

**REPORT ON THE STUDY TOUR TO INDIA WITH THE KZNP HOUSING  
PORTFOLIO COMMITTEE - 27 NOVEMBER TO 13 DECEMBER 2006**



**THE GANDHI 'TALISMAN'**

RECALL THE FACE OF THE POOREST AND THE MOST HELPLESS MAN WHOM YOU MAY HAVE SEEN AND ASK YOURSELF, IF THE STEP YOU CONTEMPLATE IS GOING TO BE OF ANY USE TO HIM. WILL HE BE ABLE TO GAIN ANYTHING BY IT ? WILL IT RESTORE HIM TO A CONTROL OVER HIS OWN LIFE AND DESTINY ? IN OTHER WORDS, WILL IT LEAD TO SWARAJ OR SELF-RULE FOR THE HUNGRY AND ALSO SPIRITUALLY STARVED MILLIONS OF OUR COUNTRYMEN ? THEN YOU WILL FIND YOUR DOUBTS AND YOURSELF MELTING AWAY.

अंग्रेजी . ENGLISH

M . K . GANDHI



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## EXECUTIVE SUMMARY

The purpose of the report is to present to the management of the Department and the Minister of Housing a report for noting regarding the study tour to India; and to make recommendations regarding future initiatives.

The study tour was organised by the Housing Portfolio Committee, which extended an invitation to the Head of Department for a representative from the Department to accompany the group.

The purpose of the tour was to exchange ideas and experiences with the India counterparts in the fields of housing and infrastructure construction. It was conducted over two weeks and targeted the major cities of New Delhi, Bangalore, Chennai and Mumbai.

The following aspects have been observed:

- (i) India, currently does not provide subsidies. Individuals access housing through low interest bonds from financial institutions.
- (ii) The Indian government is more advanced in terms of bonded markets in the low and middle income sectors, and combining these markets to increase affordability to lower income groups.
- (iii) Slums clearance implementation is considered an ongoing activity in most cities. The execution thereof is tied to a clear strategy and implementation plan, and sound project management principles.
- (iv) In areas such as Delhi where there are undetermined vast influx of migrant labour, focus is placed on providing infrastructure in rural areas.
- (v) Transitional areas in India seem to have enabled more efficient clearing of slums in certain areas as it has provided beneficiaries with interim accommodation whilst new dwellings are constructed, thus fast tracking the removal of structures in sensitive areas.
- (vi) Many alternative technologies are used in Indian housing markets.
- (vii) Mass housing is undertaken on vast estates to increase economies of scale.
- (viii) Housing estates provide accommodation for mixed income groups to increase the affordability of units to lower income levels.
- (ix) India maximises the use of labour intensive methods.
- (x) Projects are enhanced through greening initiatives.
- (xi) The Indian government has a strong focus on quality which is prioritised above volume. Housing units are generally smaller (from around 16m<sup>2</sup>) but high quality finishes are provided. Quality control is supported by strong work ethic and craftsmanship. Experienced engineers are on site and monitor quality on an ongoing basis. In addition to this, pre-qualified contractors are used and ISO 9000 registration is a prerequisite, thus ensuring that organisations procured have a proper quality assurance programme in place.

- (xii) Housing Boards are in place within each state (province).
- (xiii) India appears to be rich in technical skills relevant to housing (including but not limited to engineering, planning and project management, as well as training and development skills), and is eager and willing to engage with South Africa in this regard.

The following recommendations are made:

- 1) That there be a follow up tour with more focussed outputs. This could include visits to other areas such as Ahmedabad, Goa , and some rural areas in the north and south. It could also be more focussed on inclusionary housing and bank charter housing, negotiation strategies with private sector financial institutions, and management of contributions, as well as exploring the feasibility of alternative technologies.
- 2) That such a visit should include a smaller focus group with necessary skills, e.g. Product Development, Monitoring and Evaluation, and technical representation from project management qualified in building science.
- 3) That the provincial slums clearance strategy be expedited. Such strategy to explore mass housing and provide for mixed income groups to increase sustainability, as well as exploring transitional areas in terms of the National Emergency Housing and/or Informal Settlement Upgrade policy.
- 4) That the KZNPA explore an exchange programme in respect of technical and management skills relating to the housing environment.
- 5) That service providers be encouraged to gain ISO 9000 registration to ensure an effective quality assurance system is in place within the respective organisations.
- 6) That a concerted effort be made to involve the Department of Agriculture regarding greening programmes for KZNPA housing projects.
- 7) That the Department of Trade and Industry be informed that the Indian business sector wishes to engage with the Province, in terms of the National Trade Agreement (India, Brazil, South Africa).

REPORT: STUDY TOUR TO INDIA WITH KZNPA HOUSING PORTFOLIO  
COMMITTEE: 27 NOVEMBER TO 13 DECEMBER 2006

1. PURPOSE

- 1.1 To present to the management of the Department and the Minister of Housing a report for noting regarding the study tour to India.
- 1.2 To make recommendations regarding future initiatives.

2. BACKGROUND

The study tour was organised by the Housing Portfolio Committee, which extended an invitation to the Head of Department for a representative from the Department to accompany the group.

Approval was granted for Mrs M Milne to accompany the study tour in India from 27 November 2006 to 13 December 2006.

The purpose of the tour was to exchange ideas and experiences with the India counterparts in the fields of housing and infrastructure construction. This follows the trilateral agreement entered between India, Brazil and South Africa (IBSA) in respect of trade and development.

The tour was conducted over two weeks and targeted the major cities of New Delhi, Bangalore, Chennai and Mumbai. The programme is attached as Annexure A. Copies of the presentations and project portfolios are attached as Annexures B and C respectively. An electronic copy is attached in an envelope. Information gathered through visits to each city is presented in the section below.

3. LIMITATIONS

Expected outputs from the tour was not clearly defined, thus, the tour could be viewed as exploratory in nature.

The Committee had focussed mostly on slums clearance, which in itself limited other elements being explored in detail.

There was limited technical capacity within the group. The political nature of the group also resulted in presentations being targeted at that level, with limited detail provided on technical aspects relating to alternative technologies, building methods, in depth policy detail, etc.

India has fundamentally a different philosophy with regard to subsidisation, thus limiting the extent of comparison.

The role of the Departmental official was not clear to the Committee and as such the Committee had not fully utilised the expertise of the official in analysing and debating issues. This report is purely based on information gathered by the official in the course of presentations and own independent observations.

Although the group also visited the National Small Businesses Corporation (NSIC), the information obtained from this visit contributed little to the knowledge relating to low income housing, other than perhaps involving programmers from India to assist South African Programmers with enhancements to the current housing Subsidy Information Systems. The business sector also indicated that it wishes to engage with South Africa. A separate electronic copy of the NCIS activities is attached to this report.

#### 4. INFORMATION AND OBSERVATIONS

##### 4.1 NEW DELHI

India is willing and eager to share its technologies, knowledge and experience at all levels. It has several training and skills development programmes for people from Africa which are sponsored 100% (Sharma, 28 November 2006).

There are national schemes for housing for the poor in both urban and rural areas, implemented through the different states (provinces). The focus is on infrastructure development in rural areas to reduce migration to overburdened urban areas. This has become a primary objective of the Indian government (Sharma, 28 November 2006).

Housing initiatives are privatised and micro-credit facilities have been established with major banks to assist homeownership. However, India does not have the social type infrastructure subsidies prevalent in South Africa. The poorest of the poor house themselves form in-situ materials. This approach is motivated by the Indian government to discourage laziness and dependency syndromes. (Ray, 28 November 2006).

The identification of critical areas, coupled with focused outputs, and sound leadership principles have contributed greatly to turning around the Indian economy, however, there is no target set for the clearing of slums in New Delhi (Moloi, 29 November 2006). It is an ongoing, continuously evolving activity (Srivastava, 30 November 2006).

Slums clearance is a politically sensitive issue, as was experienced with the demolition of businesses that had encroach upon building lines. The government is concerned about the impact of this on voting and sensitivities around movement of

temples and design restriction as a result thereof. A High Court order was issued for the demolitions to continue, and in spite of riots against this, the Court was not prepared to rescind the order (Maloi, 29 November 2006).

Availability of suitable land is a problem hence developments are designed around high rise - high density (see Figure 1, below) These multi-storey developments save cost and space through economies of scale. A vast number of different technologies are used to expedite delivery cost effectively. This includes the use of pre-cast panels in different combinations with other materials. (Srivastava, 30 November 2006).



*Figure 1: Example of a residential complex at Bawana Estate, illustrating the use of pre-cast columns, filled with conventional bricks, used in a mass housing development for industrial workers. It is possible to complete a complex in a very short time using the pre-cast and monolithic systems (as little as 4 months for one block within a multi-complex development). Sale prices vary depending on the size of the unit, e.g. single unit :  $16\text{m}^2 = \text{US } \$ 2200$  (approx.); double unit :  $31.93 \text{ m}^2 = \text{US } \$ 4500$  (approx.); 3 roomed unit :  $40\text{m}^2 = \text{US } \$ 6300$  (approx.) Materials are available at low cost and greening is used extensively.*

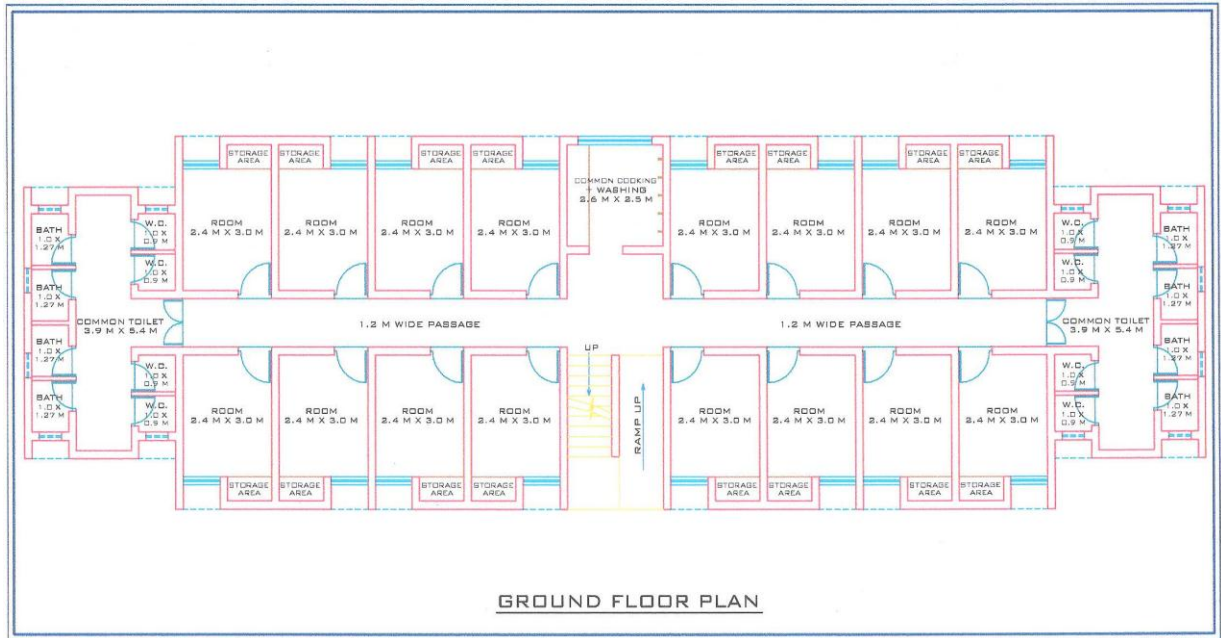


Figure 2 : Typical single unit (16m<sup>2</sup>).

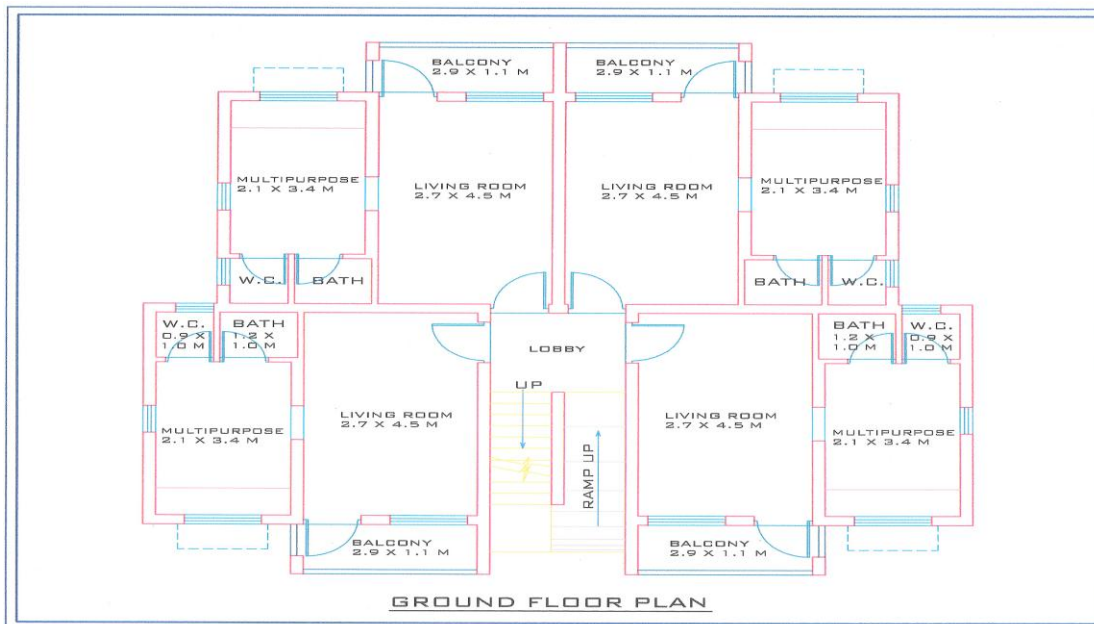


Figure 3 : Typical 2-roomed unit.

Construction is labour intensive, machinery is used only where manual labour is not possible or too inefficient. The designs allow for the use of totally unskilled labour, provided there is adequate supervision. Work allocation is aimed at prioritizing those that would be living within the project area. (Srivastava, 30 November 2006). Examples of the technologies are attached and can be found in the attachments (see annexure B1. Colour Photographs and video clips can be found on the electronic copy attached hereto (Annexure E).



The Government of Delhi aims at cutting costs, not quality. This is sought through innovative design (see Annexure B1). Quality control is facilitated through ISO 9000 certification of delivery agents (Srivastava, 30 November 2006).

## 4.2 BANGALORE

Labour intensive technologies are used in housing projects in Bangalore. (Government of Karnataka, 2006).

Housing developments are established on estates which incorporate products for low-, middle-, and high income earners (see Figures 4-6, below). This enables cross subsidization which is used to increase the affordability levels to low income earners (Government of Karnataka, 2006).



*Figure 4 : Higher income housing.*



*Figure 5 : Middle income housing.*



*Figure 6 : Low income housing under construction*

Properties are acquired through low rate bonds, facilitated by government guarantees. The financial institutions are very cooperative in this regard. Deposits for bonds are collected by the housing co-operations. The government provides loans (20 to 25% of the unit cost) paid back by beneficiaries over a 15 to 20 year period. (Karnataka Housing Board, 2006a).

Allocations for houses are market driven and waiting lists are kept. Sectional title and freehold title are typically used. Rental accommodation is not prevalent (Karnataka Housing Board, 2006a).

Slums clearance typically involves providing accommodation in high rise buildings (Figure 7, below) to achieve greater economies of scale (Laxminarayana, 2006).



*Figure 7 : High rise building under construction as part of the slums clearance programme.*

Karnataka is the leading state in terms of rural housing delivery. Allocations in rural projects are determined in village meetings, held with members of the community (Laxminarayana, 2006).

Projects are designed by pre-qualified architectural and engineering firms. Project execution is offered to pre-qualified turnkey contractors and monitored by independent pre-qualified, reputable and professional project management consultants. Incentives are provided for early completion and penalties for delay in delivery. Time and cost overruns are not entertained (Housing Department, Karnataka, 2006b:4).

Quality control includes 2-5 year defect liability and also a 1 year contract for service maintenance, including garbage disposal, security, street lighting and general upkeep of the layout. Provision is also made for third party quality control. (Housing Department, Karnataka, 2006b:5).

Projects are demand driven, although a detailed slums clearance programme has been developed in terms of a 5 year plan. Beneficiaries who wish to partake register with the Karnataka Housing Board (KHB) and secure registration by paying a deposit. Representatives of the beneficiary committee are included on the monitoring committee. (Housing Department, Karnataka, 2006b:5).

Scarceness of land necessitates joint ventures. The KHB enters into land availability agreements on its land with private developers, and *vice a versa*. (Housing Department, Karnataka, 2006ba:5).

Copies of the presentations and project specifications are attached as Annexures B2 and C1, respectively.

Karnataka has a draft revised slums clearance policy (Annexure D), which is administered through the Karnataka Slums Clearance Board (KSCB), in conjunction with the Karnataka Housing Board (Housing Department, Karnataka, 2006c9:5). The policy establishes the roles and responsibilities of the KSCB, KHB and private sector. There is no deadline for the clearance of slums as it is viewed as an ongoing activity. (Karnataka Housing Board, 2006a).

The policy provides for slum dwellers listed on the electoral roll dated 1 January 2005 to receive tenement in a 27,87 m<sup>2</sup> (300 ft<sup>2</sup>) residential unit, free of cost. Tenure is in the form of a conditional tenure right in the form of a 15 year lease. (Karnataka Housing Board, 2006c:9; 14 and 17). Temporary transit camps are provided close to new sites where relocation is required. Transit structures are temporary and are to be demolished by the developer once the occupation certificate for the replacement unit is signed (Karnataka Housing Board, 2006c: Part II :5).

Rural housing is facilitated through the Rajiv Gandhi Rural Housing Corporation Ltd (RGRHC), a company established by the Karnataka government. It promotes self help schemes for economically and socially weaker sections; releases payments based on “just in time” (JIT) through the Banking network; facilitates manufacturing and/or bulk procurement of cost effective building materials; and recovers loans from beneficiaries. (Rajiv Gandhi Rural Housing Corporation Ltd, 2006:1 and 2).

Rural housing focuses on woman empowerment. Housing finance is based on loans and saving schemes. Beneficiaries of given the option to construct their own homes. Assistance is provided by RGRHC where and/or if required. (Rajiv Gandhi Rural Housing Corporation Ltd, 2006:2).

### 4.3 CHENNAI (MADRAS)

The government aims to have a slums free Chennai by 2013 through the Tamil Nadu Slums Clearance Board. Multi-storey buildings are used for the purpose of relocating people from flood plains, road reserves and areas required for public purposes. Projects are also underway to resettle 16350 slum families affected by the Tsunami disaster (Thangavelan, 2006).

Slums are defined in the Tamil Nadu Slums Areas (Improvement and Clearance Act, 1971, as:

“3(i)(a) Any area is or may be a source of danger to the health, safety or convenience of public of that area or of its neighbourhood, by reason of the area being low-lying, in-sanitary, squalid, or overcrowded or otherwise, or

“3(i)(b) the buildings in any area, used or intended to be used for human habitation are-

(aa) in any respect, unfit for human habitation

(bb) by reason of dilapidation, overcrowding, faulty arrangement and design of such buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities, or any combination of these factors, detrimental to safety, health or morals, they may by notification, declare such area to be a slum area.”

(Government of Tamil Nadu, 2006a).

Negotiations are underway with private developers to accommodate a percentage of their developments to accommodate low income earners. (Government of Tamil Nadu, 2006b).

In situ development is promoted as far as possible but relocation is undertaken where necessary. Problems are experienced with some beneficiaries being unwilling to relocate. (Government of Tamil Nadu, 2006b).

Opportunities are created for youth and the unemployed. Preference is given to train and place beneficiaries from the targeted project areas. (Government of Tamil Nadu, 2006b).

Affordable land is in short supply resulting in housing estates are often located 10 to 20km from town. (Government of Tamil Nadu, 2006b).

Contractors are categorized in three different classes and are awarded projects based on this classification, which is also determined by the value of the project. Scores are

also informed by the contractor's financial status; equipment and assets register; and manpower. A minimum of 60 points (of 200) is required before pricing is considered. The award is then made to the lowest bidder. Invitation bids are acceptable, provided the value of the work does not exceed Rs2,5 million. Advertised tender is required where the work exceed this value in terms of the Transparency Act. (Government of Tamil Nadu, 2006b).

Site visits conducted confirmed vast housing estates, accommodating mixed income groups. No subsidies are provided. Beneficiaries are given a low interest loan. Inclusionary housing models are prevalent. Integration is supported. Schools, clinics and community halls are provided where beneficiaries had to be relocated outside of the city centre, as was sighted at Chennanjeri, a project accommodating some of the Tsunami victims, (see Figure 8, below)



*Figure 8 : Residential units at Chennanjeri*

Copies of the presentations and project specifications are attached as Annexures B3 and C2, respectively.

#### 4.4 MUMBAI (BOMBAY)

Low income housing developments in Mumbai are consistent to those found elsewhere in India, i.e. very high density, private sector driven development, financed through bonds to individuals, and housing estates that accommodate mixed income groups. (Government of Maharashtra, 2006a).

Unlike Bangalore where temporary structures are used for transit purposes, more permanent structures are used in slums clearance programmes. These are occupied by beneficiaries until they are relocated to their new homes. No rental is charged but a maintenance fee is levied. (Government of Maharashtra, 2006a).

Alternative building technologies are encouraged, e.g. concrete foam blocks weighing less than half that of the conventional, with increased insulation properties and similar

strength and durability as conventional concrete blocks were used at the transit site visited. Also, the use of fine mesh wire to aid the bonding of plaster to blocks as opposed to conventional roughing techniques. (Government of Maharashtra, 2006a).

The government engages several regional boards throughout development processes. These include the following: Mumbai Housing & Area Development Board; Mumbai Slum Improvement Board; Mumbai Repair & Reconstruction Board; Nagpur Board; Nashik Board; Amravati Board; Aurangabad Board; Pune Board; and Konkan Board. (Government of Maharashtra, 2006b).

A programme is in place to address dilapidated buildings. “About 100-125 years ago buildings of 4 to 5 stories were constructed on rental basis with conventional methods and materials for workers of textile mills and port trust etc. After 1940 due to rent control act, the owners of the dilapidated buildings, could not maintain their buildings as the rents were frozen to the level of September 1940. Over the years, due to increase in the municipal taxes, increase in the labour cost and the cost of building material, it became impossible for landlords to carryout structural repairs and to maintain the buildings in safe condition in the meagre rent received from the tenants. This resulted into number of collapses, casualties, injuries and loss of properties, (collapses - 2732, casualties - 692 and injuries - 1632). Reasons for dilapidation included composite structures; conventional methods existing at that time; old technologies; growth of plants; house gullies; poor maintenance; and change of use.” (Government of Maharashtra, 2006b).

Repairs to buildings are a preferred route, but where this is not possible, buildings are acquired by the Board for a meagre amount (Rs100 x number of occupants), demolished and new buildings are then established. (Government of Maharashtra, 2006b).

The National Slums Clearance Programme (Jawaharlal Nehru National Urban Renewal Programme) is being implemented in cities with a population of over 1 million and above. The programme provides basic amenities; (toilets, pathways, drainage, electricity, social amenities, etc.); seeks to secure tenure of land at affordable prices; improved housing and water and sanitation; and integration with education, health and social and security schemes. Free basic service infrastructure is provided but charges are levied for usage. (Government of Maharashtra, 2006b).

A new integrated housing and slum development programme (IHSDP) has been drafted, and the salient details are summarised as follows:

- Proposed to have an integrated and focused approach for development of slums & environmental improvement.
- Combining the existing schemes under the new IHSDP Scheme.
- Schemes applicable to all cities and towns as per 2001 Census except cities/towns covered under the National Urban Renewal Mission (NURM).

- Scheme seeks to enhance investment in housing and infrastructural development in urban areas.
- It will include:
  - Provision of shelter including upgrading and construction of new houses.
  - Provision of community toilets.
  - Provision of physical amenities like water supply, storm water drains, community bath, widening & paving of existing lanes, sewers, community latrines, street lights, etc.
  - Community infrastructure like provision of community centres to be used for pre-school education, non-formal education, adult education, recreational activities etc.
  - Community primary health care centre buildings can be provided.
  - Convergence of social amenities like pre-school education, non-formal education, adult education, maternity, child health and primary health care including immunization etc.
  - Provision of model demonstration projects.
  - Sites & Services/houses at affordable costs for economically vulnerable and low income group categories (land to be provided free of cost by State).
  - Slum improvement and rehabilitation projects.

(Government of Maharashtra, 2006b).

Rural housing is provided consistently as per other initiatives in India. The subsidy amount is set at Rs28 500. (Government of Maharashtra, 2006b).

## 5. GENERAL OBSERVATIONS

The Government of India does not provide subsidies, and there are no housing grants to the poorest of the poor, as it considers the latter to encourage dependency. However, basic infrastructure is provided but service charges are levied. The proposed new policy on slums clearance policy aims to provide free housing units for accommodation with a 15 year lease.

Housing is facilitated generally through loan financing from financial institutions, in cooperation with private sector developers.

Housing boards are in place within each state (province). In some cases (e.g. Mumbai) different housing boards exist for different housing markets. In the South African context, the existence of different boards has been terminated through the Housing Amendment Act (Act 4 of 2001), and Provincial Housing Amendment Act (Act 8 of 2000).

Developments, generally, are labour intensive, with rudimentary tools being used in most instances. This includes the manual crushing of stones, filling of trenches,

moving of materials on site (including in some cases rudimentary hoisting techniques). Machinery is reserved as a last resort.

Examples were sighted of different building techniques and materials not commonly used in the South African context, specifically in KwaZulu-Natal.

There appear to be strong project management skills. Engineers are also in ample supply, and in most cases appear to have a good command of the English language.

Materials (including sand, stone, marble, cement, etc) and other resources (especially human capital) are readily available.

Areas such as Delhi attempt to limit slums by focusing on developing infrastructure in rural areas to reduce the influx to urban centres. This includes provide employment opportunities, skills development and basic infrastructure services to improve living conditions, including social amenities.

Transit areas are provided to facilitate relocation of slums. In Bangalore this comprises of temporary structures, whilst in Mumbai, these are much higher quality permanent structures used on an ongoing basis. This enables beneficiaries to be moved from the slums area immediately, and being provided with accommodation whilst their new houses are under construction.



*Figure 9 : Transit camp at a housing estate in Bangalore*



*Figure 10 : Transit area under construction Mumbai*

Houses are provided on vast estates, with mixed incomes to cross subsidise (make it more affordable to develop homes at reduced cost to lower income); also integrated development to enhance settlement sustainability (e.g. mixed use sites, social and other amenities, etc. as available land is situated mainly outside city centre (e.g. Chennai).

Quality control is supported by strong work ethic and craftsmanship. There is a high prevalence of professionals on site, including engineers to oversee work.

Greening of all projects is applied. This enhances the visual image of these high density projects, whilst also contributing to creating a more homely environment.



## 6. DISCUSSION AND CONCLUSIONS

### 6.1 Policy fundamentals

South Africa has a different philosophy regarding assistance to the poorest of the poor, both in respect of housing subsidies and free basic services. However, the population is much smaller than its Indian counterpart.

The Indian government is more advanced in terms of bonded markets in the low and middle income sectors, and combining these markets to increase affordability to lower income groups.

### 6.2 Slums Clearance

Examples from Bangalore illustrate that a clear strategy and action plan is a key factor in successful project execution. This includes identification of areas and registration of beneficiaries so that predetermined areas and beneficiaries can be targeted in a planned manner. The proper definition of “slum” is a prerequisite. Such definition is proposed in the KwaZulu-Natal draft Slums Prevention Bill.

Although Chennai has set a target for clearing its slums, other cities view this as an ongoing programme. The proposed Slums Clearance Bill could facilitate the clearing of slums in KwaZulu-Natal, failing which a revised strategy may have to be explored in terms of a slums prevention and/or clearance programme.

In areas such as Delhi where there are undetermined vast influx of migrant labour, focus is placed on providing infrastructure in rural areas. The South African national housing policy has focussed its efforts on urbanisation. Whereas vast areas in the Province of KwaZulu-Natal are rural in nature, the potential impact of development of rural nodes should be explored to determine whether this would lower the impact on overburdened urban centres. It is suggested that this would only be sustainable if sustainable job opportunities are created within these areas in addition to standard infrastructure, and by applying integrated development models to improve the living conditions of those in deep rural areas.

Transitional areas in India seem to have enabled more efficient clearing of slums in certain areas as it has provided beneficiaries with interim accommodation whilst new dwellings are constructed, thus fast tracking the removal of structures in sensitive areas. This method has not as yet been used in KZN, although provision for this exists in terms of the emergency housing policy. The quality of buildings used for transitional housing in Mumbai (India) is of high standard, with good quality finishes, and communal sanitation facilities. This is different to the rudimentary type of transitional camps advocated in terms of the South African Emergency Housing policy which caters for transit camps. Implementation of transit areas, however, needs to be supported by a proper slums prevention strategy to ensure cleared areas

remain sterile, and transit areas intended for temporary shelter do not become a permanent place of residence for those relocated.

### **6.3 Alternative technologies and materials**

Many alternative technologies are used in Indian housing markets. These should be explored further. In this regard it is suggested that further research be conducted, in consultation with Indian counterparts. This should be supported by relevant technical expertise from the Department and in conjunction with the CSIR. Consideration should also be given to invite Indian counterparts to engage with the Department on participating in the research village initiative announced at the Housing Summit (September 2006).

Materials and labour are reportedly in abundance in India. Materials such as marble are readily available and thus allow for improved finishes. It must be borne in mind that these types of material are not necessarily readily available or cost effective in the South African context.

Units for low income markets in India are typically small (from 16m<sup>2</sup>), but have high quality finishes. Such small areas are unlikely to be accepted in the South African context.

### **6.4 Mass Housing**

Houses are delivered on vast estates. This model is also applied in rural areas. This increases the economies of scale. The success thereof is enhanced by sound project management in terms of which cost and time overruns and scope creep are not tolerated. This is preceded by proper project planning, including scope definition. Such models could benefit more urban areas in the South Africa, but is unlikely to be accepted in rural areas where people generally wish to maintain the rural nature of their environment.

### **6.5 Inclusionery housing**

India appears to be more advanced in providing inclusionery housing, especially with regard to mixed income developments. These appear to be of benefit as cross subsidisation of costs increase affordability levels to lower income earners. Also, integration is achieved through providing relevant social amenities, commercial sites and other employment opportunities, schools, crèches and clinics.

### **6.6 Labour intensive technologies**

India maximises the use of labour intensive methods and this is an area that could assist the KZNPA in enhancing job creation strategies and EPWP objectives. It is noted that there is a highly developed ethos of craftsmanship in the Indian culture which contributes also to aspiring to quality workmanship. The adverse to this is that

such a high degree of craftsmanship is a type of specialisation which may imply limited ability of individuals to be multi-skilled in the absence of proper training. Likewise, the tendency in the South African environment has been to pursue multi-skilling individuals, which, if not properly monitored, result in inefficiencies. The key thus would be to strike a balance between specialisation and generalisation to maximise performance.

## **6.7 Greening**

Whilst a Memorandum of Understanding had been signed with the Department of Agriculture, the implementation of greening programmes in KZNPA housing projects has been very slow. It is suggested that a closer working relationship be established with the Department of Agriculture to maximise the benefit of such a programme.

## **6.8 Quality control**

The Indian government has a strong focus on quality which is prioritised above volume. Quality control is supported by strong work ethic and craftsmanship. There is no overall quality control entity such as the National Home Builder Registration Council (NHBRC) in South Africa. Experienced engineers are on site and monitor quality on an ongoing basis. In addition to this, pre-qualified contractors are used and ISO 9000 registration is a prerequisite, thus ensuring that organisations procured have a proper quality assurance programme in place.

A quality management system is a systematic approach that yields a formal record of an organization's quality management method and provides a basis for measuring and monitoring quality performance. The system is certified by a third party as conforming to an acceptable standard, such as the International Standards Organization. The system should be accurate, robust and generate meaningful data, thus employees at the "coal face" should be involved in its development, and be committed to the system for success. It should contain the organization's quality policy, procedures for implementation and procedures, described in terms of the process, rather than broad functions. A record system should be included to monitor adherence to the system (Beckford, in Milne, 2006:24).

The International Standards Organization (ISO) develops standards through its technical committees that are usually accepted world wide. These are developed through consultation with other national standards authorities such as the American National Standards institute (ANSI), German Institute for Standards; and British Standards Institute. These standards have facilitated international trade as it provides a benchmark for acceptable quality process (ISO 9000) and environmental (ISO 14000) standards world wide. (Burt et al in Milne, 2006:35).

Whereas ISO 9000 is an internationally recognized quality management system, its application would benefit all role players Developers are likely to benefit the most as it can provide them with a competitive advantage in the market. It could also inform

departmental and municipal procurement processes as ISO certification could provide quality assurance in procurement processes. Whereas it appears that the Department does not have a formalized quality management system, the ISO 9000 standards should be used to guide the development of such a system. (Milne, 2006:142)

## **6.9 Housing Boards**

Housing Boards are in place within each state (province). In the South African context, the existence of different boards has been terminated through the Housing Amendment Act (Act 4 of 2001), and Provincial Housing Amendment Act (Act 8 of 2000). Re-establishment of the Board may increase bureaucracy. Initiatives are currently underway within the Department (KZNPA) to refine the Housing Advisory Committee terms of reference, and to obtain delegations from the Minister that would facilitate administrative processing.

## **6.10 Skills exchange**

India appears to be rich in technical skills relevant to housing (including but not limited to engineering, planning and project management, as well as training and development skills), and is eager and willing to engage with South Africa in this regard. Given the shortage of technical skills, coupled with the ability to converse in English lends itself to exchange programmes that could provide practical experience to Indian engineers, whilst also enhancing local South African skills, especially with regard to project management, technical design and alternative building technologies.

## **7. RECOMMENDATIONS**

The following recommendations are made:

- 7.1 That there be a follow up tour with more focussed outputs. This could include visits to other areas such as Ahmedabad, Goa , and some rural areas in the north and south. It could also be more focussed on inclusionery housing and bank charter housing, negotiation strategies with private sector financial institutions, and management of contributions, as well as exploring the feasibility of alternative technologies.
- 7.2 That such a visit should include a smaller focus group with necessary skills, e.g. Product Development, Monitoring and Evaluation, technical representation from project management qualified in building science.
- 7.3 That the provincial slums clearance strategy be expedited. Such strategy to explore mass housing and provide for mixed income groups to increase sustainability, as well as exploring transitional areas in terms of the National Emergency Housing and/or Informal Settlement Upgrade policy.

7.4 That the KZNPA explore an exchange programme in respect of technical and management skills relating to the housing environment.

7.5 That service providers be encouraged to gain ISO 9000 registration to ensure an effective quality assurance system is in place within the respective organisations.

7.6 That a concerted effort be made to involve the Department of Agriculture regarding greening programmes for KZNPA housing projects.

7.7 That the Department of Trade and Industry be informed that the Indian business sector wishes to engage with the Province, in terms of the National Trade Agreement (India, Brazil, South Africa).

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