02 ENVIRONMENT IMPACT ASSESSMENT

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In India, the only holistic regulatory instrument that is available for composite assessment of impact of the building construction sector is the Environment Impact Assessment (EIA) rules, introduced under the Environment (Protection) Act, 1986. Other specific building regulations that exist are mainly sectoral in scope and often confined to only one parameter -- either water, or energy, or waste management. For example, the Energy Conservation Building Code (ECBC) is a voluntary programme which has not met with the desired success.

Though EIA is meant for only large construction projects (built-up area of more than 20,000 square meter), it gives cities a chance to decide if proposed buildings are needed and how must they be designed to mitigate their impacts. EIA helps us understand whether Indian cities with their limited resources are prepared to meet the colossal environmental challenges posed by the urban building construction sector.

Unfortunately, reliable information is rarely available. For instance, a comprehensive list of the total number of buildings in India that have been assessed or cleared so far under EIA, is not available in the public domain.

WHAT DOES EIA FOR BUILDINGS ENTAIL

Under the EIA rules, all projects and activities are broadly grouped into two categories – A and B -- based on the potential impacts on human health, and on natural and human-made resources. Category A includes industry, mining and big infrastructure projects which require prior environmental clearance from the Environment Appraisal Committee (EAC) of the ministry of environment and forests (MoEF). Category B covers all other building and construction projects.

Townships/area development projects covering an area of above 50 ha and/or a built-up area of more than 1,50,000 sq m are clubbed under B1. All projects equal to or more than 20,000 sq m and less than 1,50,000 sq m of built-up area are classified as B2.

Category B projects require prior environmental clearance from respective state/Union territory Environmental Impact Assessment Authorities (SEIAA), based on the recommendations of the State-level Expert Appraisal Committees (SEAC). According to the EIA rules, B1 (township) projects require EIA reports and clear Terms of Reference (ToR), whereas B2 projects (buildings) just require to fill up Forms 1 and 1A. Building or township projects do not require a public hearing.

A CRITIQUE OF THE EIA PROCESS FOR BUILDINGS

- ***Public consultation***: Public consultations, a crucial component of EIA for Category A projects, are not considered important in Category B. But the MoEF's 2005 draft notification had included a clause for projects covering areas above 100 ha -- such projects were to be treated as Category A projects requiring EIA and public hearing. However, this

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is yet to be implemented. In the absence of a process of public consultation, cases such as that of rampant construction on the Vasant Kunj ridge in Delhi despite local protests have become common (see Box: *Ravaging the ridge*). Many other projects such as Lavasa and the Commonwealth Games Village (Delhi) stand testimony to the growing public concern over the impacts of large projects, and over the complete absence of any public interfaces in them. The EIA rules must be amended to address this; public consultation should become a prerequisite for granting clearance to township and area development projects.

- ***Environment clearance (EC) process***: According to the EIA rules, construction activities cannot be initiated without environment clearance. Project proponents tend to ignore this stipulation. In 2008, the Haryana State Pollution Control Board (HSPCB) served notices on 147 builders for failing to get environment clearance for their projects before they began construction. In Delhi, in the same year, over 70 buildings had been found to have begun construction without getting the prior consent to build.

What is worse, a practice of granting post-facto clearances is now gaining ground. Project proponents and clearance committees mutually agree on a penalty amount and a bank guarantee that is expected to compensate for the environmental damages and impact caused by the project. Post-facto clearances are not included in the legal provisions of EIA. But they have now become a convenient alternative for offenders and violators. This practice has to stop.

In several cases, especially in Haryana, it has been noted that environment clearances have been accorded to projects before they received the requisite NOCs or permissions for water supply. Often, procurement of permissions from the various authorities and government agencies takes time; the committee granting ECs, already burdened with many projects, chooses to take a short cut by giving clearances before a project proposal receives NOCs from the relevant authorities. Project proponents assure and claim that the required permissions would be taken, but extremely lax post-project monitoring makes it difficult to verify these claims.

- ***The 20,000 sq m criteria***: As per the EIA rules, impact assessment must be done for large construction projects with a built-up area of more than 20,000 sq m. Project proponents tend to misuse this criteria by under-reporting their area to circumvent the environmental clearance process. The Vasant Kunj Square Mall in Delhi – for instance -- required no clearance since its EIA report showed the total built-up area as 19,021.108 sq m (see Box: *19,991 sq m…*).

- ***Siting of projects***: Ideally, land should be acquired only after the suitability of the site has been established. The global best practice is to assess alternative locations to identify the most appropriate site. In India however, in most cases, the land is already allotted to the developer without site screening and environmental appraisal. A large number of projects belonging to DLF, Raheja, Parsvnath etc have come up in the water-stressed parts of Haryana – areas that have been marked by the Central Ground Water Board as 'dark zones' where the groundwater table is below the danger mark.

- ***Errors in estimation***: There are sometimes gross errors leading to inaccurate and flawed estimation (in EIA reports and forms) of resource requirements and waste generation. Take, for example, wastewater generation. Its accurate estimation is critical in determining the nature of treatment and the capacity of the treatment facility. This estimation is generally based on a thumb-rule that the amount of wastewater generated in a building is generally 80 per cent of its total water intake. In Gurgaon, a commercial complex built by

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Ansals reported its total water requirement as 250 kilolitre per day (KLD) and its wastewater generation as 104 KLD. This wastewater was to be treated in a 125-KLD sewage treatment plant (STP); 90 KLD was to be recycled/reused, resulting in zero discharge.

However, our calculations show that the actual wastewater generation from the building should be around 200 KLD. The question, therefore, is: with merely a 125-KLD STP, how can the project claim to be achieving zero discharge? Also, if the major water-using activities in a building such as cooling generator sets, flushing and horticulture are already using the 90 KLD of treated water, why does the building need 250 KLD?

- ***Benchmarking***: Clear benchmarking is crucial for assessing resource use, waste generation and monitoring in the post-operations phase. The current mechanism of assessing impacts on water, energy, waste, and traffic is not guided by clear targets and benchmarks, neither is it aligned with existing norms and standards. For instance, India has adopted the energy conservation building code (ECBC) for commercial buildings in different climatic zones. But EIA clearance and approvals do not formally align with this code. EIA rules should formally demand compliance with ECBC, and ask for periodic energy and water audits in the post-construction phase.

In the case of water, CSE's review of the residential projects cleared between 2008-11 in Haryana, showed a wide deviation from the per capita daily water consumption norm. Only 2 per cent of the total projects met the 135-LPCD norm; 22 per cent had per capita water consumption of above 150 LPCD, while 47 per cent claimed to be consuming between 50-100 LPCD. The question is, whether these buildings are attempting to be water-efficient or are submitting unsubstantiated estimates to receive environmental clearance.

- ***Neighborhood impacts***: Current environmental clearance regulations rarely look beyond the buildings at their neighborhood impacts. Take the example of growing motorisation and worsening mobility, especially in the context of large commercial buildings like malls that induce and attract additional traffic in the neighbourhood. In Delhi, the resident's welfare association of Greater Kailash II, a posh colony in south Delhi, has filed a case in courts against a proposal to convert the neighbouring Savitri commercial complex into a multiplex. As the complex is strategically located at the entry junction of the colony, it has the potential to create substantial traffic chaos for the colony which already sees heavy movement of vehicles.

- ***Energy code and EIA***: There is a need to harmonise ECBC and EIA with their institutional arrangements to enable implementation. There is no official communication or interaction between the BEE (which is responsible for ECBC implantation) and the EIA clearance committees on energy-related matters in buildings. Further, there is no established methodology for assessing and benchmarking the stated energy consumption of buildings that are proposed for environmental clearance. Monitoring, as a result, becomes difficult.

In addition, EIA of buildings does not require any assessment of energy deficit of the location and the neighborhood, as it is assumed that the deficit will be met by in-situ and captive power generation (read diesel gensets). Neither are there any clear indicators for post-construction monitoring -- as of now, there is no information in the public domain on how EC-compliant buildings are monitored.

- ***Monitoring***: EIA rules require the project proponent to submit bi-annual compliance reports. The ministry of environment and forests (MoEF) has six regional offices, which

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have to undertake site visits, maintain records of the violations and receive these compliance reports. But lack of capacity and resources in these regional offices is a big hurdle in proper monitoring. Whatever monitoring is done, therefore, becomes a mere formality.

The powers with respect to monitoring are also diluted. In the case of violations or non-compliance, the complaint is not directed to the committees that grant the clearances (SEAC/SEIAA) but to the regulatory agencies or the regional MoEF offices. Thus, once environment clearance is granted, the project proponent is not accountable to the committees.

Often, project proponents -- instead of admitting to non-compliance -- vaguely mention the status as 'agreed to comply' or 'will be complied'. Sometimes, there is a mismatch between the reports prepared by the project proponent and the ground situation. Monitoring is also hamstrung by the multiplicity of agencies which give clearances and the lack of coordination between them.

- ***Lack of information***: The biggest hurdle in assessing the level of compliance and state of monitoring is the complete lack of information in the public domain. According to the EIA notification of 2006, EC letters with the environmental clearance conditions must be displayed on websites of projects/project proponents as well as those of the ministry of urban development. Besides, the six-monthly compliance reports from the project proponents are also required to be made public.

CSE researchers surveying the trends in Delhi found that in most cases, the EC letters for several projects were missing on both the ministry's and project's websites. Instead of the letter, the websites often said that the EC had been issued or the project stood approved. Take the example of the popular Metropolitan Mall in Saket, Delhi, developed by MGF Developments Limited. The MoEF website states that *"there is NO letter"*. Similarly, some of the prominent Commonwealth Games venues have 'No Letter' displayed on their websites.

CSE researchers reviewed a few available compliance reports, and found major problems with their quality and subjectivity. One such report states that the project is still awaiting important consents from the Haryana state pollution control board and groundwater board. Another one-page compliance report of a commercial project in Gurgaon says everything is on track, but covers only a few aspects out of all the listed components and clearance conditions in the form. A third report which was reviewed did not give any indication of the extent and quality of compliance. For instance, in response to a condition where the project was asked about the provision and maintenance of all the sanitary and hygienic measures at the construction site, the developer states "adequate sanitary and hygienic measures are being adopted and maintained throughout the construction phase".

The MoEF does not possess a database or information catalogues containing the basic details of the building and township projects that have been granted environmental clearance. In response to RTIs filed by CSE, the MoEF was unable to provide even the names of the building projects that had received environmental clearance since 2006.

- ***The appraisal committees***: Although the upper limit for number of members in the SEAC is 15, there is no mention of the minimum members – hence, often only five-six members are appointed or are present for the meetings. These committees are overburdened: they are required to meet at least once a month, with 15-20 projects on an average applying for EC, besides tens of pending projects. There is little time for detailed appraisals. In Haryana, for instance, on an average, 19 projects are discussed in each meeting; sometimes this number goes up to as high as 40.

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Fixing accountability is also a problem. The SEACs and SEIAAs cannot be held accountable for any environmental impacts of the projects cleared by them. They are appointed by the MoEF on the recommendation of the states, and are politically influenced. Often, these committees are not reconstituted in time; in the states that do not have a committee, projects are transferred to central committees for approval – these are already overburdened with clearances, leading to massive delays!

Sometimes, projects get cleared by committees without sufficient domain expertise; building sector experts are not even part of these committees. Monitoring reports are not submitted by projects to the state committees or the pollution control boards. Neither the MoEF nor the state agencies monitor compliance, much less impose penalties on defaulters.

- ***Consultants*:** Ineptitude of consultants is another problem. Some consultants do not show basic aptitude to create a coherent set of field observations and a plausible environment management plan. The reports are generally plagiarized from those of projects that have already obtained clearance. The whole clearance exercise is based on a single interaction with the committee which itself might not be well prepared to handle the specific concerns of the project.

Builder's agenda: self rule

Confederation of Real Estate Developers Association of India (CREDAI) has on more than one occasion approached key ministers and PMO on the issue of environmental and other clearances process for building and construction projects.

CREDAI had taken up cudgels against EIA. They have made several demands by portraying themselves as a victim of the system. They have voiced their dissatisfaction with the EIA process in its current form and have suggested changes and omissions of certain process altogether.

- For example, they have asked the removal of the requirement for the 6 monthly monitoring/compliance reports of environmental clearances. According to them it doesn't serve any purpose.
- According to them EC causes huge project delays and the government must realize buildings only generate human waste, so have hardly impact on environment. Therefore according to CREDAI, the cumbersome clearances for building projects is highly unjustified and needs to be discontinued with immediate effect.
- Further the requirement for NOCs from local bodies like water boards, SPCBs should be discontinued since at the master plan level these specific requirements would have been taken into account by the planning authority.

According to CSE these recommendation are very alarming in nature. The EC process for the building and construction projects is already minimal as compared to the EIA process followed by the category A projects. Reducing this process any further will diminish its limited stringency and make it redundant to protect the environment, resources and local communities.

These regulatory checks are very important to keep in check the externalities from the building and construction projects. The urgent need is to strengthen the process to tackle the onslaught of construction projects that are been undertaken across the country.

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With a number of projects queuing up for clearance every month, most projects are okayed with suggestions for improvement. But the project proponents rarely communicate the compliance. With the project proponent appointing the EC consultant, there is a conflict of interest where the consultant is primarily paid for getting the clearance, irrespective of the site's suitability for the proposed project. Even if the past records of the consultants and the project proponents are tainted, it is of little significance to the clearance committee. The existing guidelines and actions against EIA consultants and project proponents who fail to provide factual, accurate and specific information about the project, are extremely weak.

- ***Dilution of the EC process for buildings***: The government and industry have made efforts to dilute the already weak EIA process for building and construction projects, thus reducing the entire process to a mere formality and rendering it ineffective and weak.

A case in point is the 2005 draft EIA notification which was displayed on the MoEF's website for public comments – it had placed the township and area development projects under Category A. However, the 2006 EIA notification which was implemented instead was a much watered down version. It placed the township and area development projects under Category B with no public consultation, though with a requirement for EIA reports and ToRs.

In an earlier attempt, the MoEF -- in its 2009 draft EIA notification -- had tried to extend the limit of 20,000 sq m to more than 50,000 sq m for EC of buildings. As there are very few projects that have areas above 50,000 sq m, it meant that virtually the entire building sector could move out of the pale of the EIA regulations, thus making the EIA process ineffectual for buildings. In the face of strong public criticism and protests from the states, the ministry had to back down and eventually drop this recommendation.

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Delhi: violations galore

Case No 1: Aditya Infracon (P) Ltd, Plot No 5, Jasola, New Delhi, had declared that its built-up area of 19,991 sq m was not eligible for EC. But the Delhi Pollution Control Committee (DPCC) had its doubts about the builder's claims. An inspection conducted by IIT surveyors in June 2008 found that the total built-up area was 20,323.92 sq m -- the unit had tried to mislead. The unit had indulged in other violations as well. It was withdrawing over 230 KLD of water as opposed to 120 KLD mentioned in the application to DPCC -- without the approval of the groundwater authority.

Case 2: City Square Mall, MGF Developers Ltd, Rajouri Garden, Delhi, had applied to DPCC for the construction of two different malls on two adjacent pieces of land. It said that as the built-up area of Plot No 7 was 15,826.90 sq m, and that of Plot No 8 was 11,791.66 sq m, the project did not fall under the purview of EIA notification 2006. But the DPCC found out that the mall was built on both plots as a single entity. Calculated together, the total built-up area was above 26,000 sq m.

Case 3: The MGF Metropolitan Mall in Saket has a built-up area of 31,531.26 sq mts. EC was granted by MoEF and since its operation in early 2008, there are serious concerns about the mall. The mall runs on diesel generators 24 hours as they do not have any electricity connection from the local electrical supply authority. It does not have a water supply connection from the local water supply authority, thus gets 100 KLD of water from outside. It does not have a sewage connection as well. So there is absolutely no clue of where the sewage is being discharged.

Further the prestigious mall's STP holding capacity is 100 KLD. But only 10KLD is being generated and treated in the plant, and there is no indication of the use of rest of the water and the sludge that is generated by the STP. Though the mall has parking spaces for 436 cars most of the cars were found to be parked outside the mall near the entrance. Now the striking issue is that all this happening even after the mall has conducted an EIA and the MoEF has granted the EC based on the claims made in the EIA report. Reason, there is no monitoring of the EMP claimed by the project in the EIA report.

Case 4: Splendor Forum and TDI Centre, two major commercial centres in Jasola in Delhi, had almost similar environmental clearance conditions and also similar nature of violations. Infact TDI centre had started construction before getting environmental clearance and thereafter received a post facto clearance. One of their condition mentioned in the EC letter stated that the use of glass may be reduced by upto 40% to reduce the electricity consumption and load on air conditioning. But in contrast, the building shows overwhelming use of glass spread over 22,815.42 sq.meters. So even if the building is using energy efficient technologies and appliances and high quality glass, the over all energy requirement of the building is bound to be high because of excessive use of glass with no shade. The glass house effect would eventually lead to heat generation inside the building therefore increase the need for air conditioning. Since the building exterior has no shades, which is a crucial component of ECBC, interiors of the building receives glare and direct sunlight.

The buildings had used cosmetic applications like a few solar street lights as far as the use of renewable energy is concerned, which is a part of the EC conditions. On the requirement of green belt for protection against dust and noise the TDI building had a few potted plants and majority of the outside area was paved so there was little chance that green belt area ever be created in the near future. The EC letter also clearly mentioned that the parking must be fully internalized and traffic congestions should be avoided. But, the situation on ground was completely the opposite. The entrance and the service lane adjacent to the building were completely lined with vehicles: Infact, the basements that are meant to be used for parking are lying nearly vacant.