

Robust Regulations - A Key to Ecological Sustainability



Management

KEYWORDS: ecological sustainability, environmental regulation, green governance, pollution, resource depletion

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ABSTRACT

In order to be sustainable, businesses need to recognize and effectively address the complex relationship between social development and environmental protection. The sad truth is that everyone preaches sustainability while the effort towards it is found to be rather paltry. As long as the system employs only moral persuasion to teach people the importance of going green, it fails to bring about notable positive changes in their behavior. The need of the hour is an effective, elaborate legal framework for stringent enforce ability so that sustainable development is never a distant dream but a definite destiny. This paper aims to identify the reasons why sustainable practices are unpopular in the Indian scenario and suggests ways which will ensure better adherence to green governance practices. When adoption of sustainable practices is not just desirable, but legally mandatory, India will be glorified as a nation promoting and encouraging eco-friendly and compatible businesses

Introduction

Ecological issues are heading the list of problems that our country is currently facing. A lot has been stated about them; hosts of discussions and symposiums have been held on the topic, but what is disappointing is that, most of their suggestions, inputs and convictions have been forsaken after that very occasion. The environment has been suffering a dramatic deterioration in its health, thanks to the neglectful attitude of people. The absence of monsoons, soaring temperatures in summers, steeply dipping mercury in winters, melting of the glaciers, depletion of the ozone, are just some of the myriad consequences that ill-treatment to the environment has brought about. The government has tried hard, but yet not hard enough to bring about a change towards sustainable development. Stricter regulations and more comprehensive legislations have become inevitable in this regard if we wish to save the earth for the future generations.

Literature Review

Several studies have been conducted on the burning topic of ecological ill-health and contributors to the same. Research studies have also been undertaken on the impact of various activities on ecosystems. When anti-environmental activities are not checked and regulated in time, they penetrate so deeply into the system that they become irreparable. If legislations are properly designed to check the functioning of various contributors to environmental damage, a clean and safe environment will soon become a reality.

The Millennium Declaration adopted in 2000, by UN General Assembly which defines 'respect for nature' as a fundamental value, and commits 'to integrate the principles of sustainable development into country policies', gives an insight into the need for a dedicated approach to sustainable development. Also, the World Summit on Sustainable Development in Johannesburg, held in 2002, promotes environmental protection, economic and social development as interdependent and mutually reinforcing. The UN Decade of Education for Sustainable Development (DESD) is an initiative launched to advance lifelong learning of knowledge, skills and values required for durable social transformation, through sensitizing the community to follow eco-friendly practices. Australia has also made a more significant mark in this direction by signing the Kyoto Protocol.

Research Methodology

The study was completed with data, from both primary as well as secondary sources.

Primary data was collected chiefly through personal observation and through unstructured interview method from stakeholders involving the retailers, builders, industrialists, corporates houses and households in Pune city of India. They were questioned about their routines in business and lifestyle that directly

or remotely have a bearing on the ecological balance and their responses have been analysed to arrive at fruitful results on the impact their behaviours have on the environment. Secondary data has been collected from previous research works, and from articles written about ecological sustainability accessed electronically. Further, best practices followed across the world with respect to sustainable practices have been analysed to serve as a benchmark to the Indian environmental efforts.

OBJECTIVES OF THE STUDY

This study chiefly aims to set the country thinking about the measures it may adopt to control environmental damage through the establishment of a pro-active legal system and regulatory framework to curb the damage at its source. The secondary objectives may be enlisted as follows;

- To understand the concept and need for sustainable development
- To become aware of the issues in bringing about ecological sustainability in the India
- To identify the role of the legal machinery in enforcing sustainability

ECOLOGICAL SUSTAINABILITY – CONCEPT AND NEED

5.1 Concept

Sustainability in a broad sense is the capacity to support, maintain or endure. With respect to the environment, sustainability describes how biological systems remain diverse, robust and productive over time, a necessary precondition for the welfare of human beings. Sustainability could be defined as an ability or capacity of something to be maintained or to sustain itself. It's about taking what we need to live now, without jeopardizing the potential for people in the future to meet their needs. Living sustainably is about living within the means of our natural systems (environment) and ensuring that our lifestyle doesn't harm other people (society and culture). Increasingly our lifestyle is placing more and more pressure on natural systems.

Need

The reason why we need to develop in a sustainable manner because the environment is currently posing several threats like

- climate change,
- pollution,
- environmental degradation and
- resource depletion

ENVIRONMENTAL ISSUES SPECIFIC TO THE INDIAN SCENARIO

It would be difficult to identify any single cause as having a profound impact on the Indian environment. The reasons for poor environmental upkeep and lack of sensitivity to the environment

damage can be attributed to the fact that the adverse impacts are not readily visible or tangible. Another reason could be that the point of impact and incidence lie differently, i.e., the person who causes harm to the environment and the one who suffers the consequences may be different, more so when one's actions are bound to bring about slow changes. More than the present it is the future that is endangered by our behaviors.

6.1 The reasons contributing to environmental degradation in India can be enumerated as follows:

6.1.1 Negligent attitude by retail outlets/malls: Retailers have a large role to play in the environmental problems faced in India. Use and sale of plastic shopping bags by retail outlets and malls, despite being aware of the adverse consequences it can produce, give a glimpse of their neglectful attitude and lack of concern for the environment. In fact when the Mumbai floods occurred on 26th July, 2005 the governments vehemently condemned the use of plastic shopping bags and laid down some specifications (in microns) in design that need to be met by polythene bag suppliers. The reasons why plastic shopping bags should be banned are:

1. They use up natural resources - Making plastic bags can lead to exhaustion of oil, because to oil is a major input in the manufacture of plastic bags. One can actually drive about 500 meters with the oil which is used for making a single plastic bag.
2. They create litter & harm wildlife and marine life - Plastic bags are chiefly contributing to animals deaths, on land and water, since they are getting choked, strangled and killed by them. In addition, they float around streets, causing litter.
3. They take a long time to biodegrade - Most plastic bags used either end up as litter or in landfills. It is sad but true that less than 1 percent is recycled. In a landfill, one plastic bag takes about a millennium to biodegrade.
4. They can be hazardous to humans -- Plastic bags pose a suffocation hazard to people, particularly children, and pets. The U.S. Consumer Product Safety Commission (C.P.S.C.) reports that they receive an average of 25 cases each year involving children having suffocated from a plastic bag.

6.1.2 Environmental disregard by builders: Builders and developers have entered a phase of profiteering which encourages complete disregard to the environment. While constructing industrial, commercial and office spaces and residential colonies, they have caused immense environmental injury. This fact can be evident from their behavior and construction routines.

1. Glass structures: The extensive use of glass work which enhance the glamour and glitter of the official buildings, adversely affects the environment. Where such designs are claimed to be influenced by their western counterparts, what the builders fail to note is the climatic conditions prevalent in India, and the suitability of glass curtain-wall designs for use in India. Some popular arguments for use of glass centre on the use of day lighting, maintaining connection with the outside world, and depiction of a transparent corporate culture. As for the daylighting, one does not effectively use more than a third of the daylight seeping into the building through the glass walls. As for corporate culture, the 'transparency' claim is counterfeited by the use of tints and blinds! There is a high environmental cost to all that glitter: increased energy consumption. A growing body of experts in sustainable design argues that our architectural aesthetic should evolve away from all-glass façades.

2. Debris at construction site: It is observed that in and around

residential colonies, there is heaps of debris, thanks to the builder's irresponsible attitude. Newer housing societies are being set up by the day, and as these structures stand proudly, ready to be owned; the pity is that they stand amidst debris that the builder has dumped. When builders use empty plots for disposing waste material, with no intention to clean up sooner or later, they quickly transform into dumping grounds and encourage wastage dumping by people in the vicinity.

3. Lack of environmental initiative: Builders can contribute largely to save the endangered environment. However, it is these real estate developers that chiefly harm the eco-structure. Firstly, in order to erect their skyscrapers, they may be required to destroy forests, thereby creating an ecological imbalance and causing disturbance to the flora and fauna. No effort is made to simultaneously undertake tree plantation directly or through NGOs. Secondly, most of the housing colonies are large-sized which offer ample opportunity to save and reuse water from rainfall through rain-water harvesting. But, even large builders do not incorporate facilities for rainwater harvesting in them. Lastly, newer residential projects essentially incorporate the concept of a swimming pool in their designs. Such pools are capacitated to hold huge volumes of water at all times, while only 15% residents on an average use this facility, and that too only on weekends or holidays. This is an example of sheer wastage of scarce water resources.

6.1.3 Lifestyle/routines of households: Of those households interviewed about their hygiene habits and environmental initiatives, most of the responses obtained signal towards lack of attention to the environment. It was identified that most home-makers lacked knowledge about the need to segregate bio-degradable wastes from non-bio-degradable ones. The study also revealed that non-biodegradable plastic shopping bags were used in place of garbage bags, to dispose of waste. Further, the plight of most localities is the absence of local municipality arrangement for waste collection, as a result of which they dispose waste in close-by empty plots, causing litter.

6.1.4 Carelessness by industrialists: Industrialists have been defamed over the decades as having a chief role in causing the environmental problems we experience. Large influential industrialists effortlessly obtain licenses, environmental sanctions, etc. and fearlessly function despite continually polluting the environment, endangering human and marine life through their solid, liquid and gaseous toxic effluents. They have also been quite successful in manipulating poor farmers and compelling them to sell their agricultural lands to them in order to start plants, industrial estates and SEZs, thereby expanding industry at the cost of agriculture (ecology). This is another major contributor to ecological damage.

6.1.5 Lack of civic consciousness of community: The community is also responsible for environmental degradation, and collectively powerful enough to bring a positive revolution towards sustainable development. Their callous attitude towards tree felling around them, the waste of electricity (including visible tapping) and other power resources, their silence and lack of objection in the setting up of industries in residential areas, lack of awareness of their rights to voice against unscrupulous builders and industrialists, their quiet tolerance of non-eco-friendly practices are some of the causes why there exists a high level of ecological jeopardy.

6.1.6 Lax attitude of automobile owners: Most owners of private vehicles have a lax attitude towards their vehicle use and maintenance. They continue to leave their vehicle's engines switched on at lengthy traffic signals and heavy traffic jams. They also fail to get emission tests of their vehicles done periodically, as a result of which they release a lot of carbon monoxide and other

toxic gases into the atmosphere, thereby endangering life.

LEGAL FRAMEWORK FOR ECOLOGICAL SUSTAINABILITY

7.1 Retailers: Retailers add to ecological hazard through the sale of plastic shopping bags. It is true that in today’s times, most customers make impulsive rather than planned purchases. If shopping bags are not provided by a particular store, customers either end up purchasing less or prefer to shop elsewhere. This makes an average retailer sell them a shopping bag, for the fear of disappointing/losing a valuable customer. The supply of plastic bags should be completely avoided. Customers who do not come equipped may be given paper/cloth bags at a price. This would ensure the ban on plastic bags, and ensure that customers display a sense of social responsibility.

7.2 Builders: “The Building Construction Act, 1952” must explicitly incorporate rules for sanction/approval of building master plan. These directives should consciously include and define feasible architectural designs that do not harm but rather support the ecosystem (for eg. Prohibit excessive use of glass structures; mandate the incorporation of rain-water harvesting facilities, etc.). There must be adequate clauses therein directing them to clean debris from the construction sites; providing specification on acceptable size of swimming pools based on number of flats in the housing society and specifying the amount of vacant space or ‘green area’ that each colony should incorporate.

7.3 Industrialists: There are several enactments and legislations in place to keep a check on industry and their activity. The Environment Protection Act, 1986 is an umbrella legislation to keep a check on activities that could possibly harm the environment. Further legislations enacted with related objectives include, Hazardous Waste (Management and Handling) Rules, 1989, The Manufacture, Storage, and Import of Hazardous Rules, 1989, The Manufacture, Use, Import, Export, and Storage of hazardous Micro-organisms/ Genetically Engineered Organisms or Cells Rules, 1989, The National Environmental Tribunal Act, 1995, The Biomedical waste (Management and Handling) Rules, 1998, The Environment (Siting for Industrial Projects) Rules, 1999, The Ozone Depleting Substances (Regulation and Control) Rules, 2000, The Batteries (Management and Handling) Rules, 2001, The Noise Pollution (Regulation and Control) (Amendment) Rules, 2002, The Biological Diversity Act, 2002, The Forest (Conservation) Act and Rules, 1981, The Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981, The Atomic Energy Act, 1982; to name a few. Hence what is called for is not more enactments, but a better monitoring mechanism.

Table 1 shows the summary of air pollution (2014)

Table 1: Country wise air pollution as of 2014

Countries Ranked by Air Pollution			
Country	Annual mean PM10 ug/m3*	Above or below worldaverage of 71ug/m3	Urban population coverage (%)
Mongolia	279	208	70%
Botswana	216	145	27%
Pakistan	198	127	40
Senegal	145	74	50%
Saudi Arabia	143	72	52
Egypt	138	67	21
United Arab Emirates	132	61	30.73
Iran (Islamic Republic of)	124	53	45
Nigeria	124	53	40%

Kuwait	123	52	71
Bangladesh	120	49	41%
Bosnia and Herzegovina	117	46	21%
India	109	38	91%
Nepal	106	35	19%
Ghana	98	27	18%
China	98	27	24%
Myanmar	94	23	34%
Bolivia (Plurinational State of)	82	11	39
Tunisia	80	9	74.38
Sri Lanka	77	6	22%
Peru	74	3	41
Colombia	71	-0	34
The former Yugoslav Republic of Macedonia	70	-1	100%
Madagascar	68	-3	30%
Turkey	66	-5	29%
United Republic of Tanzania	64	-7	29%
Chile	62	-9	62
Republic of Korea	61	-10	67%
Bulgaria	60	-11	40%
Israel	59	-12	64%
Mexico	55	-16	46
Indonesia	55	-16	19%
Cyprus	53	-18	100%
Lebanon	53	-18	51
El Salvador	52	-19	14
South Africa	52	-19	21%
Jamaica	48	-23	47
Guatemala	48	-23	45
Philippines	47	-24	22%
Greece	44	-27	66%
Serbia	43	-28	22%
Algeria	42	-29	15%
Malaysia	42	-29	42%
Romania	42	-29	35%
Thailand	41	-30	60%
Venezuela	41	-30	11
Brazil	40	-31	33
Panama	40	-31	29
Uruguay	39	-32	43
Latvia	39	-32	48%
Argentina	38	-33	35%
Italy	37	-34	28%
Ecuador	35	-36	22
Malta	35	-36	13%

Russian Federation	32.5	-38	11%
Croatia	33	-38	37%
Poland	33	-38	46%
Singapore	32	-39	100%
Slovenia	30	-41	28%
Spain	29	-42	27%
Czech Republic	29	-42	35%
Portugal	28	-43	17%
Costa Rica	28	-44	55
Denmark	27	-44	21%
Slovakia	27	-44	21%
France	27	-44	38%
Hungary	27	-44	30%
Belgium	26	-45	22%
Netherlands	26	-45	17%
Sweden	25	-46	21%
Austria	25	-46	38%
Germany	25	-46	36%
Belarus	24	-47	39
Iceland	24	-47	40%
United Kingdom	23	-48	29%
Japan	22	-49	13%
Norway	22	-49	25%
New Zealand	22	-49	64%
Switzerland	22	-49	12%
Lithuania	21	-50	30%
Finland	19	-52	20%
San Marino	20	-52	100%
Luxembourg	18	-53	21%
United States of America	18	-53	NA
Monaco	18	-53	100%
Bhutan	18	-53	40%
Ireland	15	-56	21%
Canada	13	-58	78%
Australia	13	-58	89%
Mauritius	12	-59	27%
Estonia	11	-60	43%

Source: World Health Organization data accessed through Statistic-brain.com

*Index to Table 1 **Table 2 – Descriptors to data in previous table**

PM10 Air Quality Index	Air Quality Description
0 – 50	Good
51 – 100	Moderate
101 – 150	Unhealthy for Sensitive Groups
151 – 200	Unhealthy
201 – 300	Very Unhealthy
301 – 500	Hazardous

7.4 Households: The households at cities and the countryside alike need to be educated about proper waste disposal practices.

They need to be convinced into segregating dry and wet waste, and more so radioactive waste. The Municipal Solid Wastes (Management & Handling) Rules, 2000 should make such segregation mandatory and take stringent actions on those who don't comply. Further, households who find it handy to dispose the waste at nearby unoccupied plots need to be taught the hazards to health caused by such practice, since it generates foul smell in due course.

7.5 Community: The community should pro-actively stop tree felling without prior sanction from concerned authorities. They should obey the law with respect to upkeep and maintenance of public places. They should cultivate clean habits and not tolerate any damage to the atmosphere. They should be adequate legislature checking the waste of energy resources by the community, pollution caused to water bodies (by washing utensils, clothes, cattle, etc.), setting up of industries and factories in areas designated to be agricultural or residential areas, etc.

7.6 Automobile Owners: The legislations for guidance of two, three and four wheelers is also not environment-oriented. Motor Vehicles Act, 1988 lays down rules regarding pollution-control , standards for transportation of hazardous and explosive materials. Sec 19(f) of the Act, 'Power of licensing authority to disqualify from holding a driving license or revoke such license' states that if the licensing authority is satisfied that the holder of a driving license 'has committed such an act which is likely to cause nuisance or danger to the public, may disqualify that person for a specified period for holding or obtaining any driving license to drive all or any classes or descriptions of vehicles specified in the license ; or revoke any such license.' This clause must be extended to include air and noise pollution caused by vehicles, and proper checks and tests being done to ensure the same. Violators must be punished severely rather than through petty fines.

FINDINGS, SUGGESTIONS AND CONCLUSIONS

8.1 Findings

Through the study, it is found that all constituents of the society are directly or remotely contributing to the environmental destruction. Some of them are indulging in such behavior being unaware of its ecological implications, but what is more dangerous is that most of them do so as due to convenience by taking advantage of the loopholes in the legislation, or due to lack of law compliance monitoring machinery.

Suggestions

In the Indian scenario, the legislation has various parts to it; the legislation itself, its interpretation, and its enforcement mechanism. Each of these arms must be tackled effectively. The legislation must be made as comprehensive and elaborate as possible so as to leave no stone unturned, it must be drafted in such manner that there is no scope for different interpretation, and as far as possible have monitoring mechanism at various levels to ensure compliance. The following suggestions may help to ensure better sustainable development;

Retailers: It is time that India has a separate legislation to cater to the Retail sector set up and functioning. Retail outlets must be prohibited from supply of plastic shopping bags. Retailers should be encouraged to try innovative schemes such as supplying paper bags or cloth/jute bags to customer who shop above a certain amount. For customers who shop for lesser amounts but need a bag nevertheless, the retailer may sell small paper/cloth bags at a price. The size, shape and overall attractiveness of the bag could be enhanced so as to encourage the customer to buy them. They may even undertake home delivery for nearby customers, which again does away with the use of plastic bags. The Shop Licenses Act and Retail Law must be amended so as to impose strict punitive measures on retailers who supply plas-

tic bags for packaging (as it poses threat to public welfare in the long run). Retailers who fail to obey the law should be punished, and continued offence should make them liable to license suspension or cancellation.

Builders: The Building Construction Act, 1952 should be strengthened to provide greater environmental protection. The Act currently focuses on use of land, removal of temporary buildings, restrictions on entry, etc. The law must be amended so as to include the role and duties of builders as responsible citizens. The Act must emphasize the need for appropriate architectural designs for buildings, which are eco-friendly and less energy consuming. It must contain a strong directive to builders to clean their premises and the site neighborhood, of construction debris; and lay down specifics for the incorporation of swimming pools in housing societies. The law must also state the punitive action against offenders with respect to the above factors, and also for manipulating and converting agricultural land into plush residential projects. It is also suggested that the regulation contains an order requiring builders to provide infrastructure for rainwater harvesting, as a pre-requisite to their blue-print receiving sanction at the hands of the sanctioning authority.

Industrialists: There is sufficient legislature for guiding industries. What is suggested is a proper monitoring mechanism, to ensure their compliance. Authorities must scrutinize the applications and inspect the premises before sanction is given for industrial estates and SEZs. The plant facilities need to be inspected to identify the nature of product manufactured, the waste disposal system and infrastructure for treatment of toxic effluents before they are released into the environment. Industries must abide by Air Act and Water Act, which will keep a check on health hazards. Industries that are found to violate any one or more of these clauses must be punished severely, by hefty fines/penalties to start with, and depending on the gravity and impact of harm caused, suspension/withdrawal of licenses to operate; or with imprisonment or with both. Where the ISO 14001:2004 sets out the criteria for an environmental management system; and the law must require that organizations mandatorily get themselves certified so as to keep their environmental impact positive.

Households & Community: The households should be educated about the law through the various bodies they function with, (for eg, the members of their housing society, the municipality waste collectors) and through promotional efforts of the government about how their routines and habits could cause extensive damage to the environment. The office bearers of housing cooperative societies must circulate notices requiring members to use separate bins for dry and wet waste. As an austerity measure they may supply two waste baskets (marked 'DRY and WET') to each of the households to kick start the process. The municipal waste collectors should refuse to collect trash if not segregated into dry and wet. Though presumed to be harsh, they are measures that bring sure-shot results.

Automobile Owners: The owners of two and four wheelers do not get regular PUC checks done, thereby resulting in air pollution due to their relaxed attitude to the environment. The Automobile Industry regulations in India, was formulated to govern emission norms and safety standards. Standing Committee on Implementation of Emission Legislation (SCOE) is another committee along with CMVR-TSC that was formulated under the Ministry of Shipping, Road Transport & Highways. This committee was established for the purpose of recommending emission norms. This committee is established to discuss the future emission norms and to recommend norms for in-use vehicles. The efforts on these are tremendous and noteworthy; however, the implementation strategy needs more attention. It is also shockingly surprising that the Motor Vehicles Act, 1988 does not impose any penalties for vehicle emissions beyond prescribed norms. If pollution needs to be controlled in word and spirit, the Act should be made more rigorous to include punitive measures on persons using vehicles causing pollution.

Conclusion

The study helps to understand how our negligence and lack of respect for the law could jeopardize environmental safety and sustainability. It also throws light on the areas where better regulation needs to be introduced so that every citizen is made responsible for his actions, and understands the implication of being callous or misinterpreting the law. An attempt is also made to sensitize the community at large to the needs of a deteriorating ecosystem, so as to curb activities contributing to its weakening, and consciously indulge in activities promoting ecological health. The need of the hour is to create and encourage ecological sustainability in word and spirit. It would be absolutely meaningless to celebrate Earth Day on April 22nd, World Environment Day on 5th June, World Ozone Day on 16th September and World Water Day on 22nd March if we do not endeavor to protect it.

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