



## ENVIRONMENTAL REGULATIONS AND RULES IMPACTING THE REAL ESTATE INDUSTRY AND ITS ROLE IN PREVENTING CLIMATE CHANGE

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### Abstract

*This article seeks to explain relationship between climate change and the construction industry and the various rules and regulations laid down by the Government of India in order to promote sustainable development in the real estate sector. Special attention has been paid to the development rules of the city of Pune as the research is centered locally. The researcher has also conducted empirical research with the students of law as well as members of the industry in order to assess the flaws and loopholes in the existing law. The literature review includes the Environmental Clearance Regulations, 2006, the Goel Ganga judgment, 2018 and the Paris Agreement on climate change.*

*The article also sheds light upon the impact of inefficient laws and the failure of the executive on the environment as well as on the development and lays down certain suggestions that will in the opinion of the researcher work towards the goal of sustainable development in the city.*

### Key words

Sustainable construction, Environmental Clearance Regulations, 2006, built-up area, waste and water management

### Introduction

The Construction and Real Estate Industry is undoubtedly an environmentally taxing industry, that inevitable requires the felling of trees and causes air and noise pollution. The Industry must be regulated by a clear set of laws to minimize its impact on climate change and to ensure that it develops in a sustainable and environmentally responsible manner. The city of Pune has a booming and powerful construction Industry with several brands that are homed and headed in the developing city of Pune. The cosmopolitan and IT crowd with reasonable land rates makes it ideal for the industry to flourish. Therefore, Pune has a significant contribution to make to this Industry in India with leading brands like Goel Ganga Constructions, Gera Developers, Panchsheel Group etc. The builders of the city also have a nexus or union known as CREDAI- Pune Chapter where the emerging problems and solutions of the industry are discussed.

The relationship between the industry and the environmental authorities has always been fairly tense and has led way to several misunderstandings and ambiguities, which have harmed both the environment and the industry severely. These have been discussed and studied in this research paper. The issues have reached a new level of pertinence thanks to the Supreme Court judgment fining a local developer a whopping amount of Rs. 100 crores for what the developer claims to be an ambiguity in the law.

### Impact of the Industry on the Environment



Small-scale individual project can have a significantly large impact on the environment in terms of the toxic chemicals that are released. The production of raw materials that, are required for construction projects are also severely environmentally taxing. For example, the international cement industry contributes to approximately 5% of the total global carbon dioxide emissions<sup>1</sup>. Further the large quantity of fossil fuels used, the power tools that are used on site and the huge amounts of electricity used to power the construction is again environmentally damaging.

The impact of construction businesses on climate change is internationally recognized as the construction sector contributes to 23% of air pollution, 50% of the climatic change, 40% of drinking water pollution, and 50% of landfill wastes<sup>2</sup>. The United Kingdom has taken due notice of these numbers and has published the "Green Guide"<sup>3</sup> which lays down rules and principles on how developers can use the material in a more sustainable, ethical and responsible fashion. The United States of America, which is

known for the worlds most eminent environment lawyers has the EPA that overlooks the construction activities and works to mitigate their impact on the environment.

### Environmental Clearance Regulations, 2006

The first regulation regarding the construction Industry came around in the year 2006 prior to which there were no real safeguards or checks on the industry. In exercise of the powers granted by way of Section (3), sub section (2), clause (v) the Government brought about the Environmental Clearance Regulations, 2006. The crux of these regulations was that projects shall be undertaken only after prior environmental clearances are granted by the State Level Environmental Assessment Authority. These clearances will be granted by way of a four step process, which is:

1. **Screening**, which entails a scrutiny of the application that seeks environmental clearance
2. **Scoping**, in which an Expert Appraisal Committee will prepare an Environment Assessment Report for the project / activity.
3. **Public Consultation**, in which the local individuals who will be affected or impacted by the project are consulted and their concerns are addressed and taken into account
4. **Appraisal**, in which a transparent final scrutiny will take place of all the applications, documents and reports and recommendations or terms and conditions will be made to the promoter, and grant or a rejection

<sup>1</sup>Lomite, Kare, BARTLEBY.COM, *The Impact Of Construction On The Environment*, <https://www.bartleby.com/essay/The-Impact-of-Construction-on-the-Environment-PKJ4A52ZVJ><https://www.bartleby.com/essay/The-Impact-of-Construction-on-the-Environment-PKJ4A52ZVJ>

<sup>2</sup>Jeroen van der Heijden, Ellen van Bueren, (2013) "Regulating sustainable construction in Europe: An inquiry into the European Commission's harmonization attempts", *International Journal of Law in the Built Environment*, Vol. 5 Issue: 1, pp.5-20, <https://doi.org/10.1108/17561451311312793>

<sup>3</sup>BRE, *Green Guide to Specification*, July 2005, <http://www.bre.co.uk/greenguide/files/GreenGuideFormatAndContent.pdf>



will be given to the construction company.

It is also pertinent to note that the regulations create a clear distinction between Category A and Category B projects by way of an attached Schedule and the requirements differ for them both. Building and Construction Projects are listed in Item 8 of the Schedule and the threshold for Category B is all projects having a built up area of greater than 20,000 sq. m and less than 1,50,000 sq. m.

In furtherance to this, there is a Form 1- A given in Appendix II of the Schedule which provides a detailed checklist of environmental impacts for the construction industry. This has been divided into the impacts of the land environment, the water environment, the vegetation, the fauna, the air environment, the aesthetics, the socio-economic aspects, the building materials and. energy conservation. The form addresses a comprehensive a vast variety of questions that will be scrutinized in the Screening stage of granting prior environmental clearance. The questions are broad and complex and in opinion lack the specificity required. However, in theory they are meritorious for the amount of planning they seek on the part of the developer and the self-assessment of environmental impact on the part of the companies.

This includes management plans of water supply and waste during the construction period, the health hazards of the construction debris, the yield and capacity of the proposed source of water, methods undertaken by the developer to prevent and mitigate water pollution, the amount of recycled water that will be used, the water

harvesting methods that will be employed, the impacts of dust, smoke, odorous gases etc that will be released during construction. The form also questions the social infrastructure around the proposed project and the adverse affects it will cause of local communities or cultural values etc. In furtherance to this there is reasonable importance given to energy conservation the energy consumption that is predicted for per square foot of built up area, the power back up plan, the use of energy efficient space conditioning. The form also studies the likely effects in the alteration of micro-climate. In addition to this, a developer is also required to furnish an Environment Management Plan that would consist of all mitigation measures for every activity to minimize environmental impact and to promote sustainable development.

#### *International nexus between Sustainable Construction and Climate Change*

It is essential that construction companies take sustainable development seriously as it is clear that the industry has a significant role to play when it comes to climate change. It is also noted that the laws regarding the same are still insufficient. In my opinion, this calls for a specific law to be created for environmental impact by the construction industry. Environmental responsibility must be included in corporate responsibility of a firm. The pioneering landmark international law for climate change is the Paris Climate Agreement<sup>4</sup>, which was formed by the United Nations

<sup>4</sup> Annalisa Savaresi, The Paris Agreement: A New Beginning? JOURNAL OF ENERGY & NATURAL RESOURCES LAW (January 2015).



Convention on Climate Change, which has been effective from the 4<sup>th</sup> of November, 2016. The treaty has been signed by 195 of the 197 countries and its impact on the international construction industry is studied below.

In order to implement the Paris Agreement, the construction sector must internationally avoid growth in its energy consumption by 50% by creating net zero energy buildings<sup>5</sup>. Further, in the 2030 agenda for sustainable development goals one of the objectives is sustainable cities. The private builders and firms have a significant contribution in the building of lifestyles and of the cities and if laws are made with care they can make sure that individuals live a more sustainable lifestyle<sup>6</sup>. Also, laws have to be made in a manner in which they do not hamper development of a city, especially when the country in question is a developing nation like India. It is important that concepts like zero energy buildings come into India and more locally into Pune. Zero Energy buildings<sup>7</sup> are buildings where the energy consumed is nearly equal to the amount of renewable energy produced. By substituting energy taken from heating fuel, money is saved and the carbon footprint of the

building too will be considerably reduced. There are several other ways too reduce the carbon footprint of a project, that is for example by replacing furnaces with heat pumps, employing the use of solar panels, water treatment plants, harvesting equipment etc.

There is also an internationally recognized doctrine of green building<sup>8</sup>, which is also known as sustainable architecture where the objective is to use the resources in the most efficient manner possible so as to minimize its impact on the environment. In furtherance to this, architecture plays a huge role in the way energy will be consumed in the building. This energy consumption will directly impact the carbon footprint of the building and thereby will have an impact on climate change. In my opinion, development plans must include architectural efficiencies to reduce energy consumptions and this must be a requirement for granting environmental clearances.

### Research Methodology

For the purpose of collecting primary data for this research paper, two categories of people were contacted and two methods were used. The first was an online survey that was filled by around 40 students of environmental law who were concerned citizens and trying their best to be

<sup>5</sup>Daniel Bodansky, *The Legal Character of the Paris Agreement: A Primer*, (December 2015).

<sup>6</sup>Global Alliance for Building and Construction, UNEP, *What the Paris Agreement means for the Building Sector*, (September, 2016) [https://www.swisscontact.org/fileadmin/user\\_upload/COUNTRIES/Peru/Documents/Content/Building\\_Sector\\_Paris\\_Agreement\\_-\\_IGBC.pdf](https://www.swisscontact.org/fileadmin/user_upload/COUNTRIES/Peru/Documents/Content/Building_Sector_Paris_Agreement_-_IGBC.pdf)

<sup>7</sup>P. Torcellini, S. Pless, and M. Deru, National Renewable Energy Laboratory, *Zero Energy Buildings: A Critical Look at the Definition* (June 2006),

<https://www.nrel.gov/docs/fy06osti/39833.pdf>

<sup>8</sup>JianZou, Zhen Yo Zhou, School of Natural and Built Environments, University of South Australia, Adelaide, South Australia, *Green Buildings: Current Status and Future Agenda*, (June 2013) [https://www.researchgate.net/publication/259158759\\_Green\\_building\\_research-current\\_status\\_and\\_future\\_agenda\\_A\\_review](https://www.researchgate.net/publication/259158759_Green_building_research-current_status_and_future_agenda_A_review)

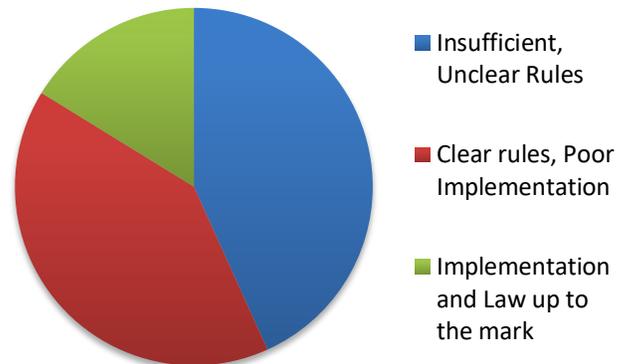


environmentally responsible in their lifestyle. The online survey questioned them on their views on the efficacy of environmental regulations in India. Secondly, by way of interviews that were conducted by the researcher herself several eminent members of the city's construction circuit were contacted. This group of people included senior members who have spent over 30 years in the industry. The researcher sought to understand the perspective of builders of the city towards the concept of sustainable development and its implementation by way of notifications and regulations issued by the executive.

### Emperical Research

The first section of people who were surveyed for the purpose of this research paper were students of environmental law and concerned citizens of India. The sample space for this category consisted of about 40 students of environmental law. Maximum students believed that regulations regarding the construction industry were insufficient in theory, and a significant number of students believed that they were not implemented properly and believed that this was because of failure of the environment authorities to act in a fair and just manner. There were also a considerable number of students of law who were unaware of the tight and tense relationship between environment and property law. The students who were unaware of the regulations have been excluded from the sample space in order to study a more pertinent perspective. The results of the survey have been depicted in the pie chart below.

### Environmental Regulations



The second category of people that were contacted were closer home to the impact of regulations upon businesses and the industry and were serious stakeholders in the law. Further, by way of telephonic interviews, several real estate developers in the city were contacted and their views on legal aspect of sustainable development were questioned. The Managing Director of Pride Purple Group of Constructions, Mr. Arvind Jain, stated that the sheer number of notifications released by environmental authorities has made the law vast to a point of futility. Further, he said that the ambiguities in the law and the extremely time consuming process of obtaining clearances is hampering development in the city.

After speaking to several developers, most of whom preferred to stay anonymous, it was learnt that developers in the city almost unanimously feel intimidated and even harassed by the authorities. Some developers also admitted that there is rampant



corruption that is thriving in the environmental authorities and therefore the current state of affairs is problematic not only to them as developers but also to the environment and the cause of sustainable and responsible development.

Developers across the city were also extremely disturbed by the amount of time that was taken by the environmental authorities to grant clearances despite the law mandating a 60 day window. They claimed to have had to wait sometimes for over 2 years to seek a standard environment clearance thereby having a huge impact on the business financially.

In particular, developers were troubled by the Supreme Courts decision in *M/s Goel Ganga Private Limited v. Union Of India through Secretary, Ministry Of Environment And Forests &Ors*<sup>9</sup> where the project proponent, that is Goel Ganga Developers were fined Rs. 100 crore for a violation of the Environment Clearance terms and conditions. The developers argued that the violation was a mere technicality and this too was caused because of unclear and obscure law and fining in such an exorbitant and exemplary fashion was severe blow. The chief issue in question was the definition and interpretation of the term built up area and the case revolved around this interpretation of law. The 1986 Act does not define built up area, and in fact mentions little about the construction industry. The statute discussed above that is 2006 Clearance Regulations mentioned the concept of built up area in the categorization

of projects but failed to define it. It was contended that developers calculated built up area as per the definition given in Development Control Rules (DCR) where the built up area was clearly to exclude basements, service areas and terraces. The developers of the city therefore, submitted the proposed built up area to the environmental authorities as per that definition. In 2011, however, a notification was released that clarified the definition stating that built up area is to include service areas, basements etc. This impliedly opens up all builders for potential violations and this actively illustrates high penalties for developers for clearances obtained between 2006 and 2011. Thus, the conclusion of this case is that the developers were fined and this case has set a stringent precedent for the industry.

Developers that were spoken to for the purpose of this research paper seemed to believe that the court has erred in this judgment and has penalized the project proponent, that is Goel Ganga Developers for a mistake and vagueness of the part of the State. However, this elucidates the impression that the courts will be extremely strict regarding violations that will impact the environment especially and specifically when it comes to the construction industry and the court and the National Green Tribunal will exorbitantly fine developers for intentional misrepresentations made to obtain environmental clearance and also the stringent following of the terms laid down during the grant of the clearance.

### Recommendations for Sustainable Construction

<sup>9</sup>*M/s Goel Ganga Private Limited v. Union Of India through Secretary, Ministry Of Environment And Forests &Ors*, CIVIL APPEAL NO. 10854 OF 2016



With the advent of environmentally friendly technology on the rise, and emerging modern ideas of developing responsibly it is essential that these are implemented in India. Corporate responsibility and environmentally ethical practices in India are still vastly insufficient in practice. While it is unarguably most important that corruption must be erased from the executive there are also certain mandates that will ensure responsible practices in the industry.

The recommendations can be broadly classified into pre construction, work in progress and post construction laws. It is essential to achieve a balance between sustainability and development in a way that one does not burden and hamper the other.

### PLANNING

The state authorities of a city create a master development plan of city, which lays down the permissible areas of construction. If this master plan is designed in consultation with the environmental authorities it would drastically reduce chances of violations by project proponents and also reduce the burden of seeking permission.

Further, instead of granting clearances with a set of terms and conditions every time there must be a list of standardized rules laid down that must be followed during construction.

Tax benefits must be granted to developers who are using environment friendly technologies and sustainable material. It is important that the government comes up with measures to recognize responsible construction practices and grants certain benefits to them.

### WORK IN PROGRESS

In regards to rules that must be followed to mitigate pollution during construction, there must be a set of clear rules laid down, that govern timings of work, that mandate protection of dust from going out and harming the citizens living close by, and the proper disposal of debris into the environment.

The pollution control board may also conduct site inspection and visits to ensure that the rules are being stringently followed by developers.

Developers must also be required to inculcate sustainable practices by way of their infrastructure, whether it is instillation of Sewage Treatment Plants for effective water management, or solar energy panels, Composting equipment or even infrastructure to promote water harvesting.

### POST CONSTRUCTION

Developers of the city must be mandated to ensure effective use of the sustainable infrastructure for at least 5 years after the completion of the project. This increases responsibility on the developer to provide high quality environment friendly equipment.

In conclusion, it is in the opinion of the researcher that if the status quo is maintained then nobody wins, neither the environment nor the development and it is essential especially in a developing country like India that both are protected. It is high time the Government takes the environment seriously and aligns the interest with the up and coming developers of not only this city



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but also this country. Violations on technicalities caused because of misinterpreted law will have a drastic impact on both the causes leaving us in the middle of nowhere down the road of detriment and ruin.

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