Jaunapur Slum Rehabilitation Project - An Urban Habitat towards Holistic Sustainability

India

anil laul

Building Houses, Communities - The Transformation Approach

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Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.

This proposal addresses the key issue of slum rehabilitation and affordable housing for the urban poor. The project accounts for economics, employment-generation, environment as well as self-government. It suggests an alternative to the soulless EWS apartments being propagated, by involving the people to be rehabilitated and allowing them an input, using local materials and indigenous skills, while maintaining the required living standards by propagating urban-control. Use of time-tested traditional technologies utilizing waste material, efficient planning on the otherwise considered wasteland makes this project cost-effective and environment friendly. This results in a low-rise, high-density solution which are efficient economically as well as environmentally.

About Project

Problem: What problem is this project trying to address?

This project aims to prove that housing for the poor need not be soulless and attempts to negate the notion that there is indeed a paucity of land and finance. To rehabilitate all the slums in Delhi, a total of 7000 acres of land would be required. A mere two week exercise revealed 32500 acres of land within Delhi which were being termed as wasteland, having been intensely quarried. Government records reveal that there are 701 sq km of land free for development. A total of 7000 acres amounts to a mere 1.5 sq km. Aspects like efficient planning, building waste usage, urban line control make this aim achievable. The recycling of waste materials from slums and other construction projects as building materials used in tradition-based method channelizes would-be pollutants into optimum usage.

Solution: What is the proposed solution? Please be specific!

The project has been conceptualized to provide a habitat with a dignified lifestyle for the urban poor currently living in ghettos. The operational scheme of the project has been so structured that this project uses the otherwise considered waste land and waste materials to create a haven amidst the urban congestion at a minimal cost. The choice of land, efficient planning based on traditional wisdom, decentralized drainage, traditional construction technologies using waste materials and redefining micro-community spaces (court yards instead of sub arterial roads)
have lead to a project that is both cost effective and environment-friendly. Diagonal planning has lead to Venturi effect and a draft within courtyards. The scheme provides the dweller with site, infrastructure and the frame for each building. The walling material would be transported from the existing houses within the slum to be rehabilitated. Each inhabitant would build his own walls. This makes the system inclusive and the personal identity of each inhabitant is manifested. Inbuilt cross-checks against encroachment, non-saleability of property and joint-ownership of all community areas like the courtyards makes it non-tradeable. A system that fosters the growth of a micro-governance with a self-checking neighbourhood, it holds a community within a larger community. It is therefore a project that sums up to economic, environmental and socio-cultural sustainability to propagate a dignified lifestyle for the urban poor. This holistic approach makes homes with their unique personality and individuality.

Impact: How does it Work

Example: Walk us through a specific example(s) of how this solution makes a difference; include its primary activities.

The Jaunapur Project talks of a holistic sustainable development and therefore addresses almost all the key issues that plague the current housing scenario:- a) Paucity of land – Use of Waste Land b) Building Communities - Courtyards c) Efficient Use of Resources - Planning Methodology - Use of Waste Material – Alternative technology - Innovative methods d) Employment Generation – Allowing People to build their own houses e) Infratucture – minimum expenditure on roads - Availability of water f) Sanitation g) Homes instead of houses h) Homes for the Street Children i) Living with Dignity for the urban poor j) Indigenous Identity Even though the issues seem insurmountable, the pilot project proved to be a resounding success. Built at nearly half the cost, it instilled the fear of exposure in the minds of the government agencies that routinely do the housing strategies. The fear of rehabilitation had brought a number of beneficiaries to the pilot project, to protest against the development. Instead they were happy with the built prototypes and were keen to be a part of the project. The project thus has the distinction of being the only project that is inclusive and has the inhabitants of the slums petitioning the Supreme Court of India for speedy implementation of this project so that they could be rehabilitated. The pilot project has proved the viability of the effectiveness of the project. A revision of the initial plan, post the increase of the required maximum density achieves 400 DU per hectare. The project is truly a benchmark.

About You

Organization:
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About Your Organization

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Organization Country
Country where this project is creating social impact

How long has your organization been operating?
More than 5 years

The information you provide here will be used to fill in any parts of your profile that have been left blank, such as interests, organization information, and website. No contact information will be made public. Please uncheck here if you do not want this to happen.

Innovation

What stage is your project in?
Operating for more than 5 years

Share the story of the founder and what inspired the founder to start this project

Having worked for low cost housing for 40 year and conceptualizing the Building Centre Programme for HUDCO, which then became the lead programme for the Ministry of Urban Development, Government of India, had allowed one to explore cost-effective and tradition-based techniques that could solve the issues plaguing urban housing at the mass level. It had also lead to a growing awareness towards the compounding miserable state of urban affairs with the growth of the city.

Three successful but quantitatively smaller projects(Rehabilitation of 212 families at Proyog Vihar in Naraina, Delhi; Rehabilitation of 1984 riot affected victims, 1400 families, at Rohini, North Delhi; Pilot scheme for Slum In-situ up gradation in high density Area (625 d.u /hectare) for 1850 households at Bhoomiheen Camp, Delhi; Pilot scheme for 1229 families at Papankala, Delhi.Leprosy colony for 800 families, Delhi.), each dealing with cost-effective aspects of urban housing triggered the next step which made for a holistic approach even to the extent of the choice of land. An integration of intelligent planning, optimum usage of resources and time-tested technologies has allowed Anangpur Building Centre to conceive a scheme that address the facets of humane habitat for the urban poor, building-waste usage and waste disposal, sanitation, building of a community and so on.
Slum dwellers are immigrants with rural sensibilities. Therefore toilets within the dwelling units become taboo. Group toilets have thus been planned for at the mouth of each cluster.

Social Impact

How many people have been impacted by your project?

More than 10,000

How many people could be impacted by your project in the next three years?

More than 10,000

What barriers might hinder the success of your project and how do you plan to overcome them?

Slums are a big business for government officials in Metropolis of India

- Bureaucratic Delays and unwillingness to let go of the moneys made by keeping the slum dweller in the slum.
- Inability to go beyond Public Works Dept Standards

The residents of Bhatti mines having become the co-petitioners sought response from the Govt. of NCT for the misdemeanors of Slum Department, MCD, DDA who had collectively doctored the stalling of the project. In Oct 04, the Addl Secretary of Delhi filed a Reply Affidavit before the Supreme Court which was a mere attempt made to disregard the viability of the project from inception till present stage (which was initially ordered by the Supreme Court). In reply, we boldly exposed the rot prevalent in the govt from its very core to the Supreme Court.

How will your project evolve over the next three years?

The Jaunapur Project would herald a sea-change to the very perception of urban habitat. A simple change in strategic planning ,centralization of sanitation, alternative building technologies, an involvement of indigenous culture - these features can be integrated in any settlement irrespective of their physical and economic scale. We have used the same technologies for very high income group including our own offices and homes at the centre.

The completion and success of this project would create a model for the rehabilitation of the over 1500 slum clusters in Delhi and many others across the world. This might also induce the discerning populace belonging to the ruling bureaucratic specie to see the light and dump the antiquated and obsolete PWD Manual from its ill-fitting pedestal.

Sustainability

For each selection, please explain the financial and non-financial support from each

This project was started at the behest of the Anangpur Building centre in a partnership with Nizamuddin Building Centre and Slum Department of Delhi. A sum of 3.7 million dollars and 61 acres of land was granted by the government for this project. The role of each of the partners were so defined :-

- The Municipal Partner: All the administrative works for the project was the responsibility of the Slum & JJ Department, right from procuring land, taking the final decision of what need to be done, and getting the money from the related government agencies.
- The Business Partner: All the suggestions and options for the rehabilitation scheme including the choice of land, choice of material, choice of construction methodology, choice of systems of roads, drainage, water supply, electrification including design inputs and project management was the responsibility of the private partner – the Anangpur Building Centre.
- The Implementing Partner: The Nizamuddin Building Centre was the executing partner and had representatives of both the business as well as the municipal partner on its board. Its task was solely implementing the scheme as finally approved.

Unfortunately there was no written document that clearly spelt out the terms and conditions of appointment. After completion of the pilot project the various bills raised by the implementing partner to the municipal partner are yet to be cleared, despite the amount deposited by Delhi Government, all in advance, in the account of Slum Department. [http://www.youtube.com/watch?v=LjgKnoQWQRM](http://www.youtube.com/watch?v=LjgKnoQWQRM)

How do you plan to grow and/or diversify your base of support in the next three years?

The pilot project of 52 houses has been successfully implemented at a cost that is almost half of what was estimated by the Slum Department. The project exposed various incongruity in the system and its success would force a change within the system which is today based on apathy and corruption. The resistance from within the system has lead to non-judicial abandoning of the project and it is being quagmired in contrived controversies. The Slum inhabitants have become co-petitioners before the Supreme Court, pleading that this scheme be completed and they be shifted here. Never before has there been an instance where the slum dwellers become willing partners in rehabilitation.

The immediate agenda is to set up ASHRA (Academy for Sustainable Habitat Research Action) - a sister institution to Anangpur Building Centre that would train young architects who would in turn train labourers and build the project in phases as a part of their training curriculum. ASHRA would also engage in high technology projects and in tie-ups with various agencies to take these methodologies and technologies from lab to land. The utilization of these techniques, cutting across all financial sectors including public buildings would increase project viability.

The success of this project would change the way slum rehabilitation is being dealt with in this country. It negates the notion that low-cost is low-quality. The requirement of today is an Appropriate Human Settlement Design at an affordable cost. These methodologies can be modified to suit any project of any economic scale and strata

Collaboration

Please select your areas of intervention in the home improvement market


Is your innovation addressing barriers in the home improvement/progressive housing market? If so, please describe in detail your mechanisms of intervention

The Jaunapur Project addresses the following barriers that plague urban housing scenario-
- Paucity of Land - This aspect is dealt with through the usage of highly quarried land that has been deemed as wasteland. Though it is not the common practice today, traditionally non-agricultural and not fertile plains were used to build settlements.
- Availability of Water - Delhi has been built 9 times, and each time it was built on the highlands and so is the case with most cities. The fact is that highlands are most suited for human settlements owing to large catchment areas that provide the constant recharge of the aquifers, provided that
the wastewater is not transported outside the site.

- Sanitation - The system of decentralized and segregated sanitation allows for an effective and economical system that can be monitored in-situ. The residents therefore are not reliant on the inefficient ministrations of the municipal corporations for their sanitation.

- Planning in squares and courtyards - Building in square reduces the surface area to be built, thereby reducing the amount of material used and heat absorption. This wisdom is embodied in all the traditional building sciences in tropical zones. The system becomes cost-effective due to reduced material cost while building and energy-efficient as lesser amount of heat would be required to cool it.

Diagonal Planning - Placing the grid diagonally not only allows for generation of consolidated spaces for the courtyard, it also manifests the venturi action leading to a pleasant draft through courtyards and an efficient system of cross-ventilation.

The planning grows from micro to macro - thereby designing the cluster of 9 units with a courtyard first and proceeding to design a sub-community interlinked with courtyards only. These are then inter-linked with the suitable land and drainage pattern. The network of roads is then generated and is subservient to the drainage and land patterns. This then generates the major scheme which then evolves to the master plan. It is the micro detail that leads to the masterplan where as in the common details we fit the micro system to in to the macro system. Therefore there is always a mismatch in the said systems.

This system constricts the connectivity via roads to the outer periphery only, thereby increasing areas of community interaction and reducing surface area occupied by roads - thereby reducing costs.

- Use of Waste Materials and Time-tested Tradition-based Technologies - Such technologies derived from ancient wisdom have been. These technologies are labour-intensive and use waste materials to be built. This not only provides an outlet for the debris generated while clearing up the slums, it also generates employment for the urban poor and allows them inclusivity while building their own homes. For further detail see - [source 1](http://www.anangpur.org/anangpur.asp?kat=APPROPRIATE%20TECHNOLOGIES&abc=_), [source 2](http://www.anangpur.org/anangpur.asp?kat=APPROPRIATE%20TECHNOLOGIES&abc=_)

- In-built checks against encroachment and speculation through the generation of a self-checking and self-governing community. Since all vacant area - be it the courtyard or the terrace is community-owned and accessible, any private profiteering through illegal construction and sale is checked by the community itself.

Are you currently collaborating with private companies, or have you partnered with private companies in the past? With which companies?

Yes. In the recent times we are in continuous dialogue with a major Australian firm that deals with the said alternative technologies. Starting the later part of this month we shall be working out the first steps towards taking these methodologies and technologies to them. Though they function in 28 different countries across the world, the first project we shall collaborate on lies in East Timor.

Please describe in detail the nature of the partnership(s)

We will be training their personnel in the technologies and methodologies developed at the centre who would then train the labourers involved in a project in a particular country. We shall therefore be forming a design partnership where in we shall be providing solutions while the implementation of the schemes shall be carried out by local bodies that our partner will define.

Select the unit(s) with which the partnership was formed

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