

Strengthening the Role of Building Centres in India

Constraints and perspectives

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Introduction

“Housing for all” has been stressed as a priority area by the Indian government. However, despite sustained efforts since independence, the nation has been unable to cope up with the ever-growing need of shelter of the teeming population. The census of 2001 has established that the Indian population has crossed the billion mark. To house its 1020 million population, India needs at least 204 million houses as against the estimated 167 million houses available, the current shortage being 37 million. Looking on to the future, it has been projected that by the year 2021, the population of the country would exceed 1.35 billion, warranting an addition of about 66 million new houses in the next twenty year period. Hence there still exists a yawning gap to be bridged most of which pertains to the needs of the economically weaker sections and the low income groups .

Housing affordability in India has been declining, with the increase in construction cost being much higher than inflation rates and without commensurate increase in income levels. On the other hand, a variety of cost-effective, durable, functional, acceptable and yet aesthetic building technology options, are available for adoption and field transfer leading to a significant reduction in the cost of construction while being environmentally sustainable.

To bridge the gap between affordability and cost of construction, the need for a mechanism for grass-root level transfer of these innovative building technology options was imperative. Inspired by the success of the initiative taken in 1986 in Kollam district of Kerala for the setting up of a ‘Nirmithi Kendra’(Building Centre) for taking up activities related to affordable housing, the Govt. of India launched the programme for the establishment of a National Network of Building Centres in 1988 with the Housing & Urban Development Corporation (HUDCO), India’s premier techno-financing Institution in the field of housing and urban development, as the nodal agency, for the dissemination and adoption of cost-effective, environment and energy friendly (CEEEF) building technologies.

The ‘Building Centres’ are centres set up by an organisation or an individual with some or all of the following objectives:

- Technology transfer from ‘lab’ to ‘land’.
- Skill upgradation and training to the artisans (masons, carpenters, bar-benders, plumbers, electricians, etc.) on innovative and cost effective technology options.

- Production and sales of various cost effective building components using local resources.
- Employment generation through construction work using the relevant technologies.
- Housing guidance, information and counselling on cost effective technologies.

The Building Centre Movement was launched as a grass root level building technology transfer mechanism for taking the benefits of the non-conventional options in the building sector into everyday construction. These centres are acknowledged as effective ‘agents of transfer’ for cost effective, ecologically appropriate and energy saving building technologies. These Building centres can be set up by both individual entrepreneurs and organisations in the Government, non-government or private sector. The penetration of the movement has led to participation of all tiers of the civil society. The projects executed by building centres cover the entire spectrum of building activity - affordable EWS¹ housing, high-visibility public asset buildings, community buildings and higher income group housing. For the initial establishment of the centre, assistance is given in the form of a start-up grant. With this seed capital, a majority of the centres have been successful in achieving self-sustainability through production and turnkey construction activities.

The movement has grown to a nation-wide network consisting of 632 Building centres. They have been able to provide training to over 213,500 local artisans and executed works worth over Rs. 6399 million (US\$ 172.5 million) and produced components worth over Rs. 1881 million (US\$ 39.18 million).

The Building Centres are also playing an important role in reconstruction, retrofitting, awareness-generation and training in areas affected by disasters. They have had a visible impact in improving living standards of the artisans trained both in the urban and rural areas. Towards eliminating gender biases and empowerment of disadvantaged women, the building centres have encouraged masonry and other trade-related training for women construction workers. The generation of equal opportunities for women professionals and entrepreneurs is evinced by the presence of several women project managers running these centres. Inspired by the success of the movement in the urban areas, a scheme for expanding the network to the rural areas too through establishing Rural Building Centres has been taken up since 1999.

The Problem of the Sustainability of the Initiative

The Building Centre movement has immense potential for making a significant dent at the grass root cutting edge level towards offering options for sustainable cost effective housing which is also strong, durable, environment friendly and disaster resistant. The movement has taken off well in most parts of the country while it has yet to make its mark in some states. This very good initiative, already recognised by UN-Habitat as one of the best practices, however faces a

¹ ‘Economically Weaker Sections’ defined as households having monthly income of less than Rs. 2500 (US\$ 50)

tremendous challenge to maintain its sustainability in the longer run. With 474 of the 632 centres being fully functional and some of them earning profits too, the need is to make them self sustaining independent entities. This can be achieved only through a coordinated effort of all the actors involved in the initiative.

With a large numbers of actors and the interplay between them towards achieving the common objective of sustainable cost effective housing for the low income groups, the initiative offers an interesting opportunity to examine and understand the role and strategies of different actors in the process towards achieving the perceived goal. The paper attempts to understand and analyse the sustainability of the initiative and the imperatives for its long term sustainability .

Strategies

The major strategy of the Government of India was to augment the housing stock and making housing affordable to the weaker sections of the society. Towards the same the initiative to launch the building centre movement was to create a sustainable mechanism for grass-root level transfer of innovative building technology options in all districts of the country so as to reach out to the public at large.

As the Building Centre represented a complete departure in many ways from conventional building practices, it has continuously faced tremendous resistance to change. Both the local populace as well as the local implementing agencies were wary of the performance of these technologies and therefore reluctant to adopt them. Problems of availability of land and infrastructure were also a stumbling block. The motivation of the project manager which is critical to the success of the Building Centres, was often lacking. Logistical problems were resolved through sustained interaction and appropriate interventions at the levels of State governments, local bodies, promoting and implementing agencies. Many State Governments provided land for the building centres besides providing funds under various training programmes. In addition to regular training for project managers, for those regions, as for example, northern states, which had been slow to catch up, HUDCO sponsored special training programmes wherein the concerned project managers were taken on an exposure visit to the successful centres in other parts of India, and convinced about its replicability. At the policy-level, major initiatives taken were a three point agenda for revision of academic curricula to include these technologies, preparation of relevant Indian Standard Codes and incorporation in the 'Standard Specifications and Schedule of Rates' of construction agencies. Other efforts included support for 'Performance Evaluation and Validation' of selected technologies, lobbying for fiscal incentives for Building Centre products, allowing a 0.25% rebate in HUDCO's lending interest rates for the works executed by Building Centres, lobbying State governments for the award of projects to Building Centres, etc.

The resources for the building centre movement were made available from the Govt. of India through its annual budgetary support, to the extent of Rs. 0.5 million per building centre from the

MoUD&PA² in urban areas and an enhanced grant of Rs. 1.5 million from the MoRD³ in rural areas.

Source	Amount (Rs. Million)	(in million US \$)
Grant Assistance from MoUDPA	152.20	3.17
Grant Assistance from MoRD	20.18	0.42
Govt. of India- NRY grants for Training	177.44	3.70
ASSISTANCE THROUGH HUDCO		
a) KfW Grant for Machinery and equipment	187.25	3.90
b) R& D grants	51.87	1.08
c) Soft loans	26.16	0.55
d) Subsidies for training of Project managers and master masons	6.84	0.14

Technical expertise of HUDCO, BMTPC⁴ and several R& D bodies such as the CBRI⁵, SERC⁶, and RRL⁷s etc., were tapped, with members of these bodies placed on the Executive Committees of the Building centres of their regions. Indigenous efforts of NGOs and scientists, in the use of local materials such as bamboo, mud, lime, and adaptations of traditional technologies were supported by Building Centre grants.

At grass-root level, human resources were built up by imparting skills through training grants. At the managerial levels, intensive capacity-building efforts, partly subsidised by HUDCO, both at the level of project managers and master masons, were taken up. Over 871 project managers were trained at HSMI⁸, New Delhi, and the Zonal training Centre, Chennai. The training concentrated on confidence-building and imparting technical know-how. Habitat Polytech, an organisation promoted by HUDCO for informal sector training, trained 1338 master masons.

HUDCO adopted a multi-pronged strategy, which comprised an integration of the bottom-up and top-down approaches. While State governments and other potential 'change agents', such as NGOs and entrepreneurs were actively supported to formulate proposals for the setting up of Building Centres, awareness-generation through seminars, training and advertisement through the media/ videos/ newsletters etc was a complementary activity aimed at creating demand for the product and services of these building centres.

Changing Strategies over the Years

The initial strategy restricted the setting up of building centres to Government agencies. As recommended by an expert committee set up to review the initiative, revised guidelines were issued in 1993 to ensure greater operational flexibility and increased grant assistance.

² Ministry of Urban Development and Poverty Alleviation

³ Ministry of Rural Development

⁴ Building Materials and Technology Promotion Council

⁵ Central Building Research Institute, Roorkee

⁶ Structural Engineering Research Centre, Chennai

⁷ Regional Research Laboratories (A part of the Council of Scientific and Industrial Research of the Government of India)

⁸ Human Settlements Management Institute, New Delhi, the research and training wing of HUDCO

The outreach of the building centres increased as the building centres could now be established by anybody – NGOs, entrepreneurs, academic institutions or co-operative societies. Several NGOs have set up successful building centres leveraging on the strength of close and vibrant community linkages. Similarly building centres set-up within academic institutions forged a critical link between budding professionals and cost-effective technologies.

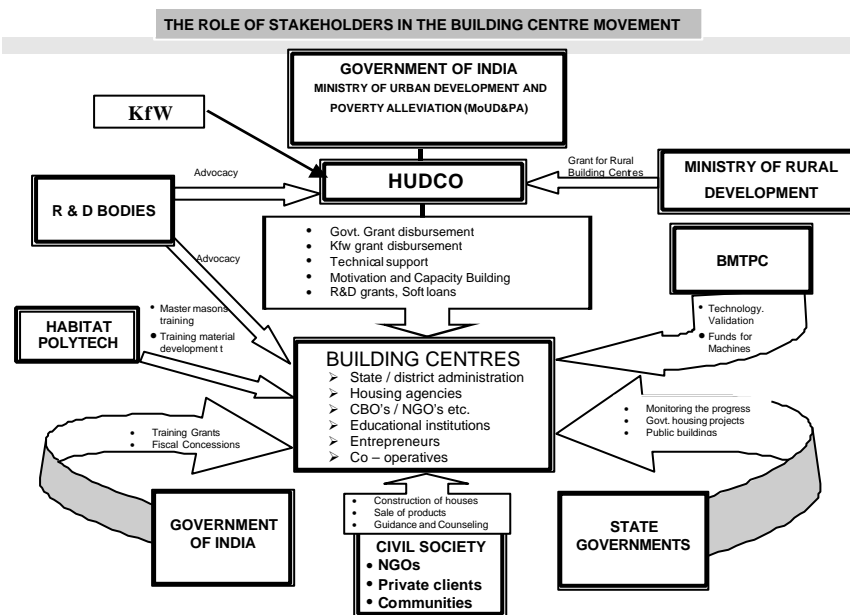
The need to generate a sustained demand for cost-effective technologies has led to an increased focus on dissemination, networking and information sharing. Since 1994, an exclusive newsletter on Building Centres 'Nirman Bharti' is being brought out and widely circulated. The first national conference on Building Centres was convened in 1999 followed by regional seminars to provide a platform for networking and experience sharing. Based on the overwhelming public response to the first Building Technology Park at Jaipur, where full-scale demonstration models have been put up for permanent public display, efforts have been made to replicate the same in several State capitals. Other recent efforts in this direction include the launch of mobile building centres to reach out to remote areas and launch of "Habitat Show" programme on 'alternate building approaches' on national television.

The strategic focus of the building centres in India has also been continuously changing. While in the initial stages the centres were primarily concerned with production of building component for housing for the low income, the next logical step was to take up the construction work for low income housing themselves as an effective and cost-effective delivery mechanism which also had a significant demonstrative effect. With passage of time the building centres continued to experience difficulties relating to poor acceptance by the masses as the people wanted to stick to conventional methods. Towards the same the next strategy focussed on construction of high visibility public buildings like village offices, primary schools, health centres, community halls etc. besides construction of demonstration units within the compound of the building centre. The next phase lent strategic focus on use of agricultural and industrial waste in components for housing construction. Many building centres were established dealing with the issue specifically and have been quite successful. During the last few years India has been hit by major natural disasters averaging one every year. Towards contributing towards major reconstruction programmes using disaster resistant features, special building centres were established which have contributed significantly in the rebuilding programmes and for training the local artisans on the disaster resistant construction. However, these centres often tend to become non-functional after the immediate task at hand gets over in a 2-3 years time.

The functioning of the building centre has been continuously monitored at various levels and the present strategy for the programme is to strive towards consolidation of the existing set up with making weak centres achieve sustainability and revive the non-functional building centres. The focus is to review critically the functioning of each centre and to close the ones which are unlikely to be sustainable. The role of the various actors is also being reviewed to clearly understand the likely interventions needed to revitalise the initiative.

The Role of Various Stakeholders in the Building Centre Movement

The Building Centres are by definition entities designed to function at the grass root level and attempting to provide interventions as per the broad policy framework identified at the central government level. Between the two seemingly extreme players, at the top and the bottom rung, there are a number of other significant actors participating in the process to make the chain complete and effective. As is true with any chain of activities, the initiative can only achieve its objectives if each and every actor in the chain effectively discharges its assigned or envisaged role. The strength of the chain is determined by its weakest link. In the present case of the Building centres, the network being very wide criss-crossing the large country, the sustainability of the movement is entirely dependent on a rather large number of actors in the process. The primary actors involved are the Central Government, State Governments, District administration, HUDCO, BMTPC, KfW, Research bodies, the managers of Building Centres, the agencies or the entrepreneurs establishing the building centres, NGOs, the private sector and the communities. An indicative representation of the role of few major actors in the process is given below:



The Central Government

The role of the 'central government' is central to the initiative as much as it is an 'action plan program' of the government with the objective to augment the housing stock and making housing affordable, safer and environmentally sustainable. Towards the same the central government provides budgetary resources for funds, provide policy framework for its operation and contributes towards creating enabling environment for the success of the initiative. The central government also monitors the programme closely. The monitoring of the programme is a complex process in absence of measurable indicators for its primary objective of grass root level technology transfer effectiveness. However monitoring is generally done based on the utilisation of grant money, workers trained, the quantum of

components produced and the work undertaken. The monitoring also includes data on the number of building centres who are fully operational and are likely to be able to sustain their activities in the longer run.

However, since the subject of housing falls under the jurisdiction of the state governments, the role of the central government is primarily that of an enabler and of a regulator.

The State Governments and the District Administrations

For the success of the building centre programme the active role and participation of the state government and the district administration is of primary importance, especially during the initial period of the establishment of a centre. Majority of the building centres, in the formative stages of the movement, were set up by the implementing agencies of the state government. Towards the same, the state governments and the district administrations provided supportive inputs through logistic support in form of land, water/power connections etc. They also participate in the governing body to oversee the functioning of the centres, supporting through award of construction works for sustaining the centres and also dissemination of the technologies through use in high visibility buildings like schools, health centres, bus shelters etc. They facilitate dovetailing of financial resources from other governmental programmes for facilitating capacity building initiatives. The state government also is expected to monitor the progress regularly and to make all necessary interventions towards making these centres functional and effective in the objectives for which they have been established.

The experience so far has clearly indicated that the movement has been successful in the states where the state governments and the district administration have taken active interest in its operations. However, since the state governments and the district administrators are generally too tied up in their regular activities, adequate attention is sometimes not paid to this field. The commitment and the enthusiasm of the specific officers dealing with the subject has been found to have a direct bearing on the functioning of these centres. Towards motivating the civil servants in the field of cost effective building materials and technologies and the concept of building centres, an initiative to expose them to the same in the initial training programme before joining the civil services, has proved to be quite effective.

The Donor Agency (KfW)

The Building Centre movement has been supported through significant financial assistance from the Kreditanstalt für Wiederaufbau (KfW) of Germany since 1991 when it sanctioned an assistance of DM 10 million under HUDCO-KfW III to HUDCO for Building Centre programmes in India. The assistance has been for fixed asset investments, including land development, buildings and equipment for these centres. The assistance has been utilised to support over 200 centres till date. Satisfied with the performance under the earlier grant program the KfW approved another package under HUDCO-KfW VII for DM 10 Million.

Towards ensuring that their assistance has been utilised effectively and has resulted in the desired objectives, the KfW has been regularly monitoring the progress reports and also conducting evaluation studies through its own consultants. In fact the precondition for release of funds against the second package has been that the building centres assisted through the first grant should be performing satisfactorily and complying with the general objectives of the German development cooperation. The cooperation with a donor agency has given the movement a definite push through and the donor agency has also been generally satisfied with the achievements even while appreciating the constraints under which the initiatives has to perform.

Another positive outcome of the support from the donor agency is that the interest earned on the money has been used, with the approval of KfW, for adoption of a total of 122 settlements for comprehensive integrated development as a model settlement for replication, using innovative building materials and technologies besides providing basic infrastructure facilities dovetailing the resources from other developmental schemes. The scheme has been able to cover 73 villages and 49 informal settlements, each having around 200-250 households, with a total grant assistance of about US\$ 9.5 million.

Housing and Urban Development Corporation (HUDCO)

The Housing and Urban Development Corporation (HUDCO) is the nodal agency implementing the programme for the government of India. The grants from the government are routed through HUDCO, which is also responsible for approving the proposals for establishment of building centres. It also monitors the progress directly through its network of regional offices and releases grants to these centres. HUDCO also provides technical and capacity building inputs besides providing soft loans and grants from its own funds. HUDCO also organises training programmes for the project managers of the building centres to train them and to expose them to some of the successful building centres. Regular newsletters and technical material is published by HUDCO and disseminated to the building centres for their use. The training to master masons is also being provided through Habitat Polytech, an institution promoted by HUDCO for informal sector capacity building initiatives. Overall, HUDCO has been playing a pivotal role in the effective implementation of this programme.

The support to the building centres is one of the primary objective of the organisation, which is the premier techno-financing institution in the country in the field of housing and urban infrastructure financing with annual disbursements of over US\$ 1 billion. Having supported construction of over 12.5 million dwelling units, it is probably the largest facilitator of housing in the world. The corporation has also been returning profitable results ever since its inception 31 years back. The progress of building Centres is also one of an important benchmark against which the performance of the institution is adjudged.

The implementation of the building centre programme involves a substantial work load for HUDCO's corporate office as well as its regional offices.

Building Materials and Technology Promotion Council

The Building Materials and Technology Promotion Council (BMTPC) is an organisation of the Government of India promoted for making available and propagating proven and validated innovative building technologies for the benefit of entrepreneurs interested in setting up manufacturing units in the tiny, small, medium and the large scale sectors. One of its objectives is to provide technological and promotional support to the building centres. The BMTPC is also supporting the building centre movement through making available the machinery for production of building components like blocks, lintels, door frames etc at decentralised locations. Towards the same, BMTPC gets allocations from the government in its annual budget.

BMTPC's role has primarily been for provision of machineries to the building centres. The machineries have proved to be quite useful in the initial process of establishment since it did away with the long drawn process of procurement by the centres.

The Key Role of the Project Manager of the Building Centre

The project manager of the centre holds the key to the success of the centre. The motivation and the skills of the project manager, who could be an engineer or an architect, often determine the functionality of the centre. The project managers are generally those who have had some prior experience of use of cost effective technologies and are given training by HUDCO at its corporate office or at its southern zonal office at Chennai. The project manager is responsible for the day to day working of the centre and for managing its resources. The functions of the project manager are quite comprehensive considering the fact that he leads a very compact team of people at the centre. The centres striving to become self sustainable have to be extremely prudent in their expenditures and towards the same the project manager is always under considerable pressure due to limited budgets. He/she has to be in regular touch with the other actors to get the requisite supportive inputs towards sustaining the centres. The project manager is also the marketing executive responsible for marketing the products and services. Above all is also the requirement to be an able trainer for imparting training to the artisans and providing housing guidance.

However, it has been observed that the motivation levels of the project managers, especially of the building centres in areas where the movement has not actively picked up, is on a lower side. This is often the result of the frustrations from not being able to achieve and perform due to various constraints including lack of active support from the other stakeholder as also from the lower financial remunerations.

Another major problem is that at present many project managers are from the government sectors, dealing with the conventional ways of construction and have a marginal interest in implementation of cost effective technologies. The need is to have motivated project managers possibly fresh graduates from the schools of engineering and architecture, and trained for the role of the project manager. Success of Building Centres have always been possible primarily because of the contribution of competent and effective Project Managers.

The agencies/entrepreneurs - establishing the Building Centres

As per the guidelines for building centres, these can be established by a multitude of agencies, institutions, entrepreneurs, NGO's etc. The table indicate the position of the building centres established through the various initiatives.

	Building Centres established through the Initiative of	Number of Building Centres established
a	State/District Administration	256
b	Housing Agencies	123
c	NGOs, Voluntary Bodies, CBOs and Charitable Trusts/ societies	132
d	Educational Institutions	48
e	Entrepreneurs/Professionals and Developers	13
f	Research & Development institutions	2
g	Construction Workers Cooperatives, Contractors/ Builders Associations, etc.	2
h	Rural Building Centres	56
i	Total	632

As is evident, a majority of the centres have been promoted by the state governments agencies. However, there is a considerable number of the centres who are from outside the governmental network. A large number of the rural building centres have been established by NGOs operating in the rural areas.

The role of the agencies establishing the building centres is the help of grant to the self sustaining stage. It is often seen that the motivation that existed at the time when the initiative was taken to establish the building centre, sometime diminishes, generally due to the changes in the personnel handling the initiative. However there are also instances where due to change in management many defunct building centres have been revived.

Another major issue relates to the group of centres generally in a particular state functioning under the umbrella of a nodal agency, and its sustainability being extensively affected by any change in the management. A typical example is of the Building Centres in Rajasthan being earlier established and run extremely well by the Awas Vikas Sansthan(AVS) for many years. However, at a stage due to change in the management, the centres failed to get the necessary management support and could not get further works and went to the extent of being non-functional. These centres have now been taken over by another nodal agency of the state government and are trying to limp back to their routine activities.

The Communities and NGOs

The primary objective of the building centres initiative is to reach out to the grass root level and as such the role of the communities and the NGO's facilitating the same is of immense importance. The communities are to be encouraged and assured about the alternative building materials and technologies, so that they are able to appreciate, accept and adopt the same in their regular use in housing construction. The communities generally are, as can be expected, resistant to any change, and that too for housing, since they believe that housing is a one time activity for them and hence there is no place for experimentation with their own home constructions. Here the role

of the NGOs and CBOs towards interacting with the communities and making them amenable to changes, assumes greater significance.

To influence the opinion of the community the building centres aim to construct high visibility buildings with these techniques. The initiative to reach out to the public through



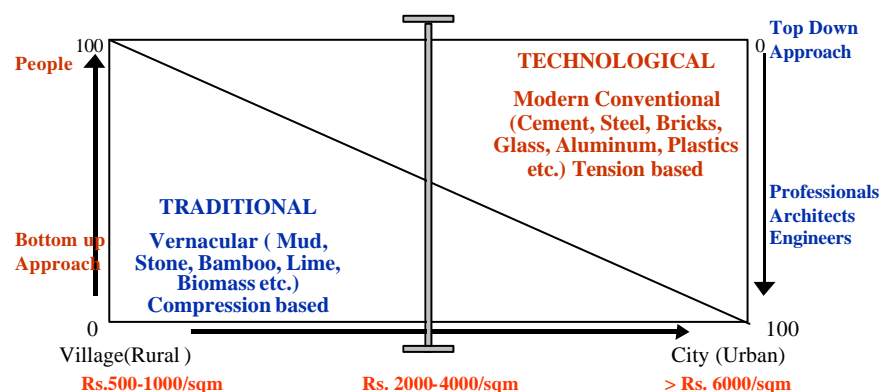
television media on the prime time has also been demonstrated positive results. The role of the trained artisans also has a significant influence in moulding the public acceptability of these options.

The experience, so far, has shown that it is indeed an arduous task for creating acceptability of the communities and it needs sustained motivated efforts of all the stakeholders towards making the desired impact on the communities for the success of the building centre initiative.

Towards achieving long term sustainability of the building centres, the various actors have to perform their expected tasks with total commitment and in close coordination with each other to make appropriate interventions in their sphere of activities.

The Design Options— promoted by the Building Centres

The design of shelter appropriate for varying geo-climatological environments using cost effective yet environmentally sustainable building materials and technologies besides providing for disaster resistant construction poses a daunting challenge. Although the industrialization has brought in mechanized and rapid construction practices, these are limited to the large scale top of the line projects for the affluent, with the majority of construction activity based on age-old techniques and norms which have long out-lived their versatility. There is a need for the necessary refinement and application of innovative and appropriate inputs to the traditional construction practices.



This calls for a people-oriented bottom-up approach striking the right and sustainable balance between the intermediate, vernacular and innovative technologies towards optimising the construction costs and

provision of sustainable housing. The designers have the responsibility to identify and adopt environmentally sustainable options for the materials and technologies in their designs. The Building Centres strive to contribute significantly in this regards. The use of building components based on the industrial and agricultural wastes are also actively promoted.



Towards providing appropriate design options using these building components and technologies, the Building Centres provide counselling to the interested people and also many times take up the whole work themselves. The works

executed by Building Centres are generally for the community asset buildings and for the low-income housing. However, in the southern states, the technologies have picked up successfully and many high income housing have

come up with construction either done by the trained artisans or by the Building Centres themselves. The community asset buildings like schools, bus shelters, health centres have a large impact due to their high



visibility as is the case with high income housing. The tendency of the common household is to stick to the established procedures and not go in for experimentation. These examples give them the confidence on the technologies and motivate them to incorporate them in their houses.



The most commonly used technologies include the use of filler slab, rat trap bond, mud stabilized blocks, ferro-cement components, brick arches, fly ash based blocks, funicular slab roofing etc. An indicative list of various popular alternative options promoted by the Building Centres are given briefly as under:

Foundations	Roofing	Miscellaneous
<i>Brick Arch Foundation</i>	<i>Brick panel with joists</i>	<i>RCC door/window frames</i>
<i>Under Reamed Piles</i>	<i>Stone slabs over RCC rafters</i>	<i>Ferro cement door shutters</i>
	<i>RCC planks over RCC joists</i>	<i>Ferro cement sun shades-cum-lintel</i>
	<i>Ferro cement shell roofing</i>	<i>Brick on edge lintels</i>
Walling	<i>Filler slab roofing</i>	<i>Corbelling for lintels</i>
<i>Stabilized mud blocks</i>	<i>Funicular shell roofing</i>	<i>Brick arch for lintels</i>
<i>Fly ash Blocks</i>	<i>Brick funicular shell roofing</i>	<i>Precast RCC shelves units</i>
<i>Rat trap bond walls</i>	<i>Precast blocks over inverted T-beams</i>	<i>Precast Ferro cement shelves</i>
<i>Hollow blocks walls</i>	<i>Micro-concrete roofing tiles</i>	<i>Ferro cement water tank</i>

For providing guidance on the use of these technologies and also for imparting training to the artisans training manuals in the form of booklets have been published by Habitat Polytech, an organisation promoted by HUDCO for informal sector capacity building.

The Building Centres also have played a very significant role in disaster prone areas. A typical example is in Orissa, where the super-cyclone of 1999 claimed over 10,000 lives. The Building Centres there have actively participated in the construction of 68 school cum cyclone shelters in the cyclone prone areas in Orissa using the technologies and the design provided by HUDCO. The cyclone shelters were funded through the contribution of the Members of Parliament through their funds under MPLAD⁹. These multi functional buildings would be able to provide shelter to a large number of the residents in case of any future disaster, which have been affecting Orissa regularly over the last few years. These shelters have the necessary cyclone resistant features and also provide for



⁹ Under the MPLAD (Member of Parliament Local Area Development Scheme), each MP is allowed Rs 20 million (US\$ 0.4 Million) every year for funding the developmental projects of their choice within the prescribed guidelines.

earthquake resistance since the area is also prone to earthquakes. These cyclone shelters provide a significant demonstrative effort for the technologies.



Based on the success of the initiative of MPLAD in provision of cyclone shelters in Orissa through the Building centres, similar initiative is now underway in Gujarat, where the major earthquake on January 26, 2001 rendered thousands of people homeless.

Appreciating the fact that the design parameters have a considerable effect on the quality of life of the residents, the Building Centres have an important role to play in provision of sustainable housing.

Conclusions and Recommendation

Overall achievement of objectives by the Building Centres

The primary objectives of the Building Centres, namely the technology transfer, skill upgradation, production of cost-effective components and undertaking construction activities have so far been achieved to a considerable extent. But, in view of the problem size, it needs to address the issues through a quantum jump both quantitatively as well as qualitatively. It has to be accepted that people are reluctant to change their deeply rooted attitudes and to adopt new technologies since they treat their houses as a part of their culture and tradition they belong to, and the lower the income, the lower is their readiness to experiment with new technologies. It is in this regard that the Building centres need to orient themselves more towards the aim of technology transfer, which presently is not being given due strategic importance in the activities of the building centres since they are non-remunerative and non-productive. The example of few building centres in the southern states for providing on-the-job training to the artisans could be an effective way, provided the building centres have sufficient numbers of projects in hand. The government also needs to formulate necessary instruments for interventions in this regard so as to give a fillip in the skill upgradation activities leading to technology transfer. The technology transfer process is a long drawn process and sustained support needs to be provided coupled with close monitoring and coordination.

Management framework - autonomy for the Building Centres

The present set up of the building centres has the majority of centres run by nodal agencies of the state governments like AVL¹⁰, APSHC¹¹ etc. These are generally run through absentee control and are totally dependant on the nodal agency thereby having little direct role in decision making process. But they also have the inherent strength

¹⁰ Avas Vikas Limited, a Govt. of Rajasthan agency.

¹¹ Andhra Pradesh State Housing Corporation.

through the governmental support. However, the effectiveness of this working method is primarily dependant on the motivation of the higher authorities of the nodal agency. The weakness of this model was observed in the case of Rajasthan. The other major group of centres have intermediate control and partial independence, who have very close ties with the promoter and take part actively in the decision making. The majority of the building centres working as an independent legal entities with full autonomy have been able to achieve sustainability and could be taken as the models for replication.

However, to be able to take the responsibility and the autonomy, the project managers have to be competent and trained appropriately for the job. This is an area which needs much greater attention for the sustainability of the building centre. The project manager needs to be properly selected, regularly monitored and adequately compensated so that he/she contributes fully towards the objectives. A separate financial provision from the grant needs to be allocated for the purpose. The building centres should have appropriate management tools, like market research, marketing, financial planning etc. to be able to run efficiently and gradually shift from the government protection to market driven entity.

Towards the same, the need is to impart training to the building centre personnel in areas of management, marketing, financial administration etc. An appropriate manual of operations should also be prepared and made available to the project manager indicating areas of operations, job description, standardised accounting systems etc.

Motivating the better performing centres through recognition and possibly extra financial allocations could also result in better performance of the centres, while encouraging the other centres also to come upto the mark.

Financial Sustainability

According to the survey conducted by SUM consultants, Germany for HUDCO & KfW, more than two thirds of the building centres are fully functional and over 21% have achieved self-reliance, implying that they do not need subsidies to sustain their operations and are making profits from their activities. Most of the centres face significant crunch of resources primarily due to lack of demand for the components produced, inadequate marketing, high overheads on salaries and maintenance etc.

With a view to augment the demand for the products and services of the centres, the products need to be adjusted to the local needs based on market and demand analysis. However, it must be noted that the individual centres can not take the total responsibility of product marketing. The sustained marketing has to be taken up in a structured strategic manner at the central, state, district and the local level with the responsibility of the different actors at various levels.

The products also should be standardised with proper quality control mechanisms and marketed adopting prudent marketing methods.

It has to be clearly accepted and understood that the sustainability of the building centres, finally, has to be decided by the acceptability

of its products and services by the community and towards the same all actors have to contribute individually and jointly.

Closer financial monitoring is also identified as a mandatory requirement for its long term sustainability. The financial positions need to be reviewed critically at regular intervals and appropriate decision to strengthen the same or even to wind up need to be taken up at the appropriate stage to save avoidable losses.

The decision to close few building centres, who even after requisite interventions cannot be made sustainable, would also make available some extra money that could be utilized to support other promising centres. The selected building centres could also be supported with additional grant for procurement of additional equipment and computers etc.

Monitoring Mechanisms

The proper monitoring system needs to be recognised and accepted as a supportive management tool rather than a time consuming control instrument as is generally treated presently. However, there is also a need to streamline and improve the physical and financial monitoring systems. The basic requirement for effective monitoring is the process of networking. Due to the location of some of the building centres, few do not have any means of communication, not even telephone. It is, therefore, pertinent to upgrade the communication systems and possibly network the building centres in the state and eventually to the national network. A separate funding program for the same may also be devised since it would contribute significantly in enhancing sustainability of the centres.

Based on the monitoring reports, the decisions should be taken, at the earliest, to provide appropriate intervention at the appropriate level. The reports should also be critically reviewed to examine the feasibility of continuing with the centre or to wind up.

Although, it is recognised that the government should try to ensure equal support to the different parts of the country, it may also be prudent to provide extra support in the areas where this movement has really picked up as they would become a model for other states to replicate.

Building Centre Movement – At the crossroads

The Building Centre Movement, a best practice identified by the UN-Habitat, is a significant initiative with tremendous potential to provide intervention contributing towards sustainable housing and improving the quality of life of the citizens. The movement needs total commitment from all the actors in the arena to be able to achieve the objectives set for it. During the 13 years of its existence, it has been able to demonstrate commendable results, and it is time now for each of the actor to, individually and collectively, introspect and evaluate the achievements and shortcomings with a view to revitalise this major initiative, which would go a long way in ensuring the long term sustainability of the building centre movement.

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