

Cement Plants: Boon or Bane to Himachal Pradesh

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ABSTRACT: The outline of the research paper is as follows. Himachal is a hilly state and used to be dust free State. It is one of the least polluted states of the country and it is full of natural flora and fauna. But at this time, 7 Cement Plants are functioning in the State and three of them are within an area of less than 50 kms and many more has been sanctioned. Now, there was curiosity in Researcher's mind that whether these Plants has really benefitted the State. So, the Researcher took this study.

Now the question arises is it right to establish polluting industries such as cement plants in this naturally beautiful and vegetation lushed State? Most of the cement plants in this State are established in the lap or peak of the mountains after cutting thousands and thousands of trees. Establishment of these plants may have benefitted one generation but the coming generations are at loss only. One can clearly understand after just seeing the location of these plants that the EIA Notification has not been implemented properly as most of the plants are functioning in the areas which are thickly populated.

The proposed paper concludes with key message that no doubt development is necessary but it should not be at the cost of natural resources and proper steps should be taken to control the ill effects of such developmental activities.

1.1 INTRODUCTION: Most of the population of this State depends on agriculture for its survival and natural resources of water fulfill the basic requirements of the locals. Now the question arises is it right to establish polluting industries such as cement plants in this naturally beautiful and vegetation lushed State? Most of the cement plants in this State are established in the lap or peak of the mountains after cutting thousands and thousands of trees. Establishment of these plants may have benefitted one generation but the coming generations are at loss only. One can clearly understand after just seeing the location of these plants that the EIA Notification has not been implemented properly as most of the plants are functioning in the areas which are thickly populated.

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66% of the total area of Himachal Pradesh is covered with deciduous and evergreen coniferous forests. Himachal Pradesh lies between 30.22'40" to 33.12'44" North latitude and 75.47 to 79.04 East longitude. The total area of Himachal Pradesh is 55,673 sq.km. with population of 68,64,602. This State is divided into twelve administrative districts.²

1.2 MATERIAL AND METHODS: The Researcher is working on the research topic "Cement Plants: boon or bane to Himachal Pradesh" for which the Researcher chose "Questionnaire Schedule for Local Residents". The Researcher chose a 10% of random sample of the population.

The study was conducted in three districts of Himachal Pradesh where seven cement plants are functioning at present. Primary data was obtained for the study through the structured questionnaire as well as personal interview with the people residing around these cement plants.

1.3 RESULT AND DISCUSSION: The Researcher chose a 10% of random sample of the population for "Questionnaire Schedule for Local Residents" by using Simple Random Sampling Method. The nature of study is exploratory, aiming to explore relationship between industrial development and environmental conditions of the area at micro level. Interview schedule contained both type of close and open-ended questions including the variables such as gender, age, educational qualification and year of establishment of the plants.

The variables chosen by the Researcher for the purpose of Data Analysis are:

- (1) Gender;
- (2) Educational Qualification; and
- (3) Age.

² Dr. Syed and RPH Editorial Board, *Himachal Pradesh; General Board, Ramesh Publishing House 1*(New Delhi, 2015).

Table 1: Population on the basis of Gender

| Sr. no. | Gender | Population | Percentage |
|---------|--------|------------|------------|
| 1. | Male | 693 | 59% |
| 2. | Female | 483 | 41% |

After analyzing the sample chosen, i.e. 10% of the population, the Researcher found that the total number of population selected is 1176, out of which 693, i.e. 59% of the total sample selected is male and 483, and i.e. 41% of the total sample selected is female which is shown in Table number 1.

Table 2: Population on the basis of Education Qualification

| Sr. no. | Education Qualification | Population | Percentage |
|---------|-------------------------|------------|------------|
| 1. | Illiterate | 38 | 3% |
| 2. | Primary | 79 | 6% |
| 3. | Middle | 263 | 21% |
| 4. | Metric | 294 | 23% |
| 5. | Plus Two | 323 | 25% |
| 6. | Graduate | 196 | 15% |
| 7. | Post-Graduate | 32 | 3% |
| 8. | Professional Diploma | 51 | 4% |

Table 2 shows that out of the total sample chosen, 38, i.e. 3% of the sample chosen, are illiterate, only 79, i.e. 6% of the sample chosen, are primary educated, 263, i.e. 21% of the sample chosen, received education till middle standard, 294, i.e. 23% of the sample chosen, are metric qualified, 323, i.e. 25% of the sample chosen, are +2 educated, 196 i.e. 15% of the sample chosen, are graduates, 32, i.e. 3% of the sample chosen, are post-graduate and only 51, i.e. 4% of the sample chosen, hold professional and technical diploma.

Table 3: Population on the basis of Age Group

| Sr. no. | Age-Group | Population | Percentage |
|---------|-----------|------------|------------|
| 1. | 18-25 | 86 | 7% |
| 2. | 25-32 | 201 | 17% |

| | | | |
|----|-------|-----|-----|
| 3. | 32-39 | 220 | 19% |
| 4. | 39-46 | 258 | 22% |
| 5. | 46-53 | 172 | 15% |
| 6. | 53-60 | 143 | 12% |
| 7. | 60-67 | 60 | 5% |
| 8. | 67-74 | 21 | 2% |
| 9. | 74-81 | 15 | 1% |

The third variable chosen by the Researcher is age. And Table 3 shows that 86, i.e. 7% of the sample chosen, people fall in age-group of 18-25 years, 201, i.e. 17% of the sample chosen, in the age-group of 25-32, 220, i.e.19% of the sample chosen, in 32-39, 258, i.e. 22% of the sample chosen, in 39-46, 172, i.e. 15% of the sample chosen, in 46-53, 143, i.e. 12% of the sample chosen, in 53-60, 60, i.e. 5% of the sample chosen, in 60-67, 21, i.e. 2% of the sample chosen, in 67-74 and 15, i.e. 1% of the sample chosen, people fall in the age-group of 74-81.

1.3.1 Analysis of the Sampling: The response of the Respondents to whether the Cement Plants are boon or bane to them is as:

1.3.1.1 Effect on traditional occupation:

Table 4 shows the distribution of answers to the 10th Question in the questionnaire, asking whether the traditional Occupation affected, 811, i.e. 68% of the sample chosen, out of the total sample chosen by the Researcher says that their traditional occupation has been affected while 376, i.e. 32% of the sample chosen, said no to it.

Table 4: Effect on Traditional Occupation

| Effect on Traditional Occupation | |
|---|-----|
| Yes | No. |
| 811 | 376 |

Traditionally, people surrounding the cement plants used to grow wheat, maize, lentils, sugarcane and other seasonal fruits. Animal husbandry was another source of livelihood. At the place of cement plants, there used to be lush jungles which were full of natural vegetation which was also one of the source of livelihood of people as they used to collect firewood from here and used to graze their cattle here and obtained other herbs. Because of these jungles, there were natural sources of pure water which fulfilled the needs of locals. Most important because if these jungles environment was pollution free and health rejuvenating.

But the establishment of cement plants has affected all this very badly. It is clear from the data collected that agriculture and animal husbandry is the traditional occupation of almost all the respondents residing around these cement plants and above Table shows that 68 % of the sample chosen says that their traditional occupation has been affected in one way or another after the establishment of the Cement Plants. Before the establishment of cement plants, there used to be forest full of trees and plants and at some places land was quite fertile. As after the establishment of these plants, natural water resources at most of the places has dried up, all the crops cultivated around these plants are badly damaged by the dust generated from these plants. Use of pesticides has increased. There is no production of fruits, vegetables and lentils after the establishment of these plants. The dust generated, which is full of chemicals, from these plants damage the fodder and therefore there is less milk production in animals, their reproduction capacity has effected badly, the skin of animals has become rough due to dust and after eating this damaged fodder, many animals has died or are suffering from ailments. Apart from this many of the respondents has lost land itself to do their traditional occupation.

1.3.1.2 Provisions by the Cement plant Authorities on different fields:

Table 5 shows the distribution of answers to the 11th Question in the questionnaire, asking whether the authorities of the Cement Plant have made any provisions in any of the different fields, 490, i.e. 14% of the sample chosen, out of total sample chosen, said that the concerned authorities has made provisions in the field of education while 686, i.e. 16% of the sample chosen, said no to it. 547, i.e. %

of the sample chosen, out of total sample chosen says that the Cement Plant Authorities has planted in the concerned areas while 629, i.e. 3% of the sample chosen, says no to it. 850, i.e. 3% of the sample chosen, out of total sample chosen says that the Cement Plants have proper Disposal Sites while 275, i.e. 3% of the sample chosen, says no to it and 51 , i.e. 3% of the sample chosen, says that they don't know anything about it. 717, i.e. 3% of the sample chosen, out of total sample chosen says that the Cement Plant Authorities has taken steps in the field of health while 459, i.e. 3% of the sample chosen, says no to it.

Table 5: Provisions by the Cement plant Authorities on different fields

| Sr. no. | Fields | Yes | No | Don't Know | Percentage |
|---------|---------------|-------------|-------------|------------|------------|
| 1. | Education | 490 | 686 | 0 | 14% |
| 2. | Plantation | 547 | 629 | 0 | 16% |
| 3. | Disposal Site | 850 | 275 | 51 | 25% |
| 4. | Health | 717 | 459 | 0 | 21% |
| 5. | Any Other | 814 | 362 | 0 | 24% |
| | Total | 3418 | 2411 | 51 | 100 |

Table 5 gives very crucial results as it shows that these cement plants has done negligible work in the field of social and environment upliftment, however, they are fully exploiting the natural resources of these areas for there benefit. They have cut thousands of trees but planted nothing, affecting health not only of humans but of other forms of lives also but providing no health facilities.

1.3.1.3 Adverse Effects of Cement Plants:

Table 6 shows the distribution of whether the Cement Plant have any adverse effects, 841, i.e. 3% of the sample chosen, Respondents said that yes the Cement Plant has adverse effects on health and 335, i.e. 3% of the sample chosen, said that it does not have any adverse effect on health.

And 931, i.e. 3% of the sample chosen, Respondents said that the Cement Plant does have adverse effect on the environment while 245, i.e. 3% of the sample chosen, said no to this. 1135, i.e. 3% of the sample chosen, respondents said that the Cement Plant has adverse effect apart from health and environment while 41, i.e. 3% of the sample chosen, said no to it.

Table 6: Adverse Effects of Cement Plants:

| Sr. No. | Adverse Effect on Environment | Population | | |
|---------|-------------------------------|-------------|------------|------------|
| | | Yes | No | Don't Know |
| 1. | Health | 841 | 335 | 0 |
| 2. | Environment | 931 | 245 | 0 |
| 3. | Any Other | 1135 | 41 | 0 |
| | Total | 2907 | 621 | 0 |

The establishment of cement plants has badly affected the health of human beings. The people who are living in the surrounding areas of cement plants are suffering from breathing problems, asthma, TV, allergies, hearing and vision problems etc. There are some cases of cancer patients also. The establishment of cement plants has not affected man only but other forms of lives and flora and fauna also. As there is less milk production in animals, their reproductive capacity has been affected and quite a number of animals had died.

There used to be lush jungles before the establishment of these plants. But now there are dusty roads full of trucks. The locals are not facing health problems only but traffic jams and bad roads full of pits and dust is another problem.

1.4 CONCLUSION: The survey of this study has led to following conclusions:

1. Almost all the plants are running schools but giving rebate in school fee only to the children of their employees and not to locals.

2. Almost all the cement plants are organizing 'Health camps' but not related to problems faced due to pollution caused by these cement plants.
3. The animal fodder is being damaged by the dust generated by the plant because of which there is less milk-production, problem of rough skin and aphoria/infertility among animals.
4. People have stopped cultivation of pulses like Cicer arietinum/chicken pea, lentil etc. because the flower of the pulses tend to decay because of the dust generated by the plant.
5. Another complaint of the locals was that there is no employment opportunities for locals in these cement plants. Even technically educated locals are rarely employed by these plants.
6. Another major problem faced by the locals is condition of roads which is very bad as roads around these plants are full of pits and dust.

One thing is clear from the above discussion that the respondents are mostly sufferers in this whole scenario, less has been done for them and the plants are exploiting not only nature but respondents also and these cement plants has become a bane for locals.

On the basis of the historical, analytical, comparative and empirical study made in this thesis, the following suggestions are made for so that Cement plants may become boon for locals.

1. The knowledge and expertise of the local communities and their perceptions of the environment should be included in the environmental methodology and while calculating means of measurements and deciding impacts on environment and finding solution for it. After all the local communities have to live around the projects to be implemented. So, this knowledge of their should be properly utilized to differentiate between the impacts which are more important to them and which are less important.
2. Presently, the Public Hearing which is an important tool in the hands of local communities should be properly publicized and the local communities should be made aware of this. As in most of the cases, the Panchayat Pradhans are the

employees of the cement plants, in such cases the villagers should be allowed to choose another representative of them in matters relating to cement plants. The required consent of Pradhans and their signature should not be considered valid in matters of cement plants if they are employees of them.

3. The old machinery should be replaced with the newer one so that level of pollution could be reduced.
4. Proper health facilities should be provided to the locals. For this purpose, “Health Cards” should be issued to the local communities.
5. Health camps for animals should also be organized because they are major sufferers because of the damaged fodder.
6. The plants should also conduct research in the field of crops and vegetation so that they can be saved from the ill-effects of cement plants.
7. The local communities, who lost their land to plant, should be employed by the plant not for one generation only but “Father-Son” scheme should be adopted by the cement plants. Because the land if had not been encroached by the cement plant would have look after the family for generations to come.
8. More employment should be given to the local residents after all they are the one who suffered most.
9. The condition of roads should be improved. It is because of the trucks and dumpers employed by the cement plants that the roads are damaged, so the wear and tear of damages should be bear by the cement plants.
10. Traffic jams has also made the life of locals havoc so it is the cement plants should develop proper parking yards for trucks.
11. Vehicular emissions apart from traffic jams are another cause of pollution so it should be regularly monitored and vehicles should be properly maintained and should not be overloaded.
12. At the time of establishments, these cements plants had cut thousands and thousands of trees, so they should implant more trees for this purpose they could adopt the areas on yearly basis and survival of trees should also be made their responsibility.

13. The most of the plants has built government schools structure for the sake that they are spending on education as the State government s are already providing enough funds for this purpose. Rather than this the cement plants should open IT parks for the local children where they could get free education or the cement plants should provide education to local children in the schools run by them for their employee's children free of cost, or they could have taken the responsibility of higher education of children of affected communities, or they could have opened "Technical Training Institutes" to train the local children and then could have employed them.
14. It is the responsibility of the cement plants to protect the natural resources and if they failed in it then stringent measures should be taken against them.
15. The other concerned area is fugitive emissions or dust emissions from plants; there is need of Environmental regulations or guidelines for controlling these emissions.
16. The State of Himachal Pradesh has ordered the ACC Cement Plant to collect the polythene from the surrounding areas upto district Kullu and use it in the burning process in the Cement plant because in the high temperature required by these plants, the polythene will dissolve completely and will not have any harm effects also. All the other plants should also be ordered to adopt this and such other schemes.
17. There is dire need to publicize the EIA Notification and for this responsibility should be of the cement plants.
18. The cement plants should regularly organize such camps in which people can be educated of good and bad effects of the cement plants and how to control these bad effects.
19. Last but not the least, how many cement plants should work in a particular area or what should be the distance of one from the other? These are the questions which are unanswered.

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1. Dr. Syed and RPH Editorial Board, *Himachal Pradesh; General Board, Ramesh Publishing House* 1(New Delhi, 2015).

2. EIA Notifications.
- 3.** www.google.com

CONSTITUTIONAL RIGHTS OF ANIMAL: AN EXEGESIS FROM THE SUPREME COURT OF INDIA

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ABSTRACT

The rich culture and heritage, where kindness and compassion were the foundation of the Indian tradition, animals had a respect and special place in society. But time has changed; they are the soft target for humans. They are the easy prey for human greed and prime candidate for exploitation. Animal welfare in India has taken a new meaning and has been in news recently for all wrong reasons. The article tries to explain how the animal-protection laws are weak and most neglected area under Indian jurisprudence. This is followed by discussing how judiciary has moved a step ahead in protecting rights and providing 'species friendly environment' through constitutional status. The article aims to discuss whether animals are right-holder under Constitution of India. The paper concludes with the need for acknowledging animals as "beings" rather than "thing."

Keywords- *Animal rights, Constitutional status*

INTRODUCTION

"Animal has also honour and dignity which can't be arbitrarily deprived of and its rights and privacy have to be respected and protected from unlawful attack."— Supreme Court²

Animal rights and welfare have been an important issue commanding global interest unfortunately victories in the animal rights movement are few and far between. The increasing case of cruelty in India against these "non-living" species of nature has been a cause for great concern these days especially in India. The abuse that animals suffer at human hands is heartbreaking, sickening, and infuriating. And in one of the most high-profile cases, a police horse named Shaktimaan died after his leg was broken while he was surrounded by an angry mob during a political rally in Dehradun. Before his eventual death, Shaktiman suffered from immense pain. Reacting to this Union Minister

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². Animal Welfare Board of India v. A. Nagaraja & Ors, (2014) 7 SCC 547 at ¶ 51

Ms Maneka Gandhi stated that the horse was a police officer on duty and that person responsible for his death must be arrested and punished. The other side of this statement can be seen as broader definition of personhood and holding the rights. The governance and management of a country's natural and biological resources is deeply integrated with and influenced by political, social, cultural and economic factors that impact on overall development. We Indians as, '*Religious Believers*' have lived out our faith in ways that have been fully in defense of nonhuman lives. This more positive view has, across place and time, been common and this is giving the moral, legal, social strength to those voices who wants the animal rights and human rights must be read together. And yet despite all this, the number of animals exploited and killed has skyrocketed during the past quarter-century. If we are to work effectively on behalf of animals, we must encourage everyone to boycott cruelty. We can't do this by fostering the impression that "It's too hard to be a strict vegetarian – animal products are in everything." We can't act as if we're following a religion, with adherence to a certain dogma the sole issue. We can't preach that harvesting honey is a holocaust. We can't imply that every farm – from the largest mega factory to the smallest free-range organic farm – is equally cruel. There is a rise to a new social movement, which seeks to attain increased legal protections, and even the recognition of actual "rights", for nonhuman animals. Not surprisingly, this push has met with a considerable amount of criticism and ridicule from those who believe that the cost of animal rights specially, and increased protections more generally, is a corresponding reduction in human freedom. There is discussion going on must not be an end to the road and the issue must be addressed with deliberations and cogitation.

JUDICIAL PERSPECTIVE

The Constitution of India is detailed sets of human rights which ensure autonomy and well-being to citizens and non-citizens. Right holder carries constitutionally guaranteed right which prevent others, including the state, to act contrary to the inalienable interest. The Constitution guaranteed seven basic rights, in 1950: these rights were placed in a separate chapter of the constitution under the heading of 'Fundamental Rights'. Among all Article 21 is the most celebrated provisions of the Constitution. A new dimension has been added to the interpretation of 'right to life and personal liberty' by introducing 'negative' as well as 'positive' obligation on the state which covers not only

‘duty to restraint’ but also of ‘duty to facilitate entitlements’.³ Judiciary from time to time has shown concerns regarding the welfare and rights of animal. In *Animal Welfare Board of India case*, an issue of seminal importance with regards to rights of animals under the Indian Constitution, with reference to the Prevention of Cruelty to Animals Act, 1960, in connection with Jallikattu has been raised. The court has refused permission to inflict pain and suffering to the animals in the name of religious or traditional practices. The idea of ‘*species best interest*’ underlying in the Act guided the court to provide complete protection to the animals from torturous practices employed by human beings.⁴ Supreme Court while penning down the law of land held –

“Every species has a right to life and security, subject to the law of the land, which includes depriving its life, out of human necessity. 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. So far as animals are concerned, in our view, "life" means something more than mere survival or existence or instrumental value for human. The right to dignity and fair treatment is, therefore, not confined to human beings alone, but to animals as well. The right, not to be beaten, kicked, overridden, and overloaded is also a right recognised by Section 11 read with Section 3 of the PCA Act. Animals also have a right against human beings not to be tortured and against infliction of unnecessary pain or suffering.”⁵

Justice Radhakrishnan stressed that the time has come that the animal rights to be elevated to the status of fundamental rights in the Constitution. All the animals have the following rights⁶ –

1. Freedom from hunger, thirst and malnutrition;
2. Freedom from fear and distress;
3. Freedom from physical and thermal discomfort;
4. Freedom from pain, injury and disease; and
5. Freedom to express normal patterns of behavior.

³. TR Andhyarujina, *THE EVOLUTION OF DUE PROCESS OF LAW BY THE SUPREME COURT IN SUPREME BUT NOT INFLIBLIBLE*, (BN Kripal, Oxford University Press, 2011)

⁴. Section 3 and Section 11(1) (a) and (m) of The Prevention of Cruelty to Animals Act, 1960 read with Article 51A (g) and Article 21 of the Constitution.

⁵. *supra* note 2, at 2 ¶ 62

⁶. *Id.* at ¶ 54; *See also* http://web.oie.int/eng/normes/mcode/en_chapitre_1.7.1.htm

The friction to constitutionally recognize animal rights developed over a series of judgments. Delhi High Court in *People for Animals v. Md Mohazzim*⁷ held that –

“Birds have the fundamental rights including right to live with dignity and they can’t be subjected to any cruelty by anyone. Birds have the fundamental right to fly in the sky and human beings have no right to keep them in the small cages for the purpose of their business or otherwise”⁸

Supreme Court even held that trapping or caging a bird comes under the preview of hunting and thus should not be allowed and is prohibited under Section 9 of The Wildlife Protection Act, 1972.⁹ Thus the impliedly view of the learned judge can be seen as bringing the animal under the ambit of ‘right to life’. Gujarat High Court in the year 2011 held that birds have the fundamental rights to fly and keeping birds in cages was tantamount to “illegal confinement”¹⁰.

HUMAN V/S NON-HUMAN

The critics to this approach put a question on the legal capacity to possess constitutional rights and it will be conflict to *Rights of Human v. Rights of Non-Human*. According to Joseph Raz, rights can only be accorded to beings which have an “ultimate, non-derivative value” rather than an “instrumental value”. The value of non-human animals to humans is merely instrumental in nature.¹¹ The incapacity to hold a right and lack of mental development can’t be the sole criteria to strip off the rights of animals against the cruelty faced by them at the hands of human. If going by this reasoning, mentally unsound mind also lacks the mental development to hold their right or simply they can’t exercise their legal capacity to enjoy or hold their basic rights as per the laws and statutes. But there is a paradigm shift from this sympathetic and non-human approach and they have been granted equal rights under the proposed bill.

Jeremy Bentham once stated that deciding on the being’s right; the question is not ‘Can they reason?’ nor ‘Can they talk?’ but ‘Can they suffer?’” Bentham points to the capacity for suffering as

7. *People for Animals v. Md Mohazzim*, CrI. M.C. No. 2051/2015, May 15, 2015 (Manmohan Singh, J) (Delhi High Court)

8. *Id.* at ¶ 5

9. *Chief Conservator Forest (Wildlife) v. Nisar Khan*, (2003) 4 SCC 595

10. *Id.*

11. Joseph Raz, ON THE NATURE OF RIGHTS, 93 (370) *Mind* 194, 204 (1984) *See also* http://nujlawreview.org/wp-content/uploads/2016/05/07_jessamine__ira.pdf

the vital characteristic that gives a being the right to equal consideration.¹² All animals have the ability to suffer in the same way and to the same degree that humans do. They feel pain, pleasure, fear, frustration, loneliness, and motherly love. Whenever we consider doing something that would interfere with their needs, their basic rights are violated. In general a human being has ‘right to life’ so animals too have inherited the right to life and enjoy free space and it can’t be scraped just because they lack a mental development to hold and exercise those rights. Now the question arises whether animals can be placed under the category of ‘legal person.’ There are many writing where it was stressed to ally animals with the idea of person for their security and welfare.¹³ The author further states,

“I think the question about whether any animals are persons is a harmful distraction for animal advocacy, and one which many people have a very hard time dealing with often for bad reasons but occasionally for good ones so I think very little, if any animal advocacy, should be done in terms of whether animals are persons or not. I think a wiser move it to stick with Bentham’s motto that whether they can suffer and be harmed is the relevant, and far simpler, question, not whether they are persons, under nearly anyone’s definition.”

The most obvious qualifiers for legal personhood can be found in a Hohfeldian analysis of jural relations.¹⁴ The critics of this theory to provide constitutional status to animal rights take this defence that right and duty must be read together and both must be satisfied. The natural thesis that is followed is that every person who seeks to claim a right must also be able to perform the corresponding duty that a right entails. Further, the claimant of a right must also be able to have rights claimed against them, i.e., rights must be able to be enforced against a person for them to truly be entitled to them.¹⁵ This means that the non-performance of a duty by a person may be punishable if it violates the right of another person. It is obvious that no non-human animal will ever satisfy or be expected to satisfy this requirement. In the same way a person with disability and child don’t participate in the matter of public, social life and can’t decide the what is right or wrong still has given inherited with ‘right to life and personal liberty’ read with Article 10 of UNCRPD. If the

¹². People for the Ethical Treatment of Animals (PETA) *available at* <http://www.peta.org/about-peta/why-peta/why-animal-rights/> (Last visited on Oct 06, 2016)

¹³. Nathan Nobis, ON THE QUESTION OF PERSONHOOD BEYOND HOMO SAPIENS *available at* http://www.morehouse.edu/facstaff/nnobis/papers/DeGrazia_comments.htm (Last visited on Oct 06, 2016)

¹⁴. Anand C. Paranjpe, SELF AND IDENTITY IN MODERN PSYCHOLOGY AND INDIAN THOUGHT(PATH IN PSYCHOLOGY) (2002)

¹⁵. *Id.*

ability to perform duties or the level of rationality is what qualifies an entity to be a person, persons with disabilities and infants or children would also be excluded from the purview of personhood.

CONCLUSION

“The greatness of a nation and its moral progress can be judged by the way its animals are treated”- Mahatma Gandhi

The lines of one of the greatest preacher of non-violence must be engulfed so that we move a step further towards moral progress. Because of human need, greed, ignorance, and vanity; untold numbers of animals throughout the world suffer and die on a daily basis. Rather than simply avoiding something because they can't have or hold the legal capacity to exercise those rights or how can it be enforced against them if they violate the rights of human; if provided can't be valid ground whatsoever. The debates must be explored through the domain of religion and animal to defend wildlife, ensure that food animals are not mistreated, and minimize harm to research animals, or honor the special place of companion (nonhuman) animals in humans' lives. Supreme Court while interpreting has missed some areas which must be dealt with legislature. The judgment in must be incorporated systematically under the Constitution of India. The point to be made, however, is that the animal protection question is a global one not localized to any state and more importantly, changes made by one country to its animal laws will likely affect the well-being of animals in other countries. At present animal protection laws have recognised animals and made laws in the manner in which human use them. The language of rights must be in the nature which will evoke the feeling of moral and legal responsibility. The argument that there might be a conflict between animal rights and human rights is vague as the much talked rights in the landmark case has nothing to do with the exiting right regime. How can the fundamental rights of bird to fly conflicts with the human rights and animal rights? The right based approach must be followed while enshrining those letters of judgment as right is granted to those who suffer at the hands of superior. It's time to move forward in our endeavors to form welfare state which must be based on species friendly and the first three letters of our Constitution: “We the People...” must be read with “kindness and compassion for all life” and finally has some meaning.

TOURISM: A CONTRIBUTOR TO ENVIRONMENT'S MISERY

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Introduction

*Pancha Mahabhutas*¹ create a web of life that is shown forth in the structure and interconnectedness of the cosmos and the human body. The five great elements includes space, air, fire, water and earth, that constitute the environment are all derived from *prakriti*, the primal energy. Each of these elements has its own life and form; together the elements are interconnected and interdependent.² It is therefore, worth mentioning that, to protect the environment is an important expression of *Dharma*³. Association of this sublime spiritual ontology to present era renders us the nexus between the *Dharma* and the Doctrine of Rule of Law⁴ which ultimately binds us with a legal obligation to conserve our environment.

In recent times, environment has become one of the most active subjects of debate and discussion. The desire to put feet into an environment that could trace its sculpture links with devotion in an unbroken skein reaching back to antiquity is vanishing. One of the major causes of the deterioration of environment is unplanned and unchecked developmental activities in the tourist destinations. And the lamenting part is that, we, as the whole globe, lack appropriate and significant laws in this regard.

There is indeed no denying the fact that tourism is enormously beneficial for any country's economy. According to World Travel and Tourism Council Report 2015, tourism represents around six per cent of world trade, and almost 13 per cent of the total global consumer

¹ *Pancha* and *Mahabhutas* are the *Sanskrit* words, the former means 'five' and the latter means 'great elements'

²The *Upanishads*: The *Upanishads* explains the interdependence of these elements in relation to *Brahma*, the supreme reality, from which they arise: "From *Brahma* arises space, from space arises air, from air arises fire, from fire arises water, and from water arises earth."

³*Dharma* is one of the most important Hindu concepts, has been translated into English as duty, virtue, cosmic order and religion.

⁴ Justice Dr. Ram Joise, *Rajdharm and Lessons on Rajneeti*

spending.⁵ But it is pathos and bathos that the environment will probably be damaged if overused, and if the limits of its carrying capacity are surpassed, the ecosystem will lose its sustainability and be damaged or destroyed for a long time, if not forever. Since, as compared to developed nations, most developing countries at their first stages of tourism development had no control or proper planning for tourism, the carrying capacities of their environment were not taken into account and thereby are abused the most.

Tourism: A Catalyst to Economy Boost

In India too, tourism has become one of the chief sectors of the economy, contributing to a hefty proportion of the national income and generating huge employment opportunities with great potentials for its further expansion and diversification. The first conscious and organized efforts to promote tourism in India were made in 1945 when a committee was set up by the Government under the Chairmanship of Sir John Sargent, the then Educational Adviser to the Government of India. But it was only after the 80's that tourism activity gained momentum.⁶

Tourism in India is the largest service industry, with a contribution of 6.23 per cent to the national GDP and 8.78% of the total employment in India. Ministry of Tourism is the nodal agency to formulate national policies and programmes for the development and promotion of tourism. Concerted efforts are being made to promote new forms of tourism such as rural, cruise, medical and eco-tourism. The Ministry of Tourism also maintains the *Incredible India* campaign.⁷

During the year 2011, the growth rate of 8.9 per cent in tourist arrivals in India was almost double the growth of 4.4 per cent in tourist arrivals worldwide. The tourism sector in India, therefore, has fared quite well vis-à-vis the world. Foreign Exchange Earnings (FEE) from tourism in India during 2011 were \$16.56 billion as compared to \$ 14.19 billion in 2010, showing a growth of 16.7%⁸ According to *World Travel and Tourism Council*, India will be a tourism hotspot from 2009-2018, having the highest 10-year growth potential. As per the *Travel and Tourism Competitiveness Report, 2009* by the *World Economic Forum*, India is

⁵ *The 2010 Travel and Tourism Economic Research*, Economic Data Research Tool, World Travel and Tourism Council (www.wttc.org.)

⁶ Access at, www.incredibleindia.com

⁷ Dr. P. Sekhar, *Secured Techno- Economic Growth of India: Unleashing Hidden Growth Potential*, Micro Media Marketing Pvt Ltd, pp. 187.

⁸https://www.academia.edu/7836294/EMERGING_ENVIRONMENTAL_ISSUES_WITH_THE_DEVELOPMENT_OF_TOURISM_IN_INDIA_A_STUDY (Government of India, Ministry of Tourism, 2012)

ranked 11th in the Asia Pacific region and 62nd overall, moving up three places on the list of the world's attractive destinations.⁹

Moreover, India has been ranked the “best country brand for value-for-money” and “second best country brand for history” in the Country Brand Index (CBI) survey conducted by *Future Brand*, a leading global brand consultancy.¹⁰ However, like every coin has two sides one boon other curse, even tourism has its pros and cons.

International Regime on Tourism *vis-à-vis* Environment

Environmentally responsible tourism's formal enunciation emanates from the *1989 Hague Declaration on Tourism*, which advocates rational management of tourism so that it may contribute to the protection and preservation of the natural and cultural environment. Even at the *Earth Summit in Brazil June 1992*, the issue of ‘sustainable tourism’ was discussed within the context of overall sustainable development.¹¹ The *Commission On Sustainable Development* as a UN body responsible for the follow up of *Agenda 21* addressed sustainable nature based tourism, first in the framework of sustainable development of Small Islands Developing States and then in the context of the working programme of its Seventh Session in 1999. A couple of years back, UNEP took initiatives of regarding sustainable tourism in the *UNEP Draft Principle on Sustainable Tourism*, which was initiated in 1995 and final draft was published in early 2000. The time of launching the UNEP initiative coincided with Commission on Sustainable Development and the adoption of *decision 7/3*. It may be regarded as an environmental approach to tackle nature-based tourism.

The Ghastly Aftermath of Global Tourism

The negative impacts of tourism on the environment can be analyzed in different ways. One of them looks at the specific elements of the ecosystem of the tourist locale. For instance, tourism can have a detrimental effect on vegetation¹² and can create pressure on local resources,¹³ it can also have an effect on air and water quality,¹⁴ wildlife can also be

⁹ www.ibef.org/industry/tourismhospitality.aspx

¹⁰ www.ibef.org/industry/tourismhospitality.aspx

¹¹ <http://www.yourarticlelibrary.com/essay/short-essay-on-tourism-538-words/8573/>

¹²E.g., the collection of plants or careless use of fire can destroy plant life; littering causes changes in soil nutrients; human and vehicular traffic affects both the soil and the vulnerability of plants.

¹³Tourism can create great pressure on local resources like energy, food, and other raw materials that may already be in short supply. Greater extraction and transport of these resources exacerbates the physical impacts associated with their exploitation. Because of the seasonal character of the industry, many destinations have ten

adversely affected by tourism,¹⁵ resort development can cause harm to the environment on which it is located as well,¹⁶ it also plays a crucial role in water depletion,¹⁷ it may lead to land degradation,¹⁸ etc.

Another way, and probably the better way, to analyze the impacts of tourism on the environment are to look at how tourism affects certain ecosystems.¹⁹ For instance, clearing plant life for the sake of tourism “disturbs” wildlife and reduced habitats. And since these components and ecosystems are interconnected not just locally, but globally, affecting one of these may disrupt another in a different part of the region or even the world.

Out of all, marine ecosystems suffer the most due to high popularity of ‘beach tourism’. There are 109 countries with coral reefs. In 90 of them reefs are being damaged by cruise ship anchors and sewage, by tourists breaking off chunks of coral, and by commercial harvesting for sale to tourists. One study of a cruise ship anchor dropped in a coral reef for one day found an area about half the size of a football field completely destroyed, and half again as much covered by rubble that died later. It was estimated that coral recovery would take fifty years.²⁰

The European marine ecosystem has probably been the worst affected because it is an inland sea, thus it has a longer self-cleaning process due to the limited tide.²¹ Out of all the components affected in this ecosystem, coral reefs are the most vulnerable. Reefs can be

times more inhabitants in the high season as in the low season. A high demand is placed upon these resources to meet the high expectations tourists.

¹⁴Air pollution can be attributed to the tourist vehicles in resort areas. There can also be pollution of lakes, rivers and oceans caused by large quantities of waste material and inadequately treated sewage from tourist facilities and from oil spills from recreational vehicles.

¹⁵By intruding on the animals' natural lives, tourism can disrupt feeding and breeding patterns, and sometimes can even force the relocation of wildlife.

¹⁶Architectural pollution is a condition where resort facilities clash with the native surroundings and architecture.

¹⁷Source: *Tourism Concern*- Golf course maintenance can also deplete fresh water resources. In recent years golf tourism has increased in popularity and the number of golf courses has grown rapidly. An average golf course in a tropical country such as Thailand needs 1500kg of chemical fertilizers, pesticides and herbicides per year and uses as much water as 60,000 rural villagers. In dryer regions like the Mediterranean, the issue of water scarcity is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 liters a day. This is almost double what the inhabitants of an average Spanish city use.

¹⁸For e.g., one trekking tourist in Nepal - and area already suffering the effects of deforestation - can use four to five kilograms of wood a day.

¹⁹Stephanie Thullen, ‘Tourism and Trade’, available at, www.american.edu/ted/project/tedcross/xtour8.htm

²⁰Source: *Ocean Planet*

²¹See: *The Mediterranean case*

harmed by trampling from scuba divers and snorkelers, untreated sewage dumped from hotels or the resort cities themselves, and many developing countries use coral for construction of hotels and roads. The construction of hotels²² and roads destroys dunes and beaches, causing severe environmental consequences, such as erosion, which in turn induces more environmental problems.²³

Discussing the other aspects, construction of hotels, recreation and other facilities also leads to increased sewage pollution. Wastewater has polluted seas and lakes surrounding tourist attractions, damaging the flora and fauna. Sewage runoff causes serious damage to coral reefs because it stimulates the growth of algae, which cover the filter-feeding corals, hindering their ability to survive. Changes in salinity and siltation can have wide-ranging impacts on coastal environments. And sewage pollution can threaten the health of humans and animals.

Often tourism also fails to integrate its structures with the natural features and indigenous architectural of the destination.²⁴ Large, dominating resorts of disparate design can look out of place in any natural environment and may clash with the indigenous structural design.

The case of Trinidad and Tobago can be discussed here, where after the decline of oil revenues in the 1980's, both states turned to tourism in order to resolve its serious economic problems. However, the country proceeded without any assessment on the environmental impacts of tourism for their islands. As a result, several environmental problems have arisen in Trinidad and Tobago. There are shortages of water due to the overpopulation of tourists on the island; sand has been depleted for construction, which has damaged beaches and destroyed the habitat of turtles, where they come and lay their eggs. The most damaging effect of tourism has been the destruction of coral reefs, as they are harvested for sale to tourists and destroyed by tourists stepping on them as they enter the water.²⁵

Navigating the land ecosystem, in industrial countries, mass tourism and recreation are now fast overtaking the extractive industries as the largest threat to mountain communities and environments. Since 1945, visits to the 10 most popular mountainous national parks in the United States have increased twelve-fold. In the European Alps, tourism now exceeds 100 million visitor-days. Every year in the Indian Himalaya, more than 250,000 Hindu pilgrims,

²²See: *The Greek Island case*

²³See: *The Bali and Jamaica cases*

²⁴See: *The Cancun, Mexico case*

²⁵ Stephanie Thullen, 'Tourism and Trade', *access at*, www.american.edu/ted/project/tedcross/xtour8.htm

25,000 trekkers, and 75 mountaineering expeditions climb to the sacred source of the *Ganges* River, the *Gangotri* Glacier. They deplete local forests for firewood, trample riparian vegetation, and strew litter. Even worse, this tourism frequently induces poorly planned, land-intensive development.²⁶

Not only the tourism has impact on the internal ecosystem of a state but it is also a fastest growing contributor to global warming. Wanting to travel by air by sheer numbers us has leaded the Aviation to be targeted for a fair amount of criticism. There is no denying the fact that the farther you go the more Green House gases you produce and *KLM* estimates that trips over 1,500 km are responsible for around 80% of the CO₂ produced by air travel. Transport by air is continuously increasing and it was reported that the number of international air passengers worldwide rose from 88 million in 1972 to 344 million in 1994. According to *Tourism Concern*, scientists predict that by 2015 half of the annual destruction of the ozone layer will be caused by air travel.²⁷

One consequence of the increase in air transport is that tourism now accounts for more than 60% of air travel and is therefore responsible for an important share of air emissions. One study estimated that a single transatlantic return flight emits almost half the CO₂ emissions produced by all other sources (lighting, heating, car use, etc.) consumed by an average person yearly.²⁸ Not only aviation affects the air but on ground also it is no less performing its part. The issues of noise, congestion and the loss of green belt to the new runways has also been an important part of discussions and also the average airport's annual carbon debt begins to look pretty daunting.²⁹

Climate scientists now generally agree that the Earth's surface temperatures have risen steadily in recent years because of an increase in the so-called greenhouse gases in the atmosphere, which trap heat from the sun. Global tourism is closely linked to climate change. The *Second International Conference on Climate Change and Tourism, 2007* was a milestone event that brought together a wide variety of stakeholders and delivered a clear commitment for action to respond to the climate change challenge. Tourism involves the movement of people from their homes to other destinations and accounts for about 50% of traffic movements; rapidly expanding air traffic contributes about 2.5% of the production of CO₂.

²⁶Source: *People and the Planet*

²⁷ Dr Gareth Evans, *Aviation and Global Warming*, Updated: 16 Oct 2012, ecoholidaying.co.uk

²⁸Mayer Hillman, *Town & Country Planning magazine*, September 1996. Source: MFOE

²⁹Dr Gareth Evans, *Aviation and Global Warming*- Updated: 16 Oct 2012, ecoholidaying.co.uk

Tourism is thus a significant contributor to the increasing concentrations of greenhouse gases in the atmosphere.³⁰

In areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is another major and grave issue and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides. For example, the Wider Caribbean Region, stretching from Florida to French Guiana, receives 63,000 port calls from ships each year, and they generate 82,000 tons of garbage. About 77% of all ship waste comes from cruise vessels. The average cruise ship carries 600 crew members and 1,400 passengers. On average, passengers on a cruise ship each account for 3.5 kilograms of garbage daily compared with the 0.8 kilograms each generated by the less well-endowed folk on shore.³¹ Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals.

In mountain areas, trekking tourists generate a great deal of waste. Tourists on expedition leave behind their garbage, oxygen cylinders and even camping equipment. Such practices degrade the environment with all the detritus typical of the developed world, in remote areas that have few garbage collection or disposal facilities. Some trails in the Peruvian Andes and in Nepal frequently visited by tourists have been nicknamed “Coca-Cola trail” and “Toilet paper trail”.³²

Physical impacts are caused not only by tourism-related land clearing and construction, but by continuing tourist activities and long-term changes in local economies and ecologies. In Yosemite National Park (US), for instance, the number of roads and facilities have been increased to keep pace with the growing visitor numbers and to supply amenities, infrastructure and parking lots for all these tourists. These actions have caused habitat loss in the park and are accompanied by various forms of pollution including air pollution from automobile emissions; the *Sierra Club* has reported “smog so thick that Yosemite Valley could not be seen from airplanes”. This occasional smog is harmful to all species and vegetation inside the Park.³³

³⁰Source: *Mountain Forum*

³¹ Our Planet, *UNEP Magazine For Environmentally Sustainable Development*, volume 10, no. 3, 1999

³² Access at, www.unep.org

³³Source: *Trade and Environment Database*

Tourists using the same trail over and over again can be another example of continuing tourist activities which results in trampling the vegetation and soil, eventually causing damage that can lead to loss of biodiversity and other impacts. Such damage can be even more extensive when visitors frequently stray off established trails.³⁴ Tourists and suppliers - often unwittingly - can bring in species (insects, wild and cultivated plants and diseases) that are not native to the local environment and that can cause enormous disruption and even destruction of ecosystems.

Indian Scenario

Shifting the focus on India which is known for its generous conduct to all visitors and the notion of *Atithi Devo Bhava*,³⁵ in recent times, has also suffered increase in tourism which has led to environmental issues which call for a great need for sustainable tourism policy³⁶ and the most relatable and visible example of it is the melting of *Amarnath Linga* resulting from the increase in temperature caused due to overcrowding in its premises.

In coastal zone of Goa also known as the Tourist hub of India, problems of loss of mangrove, reducing fish catch and species, erosion, sanitation, and water resources etc. has affected the marine life, land of coastal zone and environment.³⁷ The water level there has fallen far below the reach of the village wells since the deep wells of the hotels keep pumping up water for their pools and lush green lawns. Along with that the hotels are ensured 24 hours water supply and water in tanks.

Adverse impact of tourism development is witnessed in the state of Maharashtra as well. Findings on the study revealed that 89 per cent of the surveyed respondent experienced that there would be maximum negative impact on the environment as a result of developing tourism, they experience that more forests degradation might take place in and around the area because of tremendous demands for area by encroachment of hotels and restaurants.³⁸

³⁴Source: *University of Idaho*

³⁵ It is a Sanskrit verse, which means that, the guest is equivalent to God

³⁶ *Access at*, shodhganga.inflibnet.ac.in/bitstream/10603/9790/10/10_chapter%203.pdf

³⁷ Kalidas Sawkar, Ligia Noronha, Antonio Mascarenhas, O.S. Chauhan, and Simad Saeed (1998): "Tourism and the Environment-Case Studies on Goa, India, and the Maldives", *The Economic Development Institute of the World Bank*, The International Bank for Reconstruction and Development/The World Bank, Washington, USA.

³⁸ Dr. D. Y. Patil and Ms. Lata S. Patil 2008, Environmental Carrying Capacity and Tourism Development in Maharashtra. In *Conference on Tourism in India – Challenges Ahead*, IIMK. Part II – Tourism Society and Environmental Issues. 15-17 May 2008.

In *Mussorie, Garhwal* and Himalayas also, due to huge influx in the tourists the demand for the lodges/hotel and other infra-structure and super-structure facilities and amenities in the area were enormous and it imposed a great stress on the natural environment of the place.³⁹ In fact, some areas, such as the *Aravallis*, have been declared as being eco-sensitive, and commercial development in and around national parks and wildlife sanctuaries is being strictly regulated.

Coastal tourism in *Kolavam*, India has led to increased conflicts between the demands of existing environmental and tourism development policies. One may see the seeds of demise of a prospective industry by the deterioration of that very ecological milieu on which it thrives. Environmental conservation and community development have never been taken as the prerequisites for the betterment of tourism industry in this place.⁴⁰ The *Krushedei* Island near *Rameswaram* which was once called paradise for marine biologists has been abandoned due to massive destruction of coral and other marine life. The impact of tourism on the environment of Sikkim Himalayas is also threatening on the protected areas in the region. Sustainable planning for tourism in the state is advocated.⁴¹

People who come to enjoy the scenic beauty often litter the places with polythene and left over food without thinking about its adverse impact on the environment. The *Dal* Lake which was once pristine has lost its nature due to tourist pressure and is now covered with animal carcasses, sewage and weeds. The lake has shrunk as it was unable to handle the pollution caused by constant tourist influx.

Moreover, habitat has also been degraded by tourism leisure activities. For example, wildlife viewing brings about stress for the animals and alters their natural behaviour when tourists come too close. Safaris and wildlife watching activities have a degrading effect on habitat as they often are accompanied by the noise and commotion created by tourists.

³⁹ SAPANA MADAN and LAXMI RAWAT 2000. The impacts of tourism on the environment of Mussoorie, Garhwal Himalaya, India, *The environmentalist*, 20, 249-255. Kluwer Academic publishers, Manufactured in the Netherland.

⁴⁰ Proshanta Kumar Ghosh and Debajit Datta 2012, Coastal tourism and beach sustainability – An assessment of community perceptions in Kovalam, India. *GEOGRAFIA Online Malaysia Journal of Society and Space*, 8 issue 7. pp.75 – 87.

⁴¹ Joshi, R. and Dhyani, P. P. 2009, Environmental sustainability and tourism- implications of trend synergies of tourism in Sikkim Himalayas. *Current Science*, 97 (1), 33-41.

Panaceas and Suggestions

It brings blues as far as the present scenario and ignorance on part of humans is concerned. The plight is that, though there are countless environment protection schemes and organisations but none of them is capable of restraining the tourist activities, more specifically, from extinguishing our ambient natural habitat.

The Davos Declaration⁴² is worth mentioning here which is a huge step forward and presents concrete recommendations to the key interest groups involved in tourism, it required certain actions like to mitigate greenhouse gas emissions from the tourism sector, derived especially from transport and accommodation activities; adapt tourism businesses and destinations to changing climate conditions; apply existing and new technologies to improve energy efficiency; and secure financial resources to assist regions and countries in need.

India, specially, lacks laws regarding tourist control. Except for Article 48(a)⁴³, Article 51A (g)⁴⁴ and a few generic legislations⁴⁵, India is destitute in field of protection of environment *vis-à-vis* Tourism. And the legislations which mention tourism, like the Wildlife Act, fail to achieve the goal due to their ineffective nature.⁴⁶ The perplexity is that is that it is in fact challenging to control the tourism and tourists from damaging the nature. One of the complexities is regarding holding the tourists liable for their acts, which is very tough due to their temporary stay and the doctrine of *de minimus non curat lex* which postulates that law does not take account on trifles. And most of the acts like littering and intruding in wild animals' routine come under the latter category. But indeed, certain regulations, laws, norms and constructive techniques can be enacted like barring the carrying of junk like polythene to

⁴² II International Conference on Climate Change 2007

⁴³ Article 48 in the Constitution Of India 1949 provides that, the State shall endeavor to organize agriculture and animal husbandry on modern and scientific lines and shall, in particular, take steps for preserving and improving the breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.

⁴⁴ Article 51A(g) in The Constitution Of India 149 provides, to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creature.

⁴⁵ Air (Prevention and Control of Pollution) Act, 1981, Biological Diversity Act, 2002, Environment (Protection) Act, 1986, Forest Conservation Act, 1980, Indian Forest Act, 1927, National Green Tribunal Act, 2010, Protection of Plant Varieties and Farmers' Rights Act of 2001, Public Liability Insurance Act, 1991, The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, Water (Prevention and Control of Pollution), 1974, Wild Life (Protection) Amendment Act, 2002, Wildlife Protection Act of 1972, Noise Pollution Act, Hazardous waste Handling and management act, 1989

⁴⁶ The Act restricts the tourist from degrading the environment or other related activities which directly or indirectly affects the environment. As the wildlife parks, sanctuaries, and reserves are in abundance and serves as major tourist attraction, this Act helps in regulation and protection of these important destinations, which also serves the most number of tourist count.

natural tourist spots or limiting the amount of water used by hotels by removing bath tubs and encouraging water conservation or limiting water activities away from coral habitats etc.

*M.C. Mehta v Union of India*⁴⁷ enlightened the concept of CNG transportation which can be considered as the landmark to regulate the transport system which is the most crucial mode of transmission as well as a major contributor to tourism menace. The decision created a role model for the tourist destination to regulate the transport sector and use environmental friendly and cleaner means of transport. Not only in Delhi, but at all Tourist places, CNG taxis and tourist buses should be made compulsory. Although these are small measures but can definitely contribute to conserve the environment.

Eco- tourism can be one of the objects for many biological park project. In *Niyamavedi v State of Kerala*, the Kerala High Court found that a project for such a park was designed after consulting many experts who gave full support for watching wildlife at close quarters, without interfering with the sanctity of flora and fauna. In the court's eyes the government's decision to establish a park after consultation was a policy decision, which could not be interfered with.

On the brighter side, tourism can significantly also contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources and there are numerous significant examples where nations have developed techniques, modus and laws to protect nature. For example, in Hawaii, new laws and regulations have been enacted to preserve the Hawaiian rainforest and to protect native species. The coral reefs around the islands and the marine life that depend on them for survival are also protected. Hawaii now has become an international centre for research on ecological systems - and the promotion and preservation of the islands' tourism industry was the main motivation for these actions.⁴⁸

Grupo Punta Cana, a resort in the Dominican Republic, offers an example of how luxury tourism development and conservation can be combined. The developers have set aside 10,000 hectares of land as a nature reserve and native fruit tree garden which includes 11 fresh water springs surrounded by a subtropical forest where many species of unusual Caribbean flora and fauna live in their natural state. The *Punta Cana Ecological Foundation* has begun reforesting some parts of the reserve that had been stripped of their native

⁴⁷ 2001 (2) SCR 698

⁴⁸Source: *Mundus*

mahogany and other trees in the past. Other environmentally protective policies have been put into effect at the resort, such as programs to protect the offshore barrier reefs and the recycling of wastewater for use in irrigating the grounds. The fairways of the resort's new golf course were planted with a hybrid grass that can be irrigated with sea water and also requires less than half the usual amounts of fertilizer and pesticides.

Tourism has had a positive effect on wildlife preservation and protection efforts, notably in Africa but also in South America, Asia, Australia, and the South Pacific. Numerous animal and plant species have already become extinct or may become extinct soon. Many countries have therefore established wildlife reserves and enacted strict laws protecting the animals that draw nature-loving tourists. As a result of these measures, several endangered species have begun to thrive again.

In the Great Lakes region of Africa, mountain gorillas, one of the world's most endangered great apes, play a critical ecological, economic and political role. Establishment of a gorilla tracking permit, which costs US\$ 250 plus park fees, means that just three habituated gorilla groups of about 38 individuals in total can generate over US\$ 3 million in revenue per year. The presence of such a valuable tourism revenue source in the fragile afro-montane forests ensures that these critical habitats are protected, thus fulfilling their valuable ecological function including local climate regulation, water catchment, and natural resources for local communities.⁴⁹

Observing wild and semi-wild orang-utans in their natural habitat is a significant environmental education opportunity for large numbers of domestic visitors. To enhance this education experience, the existing station at Bohorok, North Sumatra is to be transformed from a rehabilitation centre into an orang-utan viewing centre, thus offering another, crucial contribution to the sustainable conservation of the rainforest ecosystem. This will increase their awareness of the importance of rainforest conservation.⁵⁰

Conclusion

Like other few nations, India should adopt strict and innovative laws, compulsory execution of such norms and avant-garde techniques in order to preserve what has been gifted to us by the omnipotent. Regulatory measures may help offset negative impacts; for instance, controls on the number of tourist activities and movement of visitors within protected areas can limit

⁴⁹Source: *UNEP Great Apes Survival Project and Discovery Initiatives*

⁵⁰Source: *Sumatran orangutan conservation programme*

impacts on the ecosystem and help maintain the integrity and vitality of the site. Such limits can also reduce the negative impacts on resources.

Tourism industry in India is growing and it has vast potential for generating employment and earning large amount of foreign exchange besides giving a fillip to the country's overall economic and social development. Yet much more remains to be done. 'Eco-tourism' needs to be promoted so that tourism in India helps in preserving and sustaining the diversity of the India's natural and cultural environments. Tourism in India should be developed in such a way that it accommodates and entertains visitors in a way that is minimally intrusive or destructive to the environment and sustains & supports the native cultures in the locations it is operating in. Moreover, since tourism is a multi-dimensional activity, and basically a service industry, it would be necessary that all wings of the Central and State governments, private sector and voluntary organisations become active partners in the endeavour to attain sustainable growth in tourism if India is to become a world player in the tourism industry.⁵¹

The findings of the study leaves more question on the development of Eco-tourism in India. Environmental issues of tourism in India are different per region or state as per the types of tourism. It has been viewed that the issues like carrying capacity, land degradation, pollution, deforestation, climate changes, solid wastes etc are the main problem to look upon. From the various studies it is clear that the environmental effect of tourism development in India differs from region to region. One cannot study and plan same for all the regions. Like, the more development of tourism in the Coastal area like Goa, Kerala, Pondicherry and other coastal region have impact on the marine life and water resources. In case of the Himalayan states of India, the impact is on the forest, climate, land degradation, temperature, and threat to the protected areas. Further, in the metropolitan cities and states having maximum population, further development of tourism has impact on environmental pollution, deforestation, crowd and carrying capacity. The study also awakes us and provokes us to take the issue in a more serious point to discuss. Though many environments are endowed with great tourist potential, they are delicately balanced and large scale unplanned expansion of tourism in such areas often manifests itself in problems of serious environmental concern. It is necessary that tourism should be developed in a planned way taking care of environment and infrastructural development.

⁵¹ Access at, <http://www.trcollege.net/articles/74-development-and-impact-of-tourism-industry-in-india>

Therefore, state-wise/region-wise in-depth study on environment assessment of tourism industry in India is very necessary for the sustainable management of tourism and environment. Further, the tourism planning should be made on the basis of regional characteristic of the tourist destinations. Further, a sufficient fund for Research and Development is required to execute these studies effective for sustainable tourism policy in India.

E-WASTE IN INDIA: WHO GETS THE TRASH?¹

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Abstract

If you feel that your laptop has attained the highest degree of product obsolescence, it is perfectly normal for you to replace it. But if you plan to toss it into the dustbin, you need to think twice. It goes without saying that the fruits of the developments in the field of information and technology are nothing less than spectacular, having changed the lifestyle of millions. At the same time, these have unconsciously given birth to multitudinous hitches in the form of production of hazardous wastes electrical and electronic equipment, all over the world. These “Electronic wastes” or “E-wastes” are categorized as anything that running on batteries, utilizing electricity to function. These E-wastes on being released contain humongous amounts of toxins, which carry the potential of causing environmental pollution. The E-wastes of developed countries are shipped into the developing countries in the name of free trade, for the fact because the underdeveloped countries do not have the requisite infrastructure and technical knowhow to handle the ever growing perils of E-waste. This proves to be a cheap, cost-effective mechanism to get rid of E-waste unlike in the developed countries which find it an expensive proposition to dispose E-waste legally. Many bodies of organizations have adopted various strategies to eradicate the menace of E-waste and come up with challenges and perspectives, but are these only on paper? Indian governmental intervention to implement the legislations is the need of the hour today. More so, recycling the E-wastes is the pressing exigency because they serve as purposeful raw materials for future production of electronic equipment.

1. INTRODUCTION

It goes without saying that the fruits of the developments in the field of information and technology are nothing less than spectacular, having changed the lifestyle of millions. At the same time, these have unconsciously given birth to multitudinous hitches in the form of production of hazardous wastes electrical and electronic equipment, all of this at an ethical cost. These “Electronic wastes” or “E-wastes” are categorized as anything that running on batteries, utilizing electricity to function. These E-wastes on being released

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contain humongous amounts of toxins, which carry the potential of causing environmental pollution. These contain toxic as well as useful materials. The fraction including iron, copper, aluminium, gold and other metals in e-waste is over 60%, while plastic account for about 30% and the hazardous pollutants comprise only about 2.70%². The E-wastes of developed countries are shipped into the developing countries in the name of free trade³, for the fact because the underdeveloped countries do not have the requisite infrastructure and technical knowhow to handle the ever growing perils of E-waste. This claims to be the primary source of computer wastes in India. This proves to be a cheap, cost-effective mechanism to get rid of E-waste unlike in the developed countries which find it an expensive proposition to dispose E-waste legally. According to the report on the Indian IT sector, RadhaGopalan⁴ said, “*the rate of obsolescence of computers in India is 2% per week, i.e., in 50 weeks- time the value of the computer is effectively zero.*” Also, recent research has exhibited that United States possesses the fastest growing municipal waste stream.⁵

2. E-Waste: The Indian Scenario

The approximations carried out by WEEE task force speak that the total E-waste generation in India stands at about 1,46,000 tonnes per year.⁶The IT expertise along with the eye for business, generate tonnes of hazardous wastes, left to gather dust which are accidently discovered by children hunting for food. Recent findings of the worldwide research institute in e-waste, “United Nations University”⁷ show that amount of global

²Widmer R, Heidi Oswald-Krapf , DeepaliSinha-Khetriwal, Max Schnellmann, Heinz Bo`ni, *Global Perspectives on E-waste, Environmental Impact Assessment Review* 25 436– 458, 2005.

³Toxics Link, “E-Waste in Chennai Time is running out”, 2004, available at http://toxicslink.org/docs/06033_reptchen.pdf (last accessed 20th August 2016).

⁴RadhaGopalan, “A Study on the Indian IT Sector”, 2002, available at www.nautilus.org (last accessed on 22nd August 2016).

⁵“Facts and Figures on E-waste and Recycling,” Electronics Takeback Coalition, 24 July 2013, available at http://www.electronicstakeback.com/wpcontent/uploads/Facts_and_Figures

⁶Wath S et al., *A roadmap for development of sustainable E-waste management system in India*, Sci. Total Environ. 409:19-32, 2010.

⁷United Nations University, ‘The Global E-Waste Monitor 2014: Quantities, Flows and Resources (2014)’, available at <http://i.unu.edu/media/ias.unu.edu-en/news/7916/Global-E-waste-Monitor-2014-small.pdf> (last accessed 23rd August 2016).

waste has reached 41.8 million tonnes in 2014, clinching the 5th position⁸ only behind the U.S, China, Japan and Germany. This included 16,500 kilotons of iron, 1,900 kilotons of copper, and 300 tonnes of gold and also valid amounts of silver, aluminum, palladium, and other potentially reusable resources, the estimated value of which is US\$52 billion.⁹One-third of this waste was primarily generated by the US and China alone. The developed nations ship the huge amount of E-waste to the developing Asian countries because the cost of treatment supersedes the cost of shipment to these countries, hence proving to be a relatively cheaper recourse. The issue faced is that in India, for example, everything from collection to segregation is done by unorganized sectors. Owing to the lack of efficient techniques and adequate infrastructure, the modus operandi is manual. Many a times there occurs the illegal export of “non-functional goods” instead of “used goods”. This report¹⁰ has it that India turns out to be the prime terminus for European waste Hundreds of companies send unwanted electronics to plant industries every day, and from those they recover plastics, copper, steel and sometimes, even gold! Bangalore, known as the IT hub generates waste of about 20,000 tonnes of E-waste per year¹¹ according to a report by ASSOCHAM¹².But, it is not just companies that generate E-wastes. India has million mobile phone users and it is the fastest growing smartphone market in the world. The sale of other electronic items is rising by 15% every year. So start-ups buy used gadgets from people, check to make sure that they are working, fixing them if they are not and then re-selling the items to other consumers. There is an enormous opportunity view in going forward-by not justenabling people to resell their gadgets but also providing certified gadgets. This in turn has a dual role play- extending the life cycle of the gadgets itself as well as preventing e-waste from accumulating. If we just look around, we can be sure to find computers, keyboards, television sets,headphones

⁸“India: The Fifth Biggest Generator of E-waste in 2014”, *The Hindu*, available at <http://www.thehindu.com/todays-paper/tp-national/india-fifth-biggest-generator-of-ewaste-in-2014-un-report/article7120245.ece> (last accessed 23rd August 2016)

⁹ United Nations University, ‘The Global E-Waste Monitor 2014: Quantities, Flows and Resources (2014)’

¹⁰ United Nations Environment Programme (UNEP), available at <http://www.unep.org/environmentalgovernance/Portals/8/documents/rra-wastecrime.pdf> (last accessed 24th August 2016)

¹¹ Leah Borromeo, “India’s E-waste burden”, *The Guardian*, 11 October, 2013, available at <http://www.theguardian.com/sustainable-business/india-it-electronic-waste> (last accessed on 22nd August 2016)

¹² Available at <http://www.assochem.org/publications/genpub.php> (last accessed 20th August 2016)

and of course, mobile handsets. At some point of time, all of these will be thrown away. Now in 2011, India created rules¹³ for safe recycling of things like these. But today, 90% of the country's electronic waste is not disposed of properly. Instead, it is dealt with a large number of unorganized industries that mostly operate from slums and smaller-towns in major cities. Today gadget makers are responsible to what happens to items when they are no longer wanted. And while most big manufacturers have set up systems to collect items, few people are still aware of how to dispose of E-wastes, and so, only a very small fraction of India's E-waste is at present being channeled to safe recycling plants which work with companies, a problem that India surely needs to fix.

2.1 Impact of E-waste

A population of 1.2 billion combined with one of the 118 signatories to the Basel Convention, India has to be responsible. It is known that E-waste consists of hazardous elements, and most of these hazards are given birth due to inefficient recycling and disposal techniques.¹⁴ Though there is no specific regulation that addresses the issue of E-waste, most of them find recourse within the purview of "the Hazardous and Waste Management Rules, 2008". In the light of this regulation, the E-wastes are not treated as wastes unless they are proved to be hazards of the highest order. Often due to extremely inadequate level of efficiency and expertise in India, the wastes end up in the hands of the informal sector which operate manually and hence, no special attention is given to the mode of disposal. The toll this takes on the health and environment is very critical, amounting to chronicle ailments¹⁵. It might not be known, but E-waste contains toxic substances such as Lead and Cadmium in circuit boards; lead oxide and Cadmium in monitor Cathode Ray Tubes (CRTs) Mercury in switches and flat screen monitors; Cadmium in computer batteries; polychlorinated biphenyls (PCBs) in older capacitors and transformers; and brominated flame retardants on printed circuit boards, plastic casing, cables and polyvinyl chloride (PVC) cable insulation that release highly toxic

¹³Central Pollution Control Board, 'Implementation of E-waste Rules 2011'

¹⁴E-Waste Guide, available from www.ewaste.in (last accessed on 24th August 2016)

¹⁵ B. Wath, Sushant, "E-waste scenario in India: Its management and Implications", *Environmental Monitoring and Assessment*, Vol. 172, Issue 1, January, 2010.

dioxins and furans when burned to retrieve Copper from the wires.¹⁶ If the system of landfills is used, it will lead to the leaching of lead into groundwater, some nations already have forbidden this practice. The CRT emits toxic fumes if burned into the air.¹⁷ Incineration seems to be a process of easy disposal, but has its devastating implications due to the release of toxic materials. The concept of reuse seems to be in vogue because it is for this purpose that second hand electronic goods are shipped from the developed nations to the developing nations. The limitation lies in the fact that using the second hand goods poses a threat to the people living in the vicinity, which further can be made available to the nearby factories. Via recycling, the problem of cost effectiveness finds recourse because this demands the lowest cost in the developing nations. To the workers doing it, this is a critical risk to their health. Reducing the use of power to save the life of electronics could be seen as a viable option, lest it remains only on paper.

3. Import of E-waste

It's quite clear by now that, India is one of the biggest dumping grounds of the electronic waste in the world for the e-waste of the developed giants. To tackle the alarming impact of the hazardous waste, a parliamentary panel has recommended curbing the practice through an effective legislation. There are a plethora of reports which address the issue of e-wastes and majority of them are of stands point that, wastes are being shipped to developing countries in Asia, Africa and Latin America from developed nations under the garb of "used goods" to pass on the hazards associated with it and to "avoid" the cost of legitimate recycling¹⁸.

It's quite distressful to note from environmental aspect that, India is amongst worlds one of the largest importers of the waste like lead waste and scrap, used batteries, electronic and plastic waste etc. This has devastative impact on the public health and environment.

¹⁶ Dr. B. J. Mohite, "Issues and Strategies in Managing E-Waste in India", *Indian Journal of Research in Management, Business and Social Sciences (IJRMBS)*, Vol. 1, Issue 1, March, 2013.

¹⁷ Joseph, Kurian, "Electronic Waste Management in India: Issues and Strategies", *Eleventh International Waste Management and Landfill Symposium*, Sardinia, 2007.

¹⁸ The Hindu Business Line, 3rd May, 2015, available at <http://www.thehindubusinessline.com/news/ewaste-in-india-increasing-at-alarming-rate/article7167129.ece> (last accessed on 24th August 2016)

E-waste rules of 2011, clearly lay down that, every producer, distributor collection center, refurbished, dismantler, recycler, consumer or bulk consumer shall not import used electrical and electronic equipment or components in India for use unless it is imported for the purpose of repair or refurbishment or to fulfill obligations under the Extended Producer Responsibility (EPR)¹⁹. Among all the ports, Mumbai Port and Jawaharlal Nehru port are most junk effected ports of the country. The e-waste trade is a thriving business in India with cities like Dubai and Singapore serving as a trade route. E-waste from Australia, North America, South Korea and Japan is received in Singapore and dispatched again to the importing Asian countries including India.

India has been labeled as one of the largest e-waste generators in the Asia. More than 90% of the e-waste generated ends up in the unorganized market of the country. A study by the Basel Action Network (BAN) in partnership with the Toxic Link reveals that e-waste is received and processed in India in similar manner as is done in China, or the condition could be even worse²⁰.

E-waste as provide cheap raw material, has many people advocating in its favor. One of such comment was made by Late President of India Dr. APJ Abdul Kalam who commented that, “with metal prices rising, recycling will help in sustaining our economy as it is much cheaper than extracting metals from its ore”.²¹

4. Laws Governing E-waste

There have been number of convention which discussed about the issue hazardous waste and its disposal among which, Basel Convention is one, which disused issue in the most comprehensive manner. This convention was signed by almost 173 countries. The convention sought to work in the field of following activities²²:

- active promotion and use of cleaner technologies and production methods;
- further reduction of the movement of hazardous and other wastes;

¹⁹ Rule 16 of *E-waste Rule*, 2011.

²⁰RajyaSabha, 'E-waste in India', 2011

²¹Available at <http://www.thehindu.com/thehindu/pp/2010/01/23/stories/2010012350170500.htm>

²² UNEP News Release, 'Ministers Call for Cleaner Production Methods as they Set Priorities for Next Decade of Basel Convention on Hazardous Wastes', 14 December, 1999, available at <http://www.unep.org/> (last accessed 25th August 2016)

- the prevention and monitoring of illegal traffic;
- improvement of institutional and technical capabilities— through technology when appropriate — especially for developing countries and countries with economies in transition;
- further development of regional and sub-regional centers for training and technology transfer; and
- Enhancement of information exchange, education and awareness-raising in all sectors of society.

Basel convention indicates that, every country exporting waste must take prior permission from the importing country. In case of illegal trade, it becomes obligatory for the exporting country to take back their junk and pay the damages and the cleanup cost to the importers.

4.1 The Bamako Convention

Aim of the convention was protection of environment and human health from the ever-dangerous hazardous wastes and reducing their generation to a minimum in terms of quantity and/or hazardous potential. Only difference between the two conventions was that, instead of using same language to Basel convention, Bamako convention is way too strict to make countries adhere to the rules of prohibition of hazard dump²³.

4.2 The Rotterdam Convention

It is a multilateral treaty to promote shared responsibilities between exporting and importing countries in protecting human health and environment. The Convention promotes exchange of information among Parties over a broad range of potentially hazardous chemicals that may be exported or imported.²⁴

The Rotterdam Convention calls on exporters of hazardous chemicals to use proper labeling, include directions on safe handling, and inform purchasers about known restrictions or bans. This treaty was adopted in 1989 and entered into force in 1992.

²³ Available at <http://www.unep.org/delc/BamakoConvention> (last accessed 25th August 2016)

²⁴available at http://www.iisd.ca/process/chemical_management-picintro.html (last accessed 25th August 2016)

Parties can decide whether to allow or ban the import of chemicals listed in the treaty, and countries exporting chemicals are obliged to make sure that producers within their jurisdiction comply with the directions and rules²⁵.

4.3 A bill in the right direction

To put a limit on the export of E-waste, a bill has been introduced in the US House of Representatives, with an aim to direct ethical recycling of E-wastes. This move is in furtherance of a domestic recycling of the electronic equipments, with the main purpose of preventing the E-waste from becoming a victim of counterfeit goods that might enter military supply chains in the United States.²⁶ There are a certain items which are exempted from the category of electronic wastes, which are- tested, working used electronics, low risk counterfeit electronics, recalled electronics.²⁷

5. Indian Stand on the E-Waste

After the Bhopal gas tragedy, First legislation in India was legislation concerning the Environmental aspect it was named as Environmental Protection Act (EPA), 1986. Act only addressed the problem of hazardous waste and was clueless about the problem of e-waste. Thereafter, India adopted the principle like “Polluters pay” and “precautionary”²⁸ from the International Enviro-prudence.²⁹ Presently, e-waste is treated by both informal and formal recyclers sharing total e-waste quantity in 95 to 5 ratios in the country.³⁰

The Hazardous Waste Management regulates that, the company or individual has to first obtain the permission from the relevant states pollution control board (SPCB) in order to receive, transport or store the hazardous waste. Further, the rules also banned the import of Hazardous waste for dumping or disposal. An authorization is needed to be issued by

²⁵ Kummer, Katharina, ‘International Management of Hazardous Wastes: The Basel Convention and Related Legal Rules’, Oxford: Clarendon Press, 1995

²⁶ ‘E-Waste Export Bill introduced in Congress’, *Environmental Leader*, July 7, 2016.

²⁷ Section 2(2), Congressional Bills 114th Congress, 2015-16, available at <https://www.congress.gov/bill/114th-congress/house-bill/5579/text/ih?format=txt>

²⁸ *Indian Council For Enviro-Legal v. Union of India*, 1996 SCC (3) 212

²⁹ Enviroprudence stands for environmental jurisprudence.

³⁰ Mahesh C. Vats, Santosh K. Singh, ‘Status of E-waste in India- A review’, *International Journal of Innovative Research in Science, Engineering and Technology*, Vol. 3, Issue 10, October 2014

Central government in order to process or reuse the hazardous waste. The amendment to the rules in 2000, for the first time increased the scope of the rules to e-waste³¹.

The new Hazardous Wastes Management, Handling and Tran's boundary Movement Rules of 2008 replaced the old HWM rules and now contain additional provisions on e-waste handling within India. These provisions require every person planning to recycle or reprocess e-waste to obtain prior authorization from the relevant SPCB. However, the SPCB registration process has been criticized for granting the same authorization to collectors, dismantlers and recyclers without assessing their capability to treat the e-waste in an environmentally sound manner. Furthermore, responsibility is split between the states and the federal government³².

5.1 E-Waste Management Rules 2010

Ministry of Environment and forest of government of India the E-Waste management rule in 2010. Central government for the purpose of public welfare found it considerably necessary to enable the recovery and reuse of useful material from e-waste, thereby reducing the hazardous waste destined for disposal and to ensure the environmentally sound management of all types of waste electrical and electronic equipment.

5.1.1. E-Waste Law 2011

Owing to the low cost value of labor used and the non-stringent regulations, India and other developing countries became export hub for about 50-80% of e-waste collected by the developed countries.³³ India has introduced a new e-waste rule that makes environmentally sound management and disposal of electronic waste mandatory. The E-waste (Management and Handling) Rule, 2011 places responsibility on the producers for the entire lifecycle of a product, from design to disposal. Apart from Extended Producer Responsibility principle, the rule is a significant step towards international standards of Restriction of Hazardous substances in electronics. The rules were notified by the Ministry of Environment and Forests on May 30. The rule will be implemented throughout the country from May 1, 2012.

³¹ Hazardous Waste Management Amendment Rules, 2000

³² Mahima, S., "Rules on Electronic Waste Management- An Analysis", *Indian Journal of Applied Research*, Vol. 3, Issue 4, April, 2013.

³³ Solving the E-waste Problem (StEP), "Sustainable Innovation and Technology Transfer Industrial Sector Studies: Recycling from E-Waste to Resources", United Nations Environment Programme, July 2009.

CONCLUDING REMARKS

The only viable way to reduce E-wastes is to produce less of it. Not only is e-waste illegally imported but it is also generated in India. Growing up to become one of the fastest waste streams today, it all ends up posing a huge challenge and threat to the environment clubbed with human life. It should essentially be kept in mind that the electronics are to be re-used and so it should be designed in that manner, which ultimately result in conservation of energy and toxic-free environment. Reliance should be placed on an 'e-waste policy' to promote the collective initiatives of the industry towards a better management. If the existing laws don't serve the mettle, they should be done away with and replaced with a comprehensive legislation regulating e-waste and ensuring safe and legal disposal. With respect to the products, an end-of life strategy should be borne in mind while designing the products.

Environmental Courts in comparative perspective: Preliminary reflections on the National Green Tribunal of India

“The environment is everything that isn't me”

Albert Einstein

Environmental law is undoubtedly one of the main pillars of environmental protection, but after many decades it is still suffering in most of the world from implementation. As it has been rightly noticed “almost all nations, including developing ones, have basic environmental protection laws in place, but an enormous gap exists between the letter of the law and what is actually happening on the ground.”¹

Often the executive powers, unable to enforce it successfully tend to abdicate their responsibilities to the judiciary, regardless of the effectiveness of the penalties concerning environmental infringements and crimes and of the level of expertise of the judicial bodies concerned. As a result, the organization of the courts and their environmental sensibility, as well as the national systems of access to justice, have become crucial issues in the implementation of both the environmental law in general and the principle of sustainable development in particular. This evidence was fully emphasized in the 2002 Johannesburg Principles on the Role of Law and Sustainable Development affirming that “an independent Judiciary and judicial process is vital for the implementation, development and enforcement of environmental law, and that members of the Judiciary, as well as those contributing to the judicial process at the national, regional and global levels, are crucial partners for promoting compliance with, and the implementation and enforcement of, international and national environmental law; in the same declaration it was also

¹ P. Stein, Why judges are essential to the rule of law and environmental protection, in T. Greiber (ed.), Judges and the rule of law. Creating the links: environment, human rights and poverty, IUCN, Gland, Switzerland and Cambridge, UK, 2006, p. 57.

Stressed that “the fragile state of the global environment requires the Judiciary as the guardian of the Rule of Law, to boldly and fearlessly implement and enforce applicable international and national laws, which in the field of environment and sustainable development will assist in alleviating poverty”.²

The origins of the National Green Tribunal of India: the centrality of the Supreme Court in a judge-driven reform.

The creation of the National Green Tribunal of India (NGT) has followed a long and faceted process and was determined by several factors: the attention paid by both the coalitions in power during the first decade of the third millennium (the NDA, guided by the BJP, in the first part and UPA, led by the Congress Party, later) and notably the “green turn” in the policy of the UPA government, the necessity to remedy the previous failures of other institutions designed for the enforcement of environmental legislation (like the National Environmental Tribunal, created in 1995 but never implemented and the National Environmental Appellate Authority, nearly unemployed), the international movement towards the creation of environmental courts, the ever growing need to facilitate the access to environmental justice to the average citizens. But interestingly the main factor of this process should be indicated in the judiciary itself, affirming, through several decades of judicial commitment to environment, notably by the Supreme Court, the relevance and necessity of a system of specialized Environmental Courts. It is very revealing that the political origin of this process, the 186th Report of the Law Commission of India (2003), dedicated to “Proposal to constitute Environment Courts”, states in its opening remarks that the proposal was prepared “pursuant to the observations of the Supreme Court of India in four judgments”³ where “reference was made to the idea of a “multi-faceted” Environmental Court with judicial and technical/scientific inputs”.

² Johannesburg Principles on the Role of Law and Sustainable Development Adopted at the Global Judges Symposium held in Johannesburg, South Africa, on 18-20 August 2002.

³ The Law Commission explicitly quotes the judgments M.C. Mehta vs. Union of India, 1986 (2) SCC 176; Indian Council for Environmental-Legal Action Vs Union of India: 1996(3)SCC 212; A.P. Pollution Control Board Vs M.V. Nayudu:1999(2)SCC 718 and A.P. Pollution Control Board Vs M.V. Nayudu II: 2001(2)SCC62

Without underscoring the weight of political will and the merits of the Parliamentary majority voting the NGT Act in 2010, we could define the establishment of a Green Tribunal in India as a „judge-driven reform“. This peculiar feature of the Indian reform is very important because the new green courts were designed according to the needs indicated by the judiciary (and the Supreme Court is undoubtedly one of the leading Indian institutions in the protection of the environment).⁴

Indian scholars have highlighted the role of the Supreme Court in the foundation and the consolidation of environmental protection in India⁵ , but what is really peculiar is that the Court has been quite innovative, indicating new methods to implement environmental legislation and to resolve environmental disputes in India.⁶ A not comprehensive list of them would include: “entertaining petitions on behalf of the affected party and inanimate objects, taking suo motu action against the polluter, expanding the sphere of litigation, expanding the meaning of existing Constitutional provisions, applying international environmental principles to domestic environmental problems, appointing expert committee to give inputs and monitoring implementation of judicial decisions, making spot visit to assess the environmental problem at the ground level, appointing amicus curiae to speak on behalf of the environment, and encouraging petitioners and lawyers to draw the attention of Court about environmental problems through cash award”.⁷

⁴ Significantly, some critics have defined the judges of the supreme Court as the „Lords of Green Bench“ or „Garbage Supervisor“; see S.S. Prakash- P.V.N. Sarma, Environment Protection vis-a-vis Judicial Activism, 2 Supreme Court Journal, 2, 1998, p. 56.

⁵ Among others S. Divan – A. Rosencranz, Environmental Law and Policy in India, Oxford University Press, Oxford, 2001; A.K. Tiwari, Environmental Laws in India, Deep and Deep Publications, New Delhi, 2006; S.C. Shastri, Environmental Law, Eastern Book Company, Lucknow, 2008.

⁶ M. K. Ramesh, Environmental Justice: Courts and Beyond, in Indian Journal of Environmental law, 3(1), 2002, p. 20.

⁷ . Sahu, Implications of Indian Supreme Court’s Innovations for Environmental Jurisprudence, Law, Environment and Development Journal , 4/1 , 2008, available at <http://www.lead-journal.org/content/08001.pdf>, p. 1.

Outstanding features of the National Green Tribunal.

The 186th Report of the Law Commission (2003) did not result immediately in the approval of the reform, but was implemented only in 2009 by the freshly re-elected UPA government, that introduced in the Lok Sabha on July 29, through the Environment and Forest Minister Jairam Ramesh, the National Green Tribunal bill, 2009. The National Green Tribunal is a federal judicial body whose specific mission is “the effective and expeditious disposal of cases relating to environmental protection and conservation of forest and other natural resources”. Considering that the process of setting up the Tribunal will take some time and that for a comprehensive assessment of this institution it is necessary to wait for some practice to be carried on, here I will limit myself to consider three of the more interesting features of the new „green judge“ that are: the vast range of its jurisdiction (original and appellate), its composition (integrating judicial members and technical experts) and the open access it will allow to the individuals and the public at large.

The jurisdiction of the tribunal is determined by section 14 of the Act disposing that it covers “all civil cases where a substantial question relating to environment (including enforcement of any legal right relating to the environment) is involved and such question arises out of the implementation of the enactments specified in Schedule I”.⁸

The most interesting feature of the new Green Tribunal is probably its composition. In fact the NGT Act meets the demand, illustrated by the Supreme Court in the cases quoted above, for a Court constituted both of judicial members and experts from the scientific and technical disciplines. Indeed the minimum composition of the Tribunal, as per section 4, will vary from 21 to 41 members: a chairperson (judicial), 10 to 20 full time judicial members, 10 to 20 expert members, all chosen by the Central Government.

⁸ Schedule I lists the main environmental laws of the Indian union: 1. The Water (Prevention and Control of Pollution) Act, 1974; 2. The Water (Prevention and Control of Pollution) Cess Act, 1977; 3. The Forest (Conservation) Act, 1980; 4. The Air (Prevention and Control of Pollution) Act, 1981; 5. The Environment (Protection) Act, 1986; 6. The Public Liability Insurance Act, 1991; 7. The Biological Diversity Act, 2002.

In the Tribunal there will be a balanced mix of judges and technical experts, with strict qualifications: they have to be holders of a Master in Science (in the field of physical sciences, including five years or life sciences, with a Doctorate Degree) or a Master of Engineering or Technology, and must have, as per Section 5 (2) (a) of the Act, a fifteen years experience in a relevant field, including five years of practical experience in the field of environment and forest. The experts may also come from the administrative field, with the requirement of "Administrative experience of fifteen years including experience of five years in dealing with environmental matters in the Central or a State Government or in a reputed National or State level institution", including also members from civil society organizations (NGO"s and others).

41 The limitation of the scientific experts to the field of Science Engineering or Technology, deserves some criticism, because, as it was rightly observed "environmental issues are broad and the issue with respect to 'substantial questions with respect to the environment' cannot be regarded as the sole domain of the Technologists and engineers", and maybe the criteria for selection could have been broadened. It is interesting to note that Section 4 (2) provides also for additional integration of the Tribunal to be decided on a case-to-case basis by the Chairperson having the power to "invite any one or more person having specialized knowledge and experience in a particular case before the Tribunal to assist the Tribunal in that case."

CONCLUSION

The establishment of the National Green Tribunal confirms the commitment of the Indian legal system to environmental protection, pursuing a long-lasting engagement of the State (through several constitutional reforms and a panoply of legislative Acts) and, first of all, of the judiciary. The Supreme Court, especially, has played a proactive role in the protection of the environmental rights enshrined in the Constitution, by means of an expansive jurisprudence that has determined a significant growth in the access of Indian citizens to environmental justice. In the Asian context India has a leading role to play, being “the world's largest democracy” able to influence positively not only the other States of the sub-continent but the whole of Asian democracies. With reference to the judicial enforcement of environmental law, that should be considered, as we have seen in this paper, an important condition for sustainable development but also for the sustainability of the legal environmental order, the National Green Tribunal of India seems to be the most comprehensive and promising among the specialized environmental Courts created in Asia over the last decade. In the Far East, while democracies like Japan and Korea have opted for the settlement of environmental disputes through administrative bodies (the Environmental Dispute Resolution Commissions), while China, in its ongoing institutional reform process, has set up an articulate system of Environmental Tribunals at the regional and local levels. Other Asian States have organized systems of internal specialization in environmental matters: this is the case of the Philippines, with an extremely articulate system of 117 local and regional trial (environmental) Courts, established by the Supreme Courts rules), or of Indonesia through an informal specialization of singles judges, dating long back. Other countries having developed a rich and interesting environmental jurisprudence still rely on the ordinary Courts system and especially on proactive Supreme Courts (this is the case of Sri Lanka, Thailand and, to a lesser extent, Malaysia). The Indian subcontinent, having an established tradition of public interest environmental litigation⁴⁵, appears today to be a very active area, with the Environmental Tribunal and other Environmental Courts set up in Pakistan and some reforms still going on in Bangladesh (where the government announced in 2010 the intention to set up 64 Environment Courts at the local level)

