution, India's flagship environmental laws, the air and water acts, are built on a dated criminal system where draconian penalties such as imprisonment or industry closure are the main recourse available to regulators. These penalties are so severe — and so time consuming to impose — that they are seldom used. This leads to non-compliance by industry and a bad name for environmental regulation. The solution is to introduce civil fines for environmental offences, and to allow regulators to calibrate fines to the severity of the offence. This would ensure that all violations are punished, but penalties are proportionate and easily imposed.

We also need to take a hard look at the rules themselves. India's command and control regulations impose steep costs on industry, discourage innovation, and place a heavy monitoring burden on regulators. They also do a poor job targeting the total load of pollutants released in an area, the quantity that ultimately matters for health. As new plants are set up in a particular region, the air may grow unhealthier even if most industries adhere to the letter of the law. Once the situation gets bad enough, as in Vapi, Noida or Chandrapur, we see crisis responses such as wholesale industry closures or moratoriums. The way forward might be to use technology to monitor plant emissions remotely and to experiment with market-based environmental regulation such as the coal cess. Another example is an ongoing pilot initiated by the MoEF&CC and spearheaded by Gujarat, Maharashtra and Tamil Nadu.

It aims to test continuous emissions monitoring systems as well as a cap and trade scheme to regulate pollution from industry. The MoEF&CC should support such innovation, learn from small pilots and adopt good ideas if they work. Embracing regulatory innovation could solve many problems at once. When it comes to environmental clearances, our problems are structural. It is obvious that if ministerial intervention is required to get projects started, the system is both broken and amenable to political pressure. Environmental clearances need an independent regulator with independent budgets. We also need to consider how

environmental assessments are carried out, and who should pay and appoint auditors.

A study by researchers from Harvard and MIT in collaboration with the Gujarat State Pollution Control Board showed that when accredited environmental labs were paid and appointed by the factories they were supposed to audit, they produced reports that showed low pollution. This made their data unusable and the audit system a meaningless burden. When the auditors were paid from a common pool and appointed through a lottery, they compiled accurate data. When Javadekar said, "The government believes in environment and development, not environment versus development" he hit the nail on the head. But weaknesses in our environmental laws make it difficult to achieve either of the minister's stated goals

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GREEN REVOLUTION / GREEN HOAX: YOU DECIDE

Vaishnavi Agarwal,
1st Year,
BA LLB, Symbiosis Law School, Hyderabad

Green revolution was a solution to curb the problems of food scarcity caused by an ever increasing population which is growing at a much faster rate than food production. The Green Revolution came in action to prevent deaths caused by starvations, particularly during the Bengal-Famine (1943) period, where four million people (approximately) died of hunger that in eastern India (Bangladesh).

The method is governed by three basic elements:

- Continuing Expansion of farming areas,
- Double-cropping in the existing farmland, and
- Using genetically improved seeds.

The Green Revolution was a technology involving usage of high yielding varieties of two staple cereals (rice and wheat), irrigation or controlled water supply and improved moisture utilization, fertilizers, and pesticides, and associated management skills.

Despite it being a solution to feed the hunger of millions of people; the revolution has a flip side, which cannot be overlooked; i.e. the efforts caused by it on the environment. The article aims to look at this flip side.

GREEN REVOLUTION: A CURSE

The Green Revolution has been a failure. It has led to reduced genetic diversity, increased vulnerability to pests, soil erosion, water shortages, reduced soil fertility, micronutrient deficiencies, soil contamination, reduced availability of nutritious food crops for the local population, displacement of a large number of farmers owning a smaller hectare of land from their land, rural impoverishment and increased tensions and conflicts. The beneficiaries have been the agrochemical industry, large petrochemical companies, and manufacturers of agricultural machinery, dam builders and large landowners.

One of the major drawback of the Green Revolution was that the increase in agricultural production was limited to specific crops like wheat, rice, jowar, maize, etc, while many other crops, primarily pulses and other crops' production was left untouched. It also created lack of variety among crops; it required a significant amount of land and other technological requirements for viable results. Green Revolution monocultures destroyed pulses and oilseeds to a large extent. The nitrogen-fixing crops, the pulses were displaced. The area under wheat had nearly doubled and the area under rice had gone up by five times since the start of the Green Revolution. In the same period, the area under pulses (legumes) reduced by one-half. Production was affected so much so that there was an urgent need to import 'yellow pea dal' and Genetically Modified Organism (GMO) soya oil and palm oil. Neither there was momentous increase in

the production of commercial crops. About 60% of land remained unaffected which indicates disadvantage of limited area.

The Green Revolution led to an imbalance in nutrient status leading to considerable deficiency in Nitrogen, Phosphorus, Potassium (these three collectively known as NPK) Zinc, and Manganese and disturbance of soil texture and its physicochemical properties. The HYV seeds were capable of drawing high nutrients from the soil, thereby reducing the fertility of the soil. Furthermore, Green Revolution also resulted in soil toxicity including excess quantities of trace elements in the ecosystems.

For the desired yield and greater production, a large amount of insecticides, chemicals and fertilizers were used. These pesticides proved to be very harmful, both for the environment s well as for the health of living creatures. For instance, DDT pesticide led to an increased chance of being diagnosed with cancer, infertility, and also has unknown long term effects on the environment. The genetic food also affects pregnant women considerably causing complications and affecting the foetus. Every organism has a significant role to play in the ecosystem but use of such fertilisers results in destroying them , thereby, reducing once again the fertility of the soil as these pests help in proper mixing and aeration of the soil, the excreta of these organisms also adds to the fertility of the soil.

As per the latest statistics released by the Punjab Government, Punjab has over 90 cancer patients per one lakh population. This is much higher than the national average of 80 per lakh. The Malwa region, also known as the 'cancer belt', has the highest average of 136 cancer patients per one lakh of population. Data over the last five years has shown that 18 people die of cancer every day, on an average. The connection is hard to ignore – Punjab with just 2.5 per cent of the agriculture land of the country consumes around 18 per cent of pesticides used in India, a very high number by any standard. There are high subsidies provided by the Government on pesticides in the state and this has led to their indiscriminate use.

For the proper growth of the employed High-yield variety seeds (HYV seeds), large quintals of water or irrigation facilities are must. The false collective notion of the 'High-yield variety seeds', also known as 'miracle seeds' was proved to be wrong by Dr. Palmer. According to his research, these seeds were nothing special, only that they were highly responsive to fertilizers and water. He called these seeds as 'High- Responsive Varieties'. These seeds drained the wealth of the poor farmers, leaving them to suffer from economic complexities.

With the occurrence of the Green Revolution, new irrigation systems followed. Those irrigation systems became a source of drought for the people, who left them parched and ill-hydrated. The over-use of water can increase the probability of droughts. The excess water due to irrigation also causes salinization. The cure is worse than the disease; more water consumption, more drains to get rid of excess water, more energy and capital for desalting.

These cures are neither affordable nor sustainable.

One result of the Green Revolution has therefore been to create conflicts over diminishing water resources. Where crops are dependent on groundwater for irrigation, the water table is declining at an estimated rate of one-third to half a metre per year. A recent survey by the Punjab Directorate of Water Resources has shown: 60 out of the 118 development blocks in the state cannot sustain any further increase in the number of tube wells.

The Green Revolution increased the commercialisation of social relations. It had sown the seeds of political economy in India. After an early experience of prosperity, Punjab farmers were rapidly disillusioned. In 1971-71, the returns on wheat cultivation were 27% on investment. By 1977-78 cultivators complained that their return had fallen to less than two per cent of their investment. Even the well-to-do farmers started to experience the political and economic dislocation and indebtedness that the landless and smaller farmers had experienced immediately. After two decades of the rising debts, and falling profits, the rich poor contradiction had become a Centre-State conflict. Further, since Punjab farmers were Sikh farmers, and the regional party was the Akali party, the Centre-State conflicts were quickly transformed into communal conflicts. By separating issues of agricultural production from the issues of justice, the Green Revolution strategy attempted to diffuse political turmoil. But by-passing the goals of equality and new scarcities, Green Revolution strategy for peace had boomeranged. In creating new polarization, it created new potential for conflict.

The Green Revolution also contributed to economic inequality prevalent in the nation. It resulted in increase in production but also increased economic inequality. Rich and medium farmers adopted technology and there was rapid mechanization of agriculture considering the traditional tools and implements used by the small farmers. According to Bhalla, both in the high yielding wheat and rice area, 'the distribution of operated land has shifted in favour of big farmers'. The rich farmers could afford buying such machinery and they did not employ small farmers. This led to large-scale unemployment among the agricultural labourers. The banks too, provided loans mainly to the rich farmers who were capable of returning the money. The small farmers were thus incapacitated to buy the expensive HYV seeds, fertilizers and pesticides, due to which many were forced to quit out of their business. Due to this, the employment rate dropped to a large extent. This resulted in frustration among poor farmers and the polarisation of the poor and the poorer. There was widespread increase in demand for agricultural inputs like HYV seeds, chemical fertilizers, pesticides etc. And because of short supply of these, traders started supplying them by unfair practices like hoarding, charging more prices. The Green Revolution thus, indirectly widened the gap between the rich and the poor, causing widespread poverty.

This revolution proves out to be paradoxical. Jatinder Bajaj in his study argued that the rate of

growth of aggregate crop production was higher in the pre-Green Revolution years as compared to the post- Green Revolution years. He records of agricultural production before the Green Revolution was clearly not 'dismal'. Nor has the record of production been miraculous after the introduction of the 'miracle' seeds. The usual image that is created to support the image of the 'miracle' is that India was transformed from 'the begging bowl to a bread basket' by the Green Revolution and food surpluses put an end to India's living in a 'ship-to-mouth' existence. This common belief is based on the impression that foodgrain imports after the Green Revolution substantially declined. In fact, however, food imports have continued to be significant even after the Green Revolution.

CONCLUSION

Green Revolution or Green Hoax is like a sugar-coated pill, sweet from outside, but bitter from inside: which came into picture to eradicate food scarcity and to make India a self-reliant nations in terms of food security, but it in order to fulfil the objective with which it came into force has adversely affected the environment, via directly or indirectly degrading ecosystem creating severe health complications, both for homo sapiens and animals, thereby hampering the environment at large.

An epidemic of cancer is being spread by chemical monocultures, thereby resulting in farmer suicides if proper production is not meted. In order to protect the environment and also to avoid such situations, farmers should be encouraged to indulge in organic farming and to undertake such eco-friendly techniques and mechanisms to meet the food demands of the nation. Green manuring, an ancient practice in rice cultivation has been found to double the response to nitrogenous fertilizers. This type of farming, being less expensive is viable for Indian farmers and therefore, is well-suited for Indian farmers. People are opting for organic food and the food produced through organic means, it been free from chemicals and harmful elements, thereby resulting in the increase in demands for organic food. Such agriculture techniques needs to be protected and promoted as an agriculture that does not create poverty by haemorrhaging the scarce resources of the agrarian economy for purchase of costly seeds and toxic chemicals, is the need of the hour.

In order to improve the soil productivity, composting method should be adopted. Vermi-composting, which is basically a managed process of worms digesting organic matter to transform the material into a beneficial soil amendment, is needs to be considered.

The Green Revolution has proved that "ecologically and economically inappropriate science and technology can become causes of underdevelopment, not solutions to underdevelopment".

Therefore, we need to adopt such measures that will act as an antidote to the poison spread by the so called 'Green Revolution' and not those measures which act as a catalyst to enhance the adversities caused by it.

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JALLIKATTU NOTIFICATION: LEGISLATIVE INTENT BEHIND 'LIFE' OF ANIMALS

Jitesh Maheshwari ,4th year, BBA. LLB (Hons.)
Jatin Chawla, 4th year, BBA. LLB (Hons.)
Raffles University, Neemrana

Introduction

You cannot kill them but you can torture them for their whole life. This statement draws its inference from the Notification dated 7th January, 2016 passed by the Ministry of Environment Forest and Climate Change which allows Bulls to continue to be exhibited or trained as a performing animal, at events such as Jallikattu in Tamil Nadu and Bullock Cart races in Maharashtra, Karnataka, Punjab, Haryana, Kerala and Gujarat. This Notification was an attempt to overrule the decision of the Supreme Court of India in *Animal Welfare Board of India* v. *A. Nagaraja* which put a ban on Jallikattu and bullock cart races. The reason for the ban by the Supreme Court was that these animal sports inflicts cruelty on the animals and violates their statutory right to live with dignity. However, due to political pressure the impugned notification was passed and the ban has been lifted. The purpose of this paper is to provide a complete analysis of this controversial notification.

A brief history

A notification was passed by Ministry of Environment and Forest dated 11.07.2011 in which the bulls along with other animals banning the exhibition of bulls as performing animal so as to prevent the people from exhibiting them in Jallikattu and other Bullock Cart Races by which the ban was for 4 years. The Supreme Court of India also upheld its validity in *A. Nagaraj case* and even declared its expectation from Parliament to elevate the rights of animals to that of Constitutional Rights. But the Central Government issued the impugned notification making way for the Jallikattu event to continue after the Tamil Nadu Government urged and threatened the Centre to do the same.

Jallikattu Event and Cruelty on Bulls

In *A. Nagaraja Case* the Supreme Court, on the basis of the report submitted by the investigators authorised by the Animal Welfare Board of India, noted the acts of cruelty which are inflicted on the bulls during Jallikattu event. In this event, 80 per cent of the bull's ears are cut to make them able to hear sounds from the back. But by this, the bulls lose their natural ability to receive sounds signals with appropriate positioning. They are also forced to stand together in accumulated waste for hours. Lot of pulling and twisting takes place in the event due to which many bulls suffers from dislocation and fracture of the tail which are extremely painful. Biting of a bull's tail also takes place by the organizers and owners of the animals in the waiting area. They are poked with

sticks by owners, police officials and organizers and deliberately agitated before they are forced into the Jallikattu arena, where bull tamers are waiting. While attempting to flee from these bull tamers, the bulls often injure themselves when they run into barricades, electric polls, water tanks, tractor carriages and police watch towers placed inside the Jallikattu arena. There have been incidents where bulls have fallen into open wells in an agriculture field and jumped more than 10 feet off a narrow road to escape mob carrying sticks causing injury involving muscles, bones, nerves and blood vessels resulting in tremendous pain. .

Before forcefully entering the arena, irritant solutions are rubbed into their eyes and noses causing pain, distress and an intense sensation. To control the bulls before entering in the arena, ropes are tied through their nose which are frequently pulled, yanked or tightened which results in bleeding from the nose as it exerts pressure on the nerve-rich and extremely sensitive septum. These bulls are packed tightly into narrow waiting corridors, forced to stand for more than eight hours in line without any protection from the blistering sun and without being offered food, water and shelter. They are also made to wait for more than eight hours without sanitation facilities because of which they have to stand on their own faeces and urine. Several bulls become recumbent and unable to stand because of dehydration and exhaustion. This often results in injuries or death. These bulls also suffer from chronic pain as well as mental trauma brought on by the injury and the handlers' and bull tamers' cruel treatment.

Bullock-Cart Race and Cruelty to Bull

Various types of bullock-cart races are organized in some parts of Maharashtra. One such type Bailgada Sharyat where there is no person to ride the cart whereas, the bullocks are brought blind folded and let free. They often gets terrified after unfolding sudden exposure to the light and by the huge noise of the large assembled spectators, and starts running in straight on the slope. They are also subject to torture and whipping in order to make them run and are made to run 10 kilometres and more. Cruel practices like beating, twisting of tail, biting tail, poke with spiked instruments, electric shock etc. are done to the bullocks before and during the course of the race.

Legislative Intent behind term 'Life'

If we have a look on various laws enacted by the legislature, both the Centre and State, then we will come to a legitimate conclusion that the Legislative Intent behind the term 'Life' of animals, specially bulls, is based on anthropocentric approach which is that 'Life' means a mere existence. Slaughter of bulls is prohibited in Tamil Nadu by Section 4(1) of the Tamil Nadu Animal Preservation Act, 1958 without obtaining certificate. Even in Maharashtra, there is restriction on slaughter of bulls and bollocks which falls under 'scheduled animals' under Section 6 of Maharashtra Animal Preservation Act, 1976. By these, it can be concluded that although they are too much possessive to preserve animals' rights but, they don't really bother about these innocent animals which are abused for their whole life. It is sad that the expression 'Life' for humans has been evolved so much, but for animals it is still remains as mere existence as per the Legislature.

We all know the controversy which was created recently over beef ban in Maharashtra which also gave rise to the other controversial 'Intolerance Debate'. If the legislature is so possessive, as it appears on the face, with regard to the protection of these cattle, why is it intending to subject them to cruelty for their whole life and in turn harming their dignity.

Conclusion

It is important must value the animals not by its instrumental value but by it aesthetic value. Article 51A(g) states that it shall be the duty of citizens to have compassion for living creatures. In *State of Gujarat* v. *Mirzapur Moti Kureshi Kassab Jamat*, it was observed that one of the objects sought to be achieved by the Parliament by giving Article 51A(g) a status of a fundamental duty, is to ensure that the spirit and message of Articles 48 and 48A are honoured as a fundamental duty of every citizen. Article 51A(g), therefore, enjoins that it was a fundamental duty of every citizen "to have compassion for living creatures", which means concern for suffering, sympathy, kindliness etc., which has to be read along with Sections 3, 11(1)(a) & (m), 22 etc. of The Prevention of Cruelty to Animals Act, 1960.

Maharashtra Government has filed an affidavit in Bombay High Court for Beef Ban Case in which it has stated that "*cattle which has served human beings is entitled to compassion in its old age when it has ceased to be milch or draught and becomes so-called 'useless'. It will be an act of reprehensible ingratitude to condemn a cattle in its old age as useless and send it to a slaughter house taking away the little time from its natural life that it would have lived, forgetting its service for the major part of its life, for which it had remained milch or draught. We have to remember: the weak and meek need more of protection and compassion*." In this is their stand then why are they condemning the innocent cattle to cruelty by exhibition them in animal sport like Jallikattu and Bullock Cart Races.

The Supreme Court has in the *A. Nagraj Case* struck down the whole Tamil Nadu Regulation of Jallikattu Act, 2009 as contrary to The Prevention of Cruelty to Animals Act, 1960 which is quoted as the Magna Carta of Animal Rights. However, it was struck down because it was repugnant to a Central Act and President's assent as per Article 254(1) of Constitution of India. As Animal's Right to Live is a statutory right, it is dependent on the will of the legislature. If it would have been a Constitutional right, then the impugned Notification would have been held unconstitutional for being violative of the provisions of the Constitutions. Being such not the case, it is much anticipated what will be the judgment of the Supreme Court in the petitions challenging the impugned Notifications by the animal activists like Compassion Unlimited Plus Action, Animal Welfare Board of India, etc. It must be further observed here that the petitions has been filed under Article 32 of Constitution of India which can be filed only for the violation of Fundamental Rights, and on 12 January 2016 the Supreme Court admitted the petitions and stay was imposed on Jallikattu event. In *A. Nagaraj case* it was the obiter of the Supreme Court that as "*Article 21 of the Constitution, while safeguarding the rights of humans, protects life and the word "life" has been given an expanded definition and any disturbance from the basic environment which includes all forms of life, including animal life, which are necessary for human*

life, fall within the meaning of Article 21 of the Constitution". It is possible that the obiter in A. Nagaraj Case may become the ratio in the pending case of *Compassion Unlimited Plus Action* v. *Union of India* and the judiciary for an efficient protection of animal rights may include Animal Life under Article 21. If the same is done, then it will be a welcome step by the Supreme Court which will evolve the right of the animals by judicial activism and disallow the legislature to take away the rights of these innocent animals by a procedure of law. However, it is matter of time to see what is actually done by the Supreme Court of India.

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RAMPANT DESTRUCTION OF MANGROVE HABITATS IN INDIA

Siddiqui Saima J. A (8th Semester)
Research Scholar in Law,
Hidayatullah National Law University
(HNLU), New Raipur (Chhattisgarh)

Introduction

India has a vast coastline of 7500 km consisting of diverse ecological components like bays, creeks, estuaries, coral reefs and mangroves. Of all the above named components, mangroves comprises of the most ecologically diverse habitat. They are groupings of dense trees that are resistant to the salty waters of the sea. Mangroves nurture a wide diversity of flora ranging from algae to trees, and fauna consisting of aquatic and semi-terrestrial animals. It forms an extensive habitat to the biological diversity of unique plant and animal species. This biodiversity mainly thrives on mangroves and the ecological services offered by them.

Mangroves are a comprehensive ecosystem that nurtures many biotic and abiotic components and features. This makes them perfectly suitable to satisfy and sustain different human ventures. For instance, mangroves support different avocation like cultivation, aquaculture, industrial use, mining, fishing; it also offers products like wood, fuel wood, timber, and herbs that can be used for many purposes. Practically, many developmental and commercial activities like urbanization and housing in coastal areas also depend on mangroves. However, human activities have been reaping undue commercial advantages at the cost of ruining the mangroves beyond rejuvenation, and rampantly destroying them.

Unsustainable use of mangroves for conducting avocations has led to severe ecological crisis in India. It has resulted in the destruction of habitat of the precious flora and fauna. Many marine and fresh water species are threatened and are at the verge of extinction. Coastlines have become prone to the physical action of nature like soil erosion, floods, cyclones, storms and high tides. Unsustainable use of mangroves has made coastal areas directly prone to a rise in sea level and to climate change. On the other hand, many ecologically threatening activities like aquaculture and mining have given rise to marine pollution and rendered many coastal zones unfit for rejuvenation.

In the backdrop of such emergent scenarios, there is a need to adopt a holistic approach of conservation. The state, several entities, industrial units, communities and citizens need to come together to protect mangrove habitats. The state has to come up with stringent policies to regulate the use of mangroves and impose vigilance to check its misuse. Entities and communities have to impose self-restrain while utilizing the ecological services of nature. They have to aid and supplement the state in conserving the mangrove habitats in India.

Rampant Mangrove Destruction and Yearning Ecological Consequences

More than 35% of world's mangroves have been extinguished, and much to the surprise, the percentage of mangrove extinction is as high as 50% in India. Once upon a time, India had 6,749 sq. km of mangrove-cover, which was the fourth largest cover of mangrove in the world. However, a recent assessment shows that there has been a sharp decline in the cover of mangroves in recent years. The total area under mangroves now extends only up to 4,628 sq. km or 0.14% of the total area of the country. An overall analysis of the factors leading to degradation of mangroves in India suggests that most of the serene habitats of mangroves have become subjected to the unsustainable development in India. Such development has failed to strike a chord between development and conservation of mangroves, thereby perpetuating many dangerous developmental activities which have taken a toll on the mangrove habitats in India.

Mangroves have been ruthlessly uprooted and distorted to clear way for urbanization and housing along the Indian coastline. Urbanization, especially the unplanned urbanization, has caused the worst onslaught on natural environment in the present century. Mangroves are no exception to such onslaughts. Urbanization in cities, including congested metros like Mumbai, has destroyed the mangrove habitat. Urbanization has claimed land which in turn led to the conversion of mangroves for urban development. As a result of this, large swathes of mangrove habitats have disappeared or have been degraded in recent years. Construction in coastal cities has come at logger head with the preservation and protection of mangroves; however, the former has pragmatically overridden the later concern.

Mangroves are being equally subjected to diverse industrial use and commercial activities in India. Industrial use of mangroves, like setting industries in their vicinity and accruing mangrove resources, have led to serious distortion of mangrove habitats in eastern and western Indian coastlines. Mangroves are industrially exploited for obtaining natural products like charcoal, trees, plants and herbs. It is often subjected to operations like tanning. They are often converted into industrial estates and are used for supporting forest industries and extension of harbors and docks on ports. Industrial effluents, untreated wastes, fatal pollutants and chemicals released from industrial units are often discharged in mangrove forests. Such untreated effluents and pollutants are discharged in mangroves in gross violation of the Water Pollution (Prevention and Control of Pollution) Act, 1974 that prohibits any such discharge of untreated effluents in streams, wells or land.

Mangroves are also being often reclaimed for the expansion of farming in India. The increasing demand to meet higher rates of food output has started exerting pressure on natural resources like mangroves to support cultivation. Remote sensing and satellite images from coastal areas in India show that agriculture is an important factor responsible for the conversion of mangroves. Paddy cultivation has been mostly undertaken in the mangrove habitats in India. Gradually, problems like

decreasing fertility of soil, lack of availability of fresh water and shrinking profit finally paved way for shrimp farming on agricultural fields. Nevertheless, in spite of conversion of agriculture to aquaculture, the mangrove area under agriculture has increased considerably.

Lately, mangroves in India have badly fallen prey to the commercial practice of shrimp farming. Development of shrimp aquaculture has become a controversial issue in India. Amongst some substantial environmental problems like water pollution, salinization of wells and paddy fields, and destruction of fishes, falls the critical conversion of mangroves to support aquaculture. Mangroves have been blatantly destroyed due to the modern practice of shrimp farming which is more intensive and ecologically-threatening. Shrimp farming has been responsible for about 80% of the conversion of mangrove lands on the eastern coast of India. Policy regulation and the protected status of forests under the Indian Forest Act, 1927 have also been unsuccessful to prevent the said conversion of mangrove lands to shrimp farms in recent times.

Felling of trees has become a common phenomenon in the mangrove habitats of India. There has been indiscriminate felling of trees and lopping in mangrove sites for the collection of wood, fuel wood and timber, especially in the places close to human habitats. The felling of trees has also increased in order to meet the demand of firewood supply in cities. Trees are often cut and left in the forests after extracting requisite timber from them. There are constant reports of illegal felling of trees in mangroves to catch fishes and build salt pans. Mangrove forests are also being cleared to build resorts and hotels for recreation and yielding huge profits. Mangrove forests are being openly converted to non-forest uses in spite of stringent statutory prohibition on subjecting forest to non-forest use without prior approval of the Central Government under the Forest Conservation Act, 1980.

Along with the above alarming factors, there are several others that have resulted in damaging the mangrove habitats. Activities like mining, blasting, over-fishing, and the illegal collection of mangrove fruits are also affecting the mangrove habitats in India. Out of all the preceding activities, mining has the potential to damage the ecology to a tremendous extent; this even includes the irreversible loss of natural environment including mangroves, rivers, creeks, estuaries, marine ecology, flora and fauna, to name a few. Besides the human activities that are affecting mangrove, natural actions like storms, cyclones, high tides, earthquakes, tsunamis and heavy rains also have a tendency to damage them.

Mangroves provide several important ecological services to nature and humankind. They act as barrier against storms and cyclones. Such barriers protect the land behind mangroves from destruction. They also create and provide *buffer zones* against flood and soil erosion. Mangroves trap fine sediments that get carried away to the coast by flood waters. Mangroves also help in enriching the marine environment and biodiversity. There is a significant export of nutrients from mangroves to coastal zones. They also prevent inorganic nutrients from sinking into the sea through swift flowing

terrestrial run-offs. Mangroves help in synthesizing the organic material by absorbing the inorganic nutrients. They have high potential for supporting biological diversity; mangroves serve as nurseries for prawns, lobsters, crabs, and fishes like mullets. They help in protecting threatened species like crocodile, turtle and pelican.

The above-noted ecological benefits lie at risk with the increasing unsustainable use of mangroves in India. Disappearance of mangroves has ultimately resulted in the disappearance of its ecological services that prevented soil erosion, added nutrients to marine ecology, nurtured biodiversity and act as staunch buffer zones. Activities like urbanization, agricultural expansion, aquaculture, industrial use, mining and felling of trees in mangrove habitats have not only distorted the mangroves but have also posed severe challenges like danger to biodiversity, climate change, extinction of species, marine pollution, to name a few. Such activities have resulted in *habitat destruction* wherein countless species of flora and fauna have lost their natural habitats within mangroves. More than 1300 species of fishes, 30 species of marine animals, 26 species of sea snakes, 5 species of seas turtles are at risk of dying; also marine floral diversity including 844 species of marine alga, 14 species of sea grasses and 69 species of mangroves along the Indian coastline are at threat of being damaged or possibly extinct due to the unsustainable use of mangroves.

Loss of mangroves for supporting urbanization has made cities more vulnerable to natural disasters like storms and cyclones. Coastal cities have become more prone to the anticipated rise in sea-level due to climate change and global warming. Cities have lost the natural shield that mangroves once provided and offered against flooding during monsoons and high tides. Large swathes of mangroves that have disappeared due to urbanization have resulted in the death of several animal and plant species along the Indian coastline. On the other hand, shrimp farming in mangrove habitats has resulted in the destruction of mangroves and subsidence of land. It has caused severe salinization of ground water, obstruction to natural drainage of flood water, pollution of ponds and other sources of water. Abandoned shrimp farms remain absolutely unsuitable for any other use and in pathetic conditions, which are beyond rejuvenation.

Mangrove is a *comprehensive ecosystem* in itself. It consists and comprises of many other natural entities like dense trees, core-forests, litter forest floors, mudflats, water bodies (rivers, bays, intertidal creeks, backwaters, and channels), sea weeds and coral reefs. Destruction and damage to mangroves by the above-mentioned activities also affect and destroy the said natural entities. Thus, destruction of mangrove is *multitude destruction* in itself; it causes harm to other biotic and abiotic species as well. The damage is not limited to this extent. Mangrove forms an interface between land and water, and fresh and salty water. Any form of pollution and loss of ecological services of the mangroves due to unsustainable development also affects the land and water- fresh as well as salty. Mining in mangroves results in unabated pollution of air, water and soil, loss of biodiversity and

extinction of species in mangroves. Mining of sand, gravel in mangrove habitats erodes the population of trees, density of forests and the number of flora and fauna.

Indiscriminate use of mangroves has jeopardized the traditional living of many fishermen in coastal India. Fishermen are left with no avocation and occupation due to the destruction of mangrove habitats and loss of fishes. They have no option but to migrate inland in search of other alternate sources for sustenance. It must be noted that traditional fishing has acquired the status of culture in many states and any disruption in *cultural traits* directly affects the lives, livelihood, property and occupation of the affected fishing communities.

Conclusion and Suggestion

Mangroves are at threat and are rapidly eroding in numbers. In the light of such situations, it becomes incumbent on all stakeholders- state, entities, communities, citizens to adopt a holistic approach to conserve mangrove habitats in India. The state must legislate on specific legislation to conserve mangroves in India. Unlike the present regime where mangroves are protected under piecemeal regime of forest, water and wildlife laws, there is a need to have a complete and specific legislation devoted to mangrove conservation. The government should also formulate and revise policies to ensure better protection, and wise and judicious use of mangroves in all coastal regions. Housing, urbanization, agriculture, industrial and mining policies must also be kept in view of the agenda to protect mangroves from any unsustainable use.

Along with the state, the entities and industrial corporations must exercise self discipline and utmost restraint from misusing mangrove resources. Commercial gains and short term profits must not override the concern to safeguarding mangroves. Similarly, care must be taken that all compliances are made with environmental legislations on air, environment protection, forest, mining, water and wildlife to avoid misuse of mangroves. The traditional communities must also practice sustainable usages to conserve natural services of mangroves. The state must adopt the traditional knowledge of the communities to protect mangroves. Last but not the least, every individual has a sacrosanct fundamental duty to safeguard natural environment which includes mangroves. Every stakeholder has to assume the legal and moral responsibility to protect the serene ecosystem of mangroves in India.

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NGT CRACKS DOWN ON SRI SRI RAVI SHANKAR'S WORLD CULTURE FESTIVAL

Deepti Bajpai

IV Year, BA, LLB (Hons),

RMNLU , Lucknow.

Introduction

World culture Festival, an event to *"celebrate the diversity in cultures from across the world while simultaneously highlighting our unity as a human family*" , was organized by The Art of Living Foundation by Sri Sri Ravi Shankar from 11th to 13th March, 2016. Around 3.5 million guests were supposed to attend the event. Eminent personalities and dignitaries like, Prime Minister Narendra Modi , Finance Minister Arun Jaitley, Delhi Chief Minister Arvind Kejriwal and Uttar Pradesh Chief Minister AkhileshYadav, were suppose to be the participants in order to promote the objective of the event, which aims to bring together senior leaders from business, government, politics, science, NGOs, faith-based organizations, sports, academia and media to reflect on the paradigms of leadership needed to maneuver the world of today.

Mired in controversy

The event is scheduled to happen on the flood-plains of river Yamuna. The Foundation aims to set a Guinness Book of World Records with a stage spread over an area of seven acres. The event was recently mired in controversy as the Foundation was accused of ruining the fragile plains and destroying the ecosystem. The Court in January had issued orders against debris on the plains dumped due to construction work. The Court also chided the Delhi Development Authority (DDA) for shortcomings on their part to keep vigil. To this effect, the Foundation issued a statement saying that the debris were already lying on the plain and was dumped by people involved in adjoining construction activities. This resulted in an investigation followed by order of the National Green Tribunal (NGT) in March on the issue of polluting 1000 acres of the Yamuna bank. Later on , due to the criticism by the media and various environmentalist President Pranab Mukherjee withdrew from the invitation because of such environmental concerns.

Sri Sir Ravi Shankar defended the event saying that it was an event on the lines of Olympics and that he should be appreciated for hoisting such a grand Fest.He even went on to say that the investigations by NGT were biased. Even the Government defended the actions and said that there were no environmental concerns and all permissions were obtained.

Not only environmental concerns, the event were also criticized for roping in the Army for building bridges for the event. Amidst all these, NGT did not come down softly on the issue of environmental degradation and issued orders against the Foundation fining the responsible authorities for possible damage. The orders are discussed as under:

National Green Tribunal (Order on March 3rd 2016)

On March 3rd, it was highlighted via order that DDA granted permission for 24.4 hectares of land. But reports by the NGT-constituted expert committee recorded damage on 50-60 hectares of land.

The way ahead for the Foundation

National Green Tribunal (Order on March 9th 2016)

The Court questioned how the clearances were granted by the Ministries and whether Environmental Impact Assessments was not required for a temporary structures. The Bench also asked DDA how permission was granted for two pontoon bridges being constructed for the event.The Tribunal directed the Foundation to pay a compensation of Rs 5 Crores before the commencement of the event. The Committee which carried out the investigation was asked to propose steps and cost for restoration works. Tribunal also said that changing topography and obstructing the natural course of the river were not temporary structures and required assessment by DDA. DPCC and MoEF were criticized for not properly evaluating ill-effects. Foundation was asked to obtain permissions from police, fire department, etc. They constituted a committee of DPCC and other officials to issue further directions.

National Green Tribunal (Order on March 10th 2016 and March 11th 2016)

It was declared the DPCC, CPCB and the MoEF shall issue directions as stated in the previous day order. Foundation submitted an affidavit saying that it will adhere to directions issued on March 9th. The Court asked the concerned authority that no pollution should be caused during the event and the waste should be disposed off according to relevant rules. NGT also said that the amount of 5 Crores was as compensation under the NGT Act and not as a penalty. The Tribunal asked to pay twenty- five lakhs and the rest within a stipulated period, listing the matter on 4th April, 2016. The Supreme Court has refused to entertain any plea against the said event. However, the Foundation isn't satisfied with the order of the NGT and shall appeal to the Supreme Court against it.

The Right Path To Be Taken:

The question that arises out of the whole issue is that can an event be given more important than ecological balance? The cost of ecological damage cannot be quantified. Without proper assessments even temporary structures can do permanent damage. The controversy raises concerns about how the various departments helped to speed up the process for clearances and in the garb of paucity of time , various important factors like permanent damages assessment were shoved aside. The aggrieved approached the doors of NGT at the last moment, making it impossible to cancel the event or even evaluate the damage caused by the event to the environment. The blame shifting between various organs of the Government as to who is responsible for the fiasco has been another appalling factor. The same requires the intervention on the

part of the Supreme Court. Even after the Tribunal has given a go ahead for the event, the Apex Court needs to delve deeper and ensure that when events of such great scale are conducted, all authorities give clearances after proper assessment of environmental impact even if the structures are temporary in nature. The matter is now listed for April. The Foundation may also appeal against the fine imposed. It only remains to see what the Apex Court will do to stop such a debacle to occur in the future.

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BUDGET 2016 AND ENVIRONMENTAL FUNDING FOR INDIA

Chiradeep Basak,
Assistant Professor of Law,
National Law University, Assam

Environmental activists, thinkers and scholars have expressed great dismay over the budget 2016 from environmental point of view but before we delve into that arena, we must look into India's stand in global arena. According to Yale Center for Environmental Law & policy, Center for international Earth Sciences of Columbia University & World Economic Forum's Environmental Performance Index (EPI) 2016, India has secured 141th rank among 180 countries across the globe. EPI ranks performance on high- priority environmental issues in two areas: protection of human health and protection of ecosystems. There are more than 20 indicators dealing with nine issues. EPI indicators measure country proximity to meeting internationally established targets or, in the absence of agreed targets, how nations compare to one another. Albeit she has performed better than last EPI, where she stood 155th, her sector specific performance is not up to the mark.

The EPI report of 2016 specifies that India has launched an Environmental Sustainability Index (ESI) at the state level, with a focus on critical in- country issues such as population pressures, waste management, and environmental budgets. In 2011, Centre for Development Finance of Institute for Financial Management and Research released an Environmental Sustainability Index for Indian States. This index considered air quality, water quality, land use, agriculture, forests, biodiversity, waste management, energy, human health, disaster and more importantly environmental budget as indicators to draw a comparative interstate driven force pressure state impact response framework.

As per this index, except Jammu & Kashmir and West Bengal, most of the states with higher ESI score revealed higher allocations to environment in their budgets. In January 2012, the then planning commission (currently known as *Niti Ayog*) took the initiative to develop an EPI, along with the then Ministry of Environment & Forest. From 2012, the ministry has rationalized eight Centrally Sponsored Scheme, among which EPI is one. The XII five-year plan has given due importance for a "Faster, Sustainable and Inclusive Growth". The Environment Ministry, as per this plan document has been allocated an outlay of 17, 874 crores, which works out to 0.41% of the Plan allocation across various ministries/departments as against a share of 0.42% or 9231 crores in the XI five-year plan.

As regards budget of 2016, the apprehension of an environmentally cautious mind is quite palpable but we should also appreciate some of the significant measures taken by the current government. In addition to the proposal of renaming the "Clean Energy Cess" into "Clean Environment Cess", the government also proposed to

substantially enhance the cess on lignite, coal and peat. The generated amount will be utilized to develop renewable energy sources and abatement of river pollution. This is a noteworthy initiative because within this current government's regime, the amount of cess has increased eight times higher; from Rs 50/tonne to Rs 400/tonne in last two years. An amount of 2250 crore has been proposed to be allocated for Ganga River Cleaning Programme. This amount will be generated from the proposed Clean Environment Cess only. Until now, government has managed to fund its river cleaning projects through several sources, which also includes World Bank but this proposal for allocation is a new move to preserve, protect and abate river Ganga from pollution.

The government proposed to levy the infrastructure cess of 1% on LPG, CNG and petrol vehicles, 4% on high engine capacity and 2.5% on diesel vehicles. As per the said proposal, the amount collected from this cess will be employed to improve public transports, roads and check air pollution. This is a welcome measure from government in current budget. "The Union budget has made explicit reference to the pollution and traffic situation in Indian cities as a matter of concern. To address this, an infrastructure cess will be levied on all cars. The differentiated tax based on pollution potential of technologies and polluter pay principle is an import step forward, this revenue should be spent on pollution control measures"

The slew of proposals announced by the government in the Budget will affect coal based industry and electricity prices. For wind energy sector, the government capped the accelerated depreciation tax benefit at a maximum of 40% from April, 2017. In a way, the budget came with mixed surprises for the power sector. The government also proposed for diversification of power generation, including nuclear power with an objective to come up with a comprehensive plan for next two decades. However, the transmission and distribution sector remained untouched this time. The budget promoted renewable energy with an allocation of 5036 crore against current 216 crore for current FY. Although this proposal looks quite promising but precedent shows that money wasn't disbursed for renewable energy projects till August 2015. Hence effective utilization of these funds remain a big question for the days to come. If we refer India's intended nationally determined contributions, the cess on coal will form the corpus of National Clean Environment Fund. As per India's submitted INDC, a total collection of INR 170.84 billion is being used for 46 clean energy projects but as mentioned above the funds utilization has been questioned by several think-tanks. Budget 2016 didn't specify anything on National Adaptation Fund's allocation, which according to the INDC is of INR 3500 million. India's stand of common but differentiated responsibility and climate justice has been challenged by western countries already because of her current emission figures. Hence, the question remains, how to meet these international commitments, if we don't manage to tap funds through CBDR. There is no doubt that Green Climate Fund has failed to meet its target already and private finance stepped in, to meet the global targets under United Nations Framework Convention on Climate Change. The initiative of 14th finance commission

on incentives for creation of carbon sinks should have been revisited to further the boost it has created by conditioning USD 6.9 billion on the basis of forest covers.

From environmental scaffold, the current budget seems quite promising despite some setbacks. If India really wish to perform well with respect to ecosystem vitality and environmental health, she should take pro active measures in effective utilization of all these funds by creating a proper symmetry in the entire environmental governance of India. We have to set aside our differences and take environmental challenges as a matter of common concern and go ahead with necessary measures from time to time to meet all those targets we have set, both globally as well as nationally.

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