



## COMMUNITY RESILIENCE

A CASE STUDY OF NORTH EAST SECTOR 2 IN-SITU UPGRADING AND HOUSING PROJECT IN KWAZULU-NATAL

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The world's urban population is currently estimated at 52% (Van Huyssteen et al. 2013) and is expanding rapidly, which means that towns and cities have to manage and mitigate the risk of increasing vulnerabilities. Like most cities in the developing world, South African cities are experiencing high rates of urbanisation (almost 68% of South Africa's population live in towns and cities). Yet urbanisation is taking place in a haphazard manner, with no control and regulation, because of inadequacies in planning, management and provision of basic urban infrastructure and services. The growth of informal settlements and the failure to provide housing to meet the low-income demand are natural indicators of the urbanisation process.



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IN SOUTH AFRICA, 13.6% of all households live in informal settlements (Stats SA 2011), which are located largely in fragile and hostile environments, and often do not have secure tenure, adequate housing or basic services. In most instances, these households have few resources at their disposal and inadequate access to the skills and expertise that could help them to make the best use of their

limited resources (Pasteur 2011), which make them susceptible to hazards and stresses. Their human security is vulnerable, in terms of physical (from violence or trauma), socio-economic and environmental security (O'Brien and Leichenko 2007).

'Human settlements are dynamic, complex socio-ecological systems which arise from the interaction of socio-economic and environmental processes on

various scales' (Aguilar and de Fuentes 2013: 15). To understand the vulnerability of human settlements, the different links in these complex socio-ecological systems need to be interrogated, in order to look at power, politics and other contextual factors that create insecurities (O'Brien and Leichenko 2007). Towns and cities are the main engines of South Africa's economy but are characterised by huge inequalities and high concentrations of poverty. Therefore, the resilience of these spaces and the preparedness of urban communities to deal with stresses, risks and mounting (and often prolonged) vulnerabilities is critical.

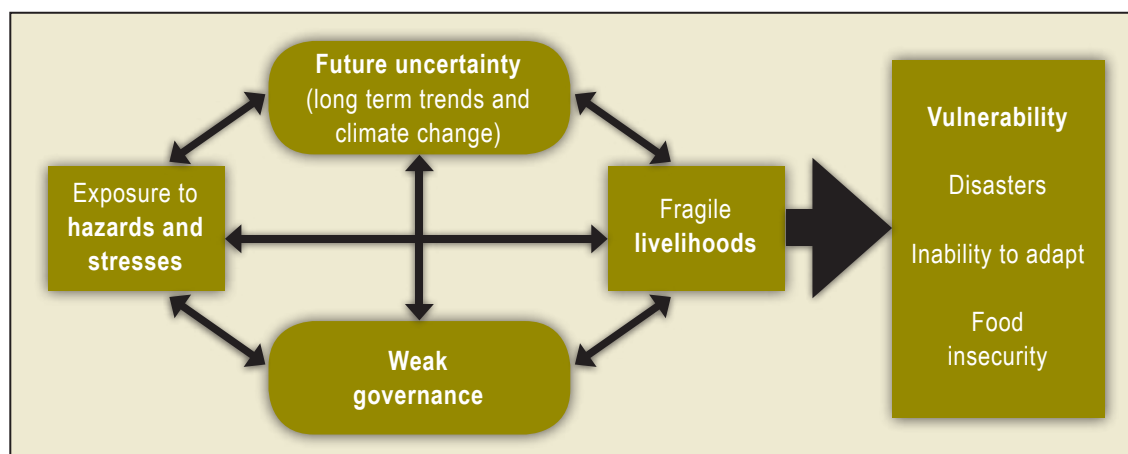
This case study is an analysis of the North East Sector 2 (NES2) community, which is located in Pietermaritzburg, Msunduzi Local Municipality, in KwaZulu-Natal. It documents how a community has managed to maintain resilience against multiple adversities, explores the community vulnerabilities and traces the positive ways in which people have responded to shocks and stressful events in their quest for housing development. The paper contributes to the current discourse on community resilience, by providing an overview of and reflection on the concept of resilience from a human settlements perspective, extrapolating applicable findings and lessons.

## THE CONCEPT OF RESILIENCE

Both vulnerability and resilience have been shaped largely by severe stresses and impacts closely connected to natural hazards. The concept of resilience refers to 'the ability of a system, community or society to resist, absorb, cope with and recover from the effects of hazards and to adapt to longer term changes in a timely and efficient manner without undermining food security or wellbeing' (Pasteur 2011: 13). It can be thought of as a community's capacity to endure shocks and stresses without its overall situation deteriorating. The concept of resilience is also no longer confined to analysing the functioning of ecosystems but refers to a 'broad spectrum of social, economic, institutional and ecological hazards as well as the complex interplay between them' (Christmann et al. 2012: 2). Vulnerability is increased by the wider context of uncertainty created by long-term trends, which are exacerbated by weak access to – and influence over – the institutions and policies that govern the community's access to resources and decision making (Pasteur 2011).

As Figure 1 shows, vulnerability constitutes intertwined and multi-faceted stresses and risks

**Figure 1: Vulnerability Framework (Pasteur 2011: 11)**



that lead to potential or actual weakening of social systems and ways of life. Stresses and risks that lead to an inability to cope can be defined in terms of immediate vulnerabilities<sup>1</sup> or long-term trends that foster prolonged uncertainty. In contrast, resilience signifies the successful adaptation of societies to shocks and stresses. Therefore, increasing people's resilience is directly linked to addressing the factors that underlie their vulnerability. Building community resilience requires an understanding of challenges and stresses to a community's overall health, income, environment and physical security, as well as its coping mechanisms that enable people to address these issues through a 'bottom up' process of adaptation and change.

According to Pasteur (2001: 13), 'vulnerability is not a permanent state, and communities are certainly not helpless in the face of hazards that might affect them'. Capacities and opportunities need to be harnessed in order to ensure that communities can cope with hazards, adapt to change and begin to move out of poverty (Pasteur 2001). Vulnerability can be seen as a system's actual weakness, whereas resilience can be seen as a system's coping capacity. The level of vulnerability is greatly influenced by a system's capacity to deal with threats (Christmann et al. 2012). Hence, in some instances, vulnerability may be low, even if the exposure to threats is high.

According to Folke (in Christmann et al. 2012), resilience can be understood as a process rather than a state, and so adaptation, learning and innovation

processes must be considered. An important aspect of resilience is positive coping strategies, which are the result of positive adaptation, learning and innovation processes. Sustainable resilience can only be achieved when households and communities use non-erosive<sup>2</sup> strategies based on the available skills and resources (Pasteur 2011). Therefore, 'resilient households and communities are able to cope and respond to change proactively, making active choices about alternative livelihood strategies that will maintain wellbeing under the changed context' (Pasteur 2011: 14).

### NORTH EAST SECTOR 2 IN-SITU UPGRADE: A CASE STUDY

The North East Sector 2, or NES2, was the fourth phase of the Glenwood 2 less formal township development<sup>3</sup> but was originally planned as the second phase of a proposed fast-track emergency settlement area. In 1996 the first phase was serviced and used to relocate the Q-Section informal settlement from steep land between Glenwood 1 formal suburb and the Willowton floodplains. In December 1995, the Pietermaritzburg-Msunduzi Transitional Local Council (TLC) applied for a project-linked subsidy to develop the second phase (NES2), but in July 1996 the provincial Department of Local Government and Housing indicated that the application would not be supported on the grounds of high servicing costs. Nevertheless, in 1997, the project area was planned, surveyed, and pegged to provide 283 sites. In the same year the TLC relocated to the area about 190 families from the former informal settlements of Peter Hey and Woodstock Road, in Mountain Rise, after the Pietermaritzburg High Court ordered their eviction. The communities agreed to the move because they were promised 'housing opportunities'. However, the relocated families found themselves living in emergency shelter

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(tents), which became seemingly permanent because of project delays and led to the settlement being nicknamed 'Tent City'. This was in contravention of the South African Constitution (1996), which enshrines the right of access to adequate housing (in Section 26 of the Bill of Rights). In accordance with the Municipal Systems Act (2000), the site was serviced at the municipality's expense, with emergency services comprising communal standpipes and ventilated improved pit latrines (VIPs). Electrical reticulation was provided upon registration of the General Plan.

In October 2000, amidst municipal concerns about the high estimated cost of servicing the area, the city planner commissioned the Built Environment Support Group (BESG) and consulting engineers Moore Spence Jones to undertake a project feasibility study. The study found that the servicing costs would be high, requiring an additional R8 000 per site on top of the housing subsidy. Based on this finding, a mass relocation was considered, to an area that would be cheaper to develop, but the community strongly resisted this idea. The NES2 community, which had moved before on the promise of housing, had invested in meeting their own (largely informal) housing needs while waiting for the municipality to deliver on its promises. Further project delays and uncertainty prompted the community to organise itself and elect a Development Committee. In 2002, the Msunduzi Municipality advertised for a project implementation agent (IA) to develop the area through a project-linked subsidy application. The NES2 community leadership asked BESG to tender for the project, and in February 2004 BESG was appointed IA.

In 2005, BESG took two community leaders to the housing summit hosted by the national Department of Housing. At the summit, the community leaders spoke about community housing issues, highlighting project stagnation and reiterating their

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commitment to maximum community involvement in project pre-implementation, development and construction. However, in the period leading up to the 2011 local government elections, the Development Committee was disbanded because of local-level political contestation and other factors that are beyond the scope of this paper. In order to save the project a joint intervention followed, involving the IA, the ward councillor, municipal officials and the community, which led to the development committee being re-established and regaining control of the project. Further project delays prompted the community and BESG to approach the KwaZulu-Natal Human Settlements MEC who, in August 2012, confirmed that his department had no objections to the project and would honour the appointment of BESG as the IA. In September 2013, the MEC signed the project approval documents, paving the way for in-situ upgrading. BESG is currently finalising the contracts of agreement, and construction is set to start in 2014.

This case illustrates how, over a period of 16 years, a community has been proactive, adapted to change and managed to cope when the housing project did not go as planned. It is a story of a community organising itself, building capacity and continuously advocating for development in spite of significant vulnerabilities and threats.

#### COMMUNITY VULNERABILITY

Poverty and vulnerability are intertwined, as the poor are more vulnerable socially, economically and environmentally. Vulnerabilities are not only from

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nature but are also aggravated by unstable socio-economic, political and physical conditions coupled with inadequate coping strategies (Tran et al. 2012). The lack of financial (and in some cases institutional) safety nets make the poor more vulnerable, and the NES2 community is no exception. Upon relocation, the NES2 community was settled in tents, as a temporary housing solution. However, this has become seemingly permanent, since the proposed housing project hit a snag, and the NES2 community remains vulnerable in many aspects.

Although the tents have disappeared and been replaced by self-built housing, the structures are poorly built, made mostly of make-shift wattle and daub, in bad condition and over-crowded. Because of the promise of housing, the majority of households have not invested substantially in shelter provision, and so some of the dwellings are in a very bad state. Limited household resources have been channelled towards supplementing livelihoods. The location of NES2 on an undulating site makes building difficult and leads to erosion that damages the structures. The community's vulnerability is increased by the cost of rebuilding and repairing houses affected by rains and storm-water run-off.

The failure of the municipality to provide adequate services, particularly sanitation and refuse collection, has resulted in the community digging its own pit latrines and dumping waste in open spaces. This has led to severe environmental degradation and pollution, leaving the community susceptible to disease. As an interim measure under the Emergency Housing Programme,<sup>4</sup> chemical toilets replaced the

VIPs, but they are inadequate, and the portable water standpipes frequently run dry at peak hours. In September 1998, additional toilets and water-storage tanks were installed, following an outbreak of hepatitis A in the larger Glenwood 2 township and neighbouring schools. This prompted a ban being placed on any further relocations to the area until permanent services were provided.

The lack of proper road access makes the settlement vulnerable to fire and other emergencies. Apart from households located on the main taxi route and some service roads, fire engines and ambulances would have difficulty reaching households.

Nevertheless, since 2006 the area has experienced a substantial amount of infill development and small-scale land invasions, some through the natural growth of the settlement and some through the alleged illegal sale of plots. The settlement has become denser and the pegs used to demarcate plots have since been lost. The vulnerability of the community has been further increased because of local political patronage, with housing stands and community work opportunities being sold and distributed along party lines.

In spite of all these vulnerabilities, the NES2 community adapted various coping mechanisms to contend with the largely overwhelming impacts of stresses and hazards. The local conditions (strengths and weaknesses) determine community strategies on which to build resilience (Colten and Sauer 2010).

### COPING STRATEGIES

Since its relocation, the NES2 community has mobilised itself with the aim of obtaining service delivery and housing. Instead of sitting back as victims of an eviction order, the community has taken a proactive approach. For the purpose of this paper, the coping strategies examined are those directly linked to housing development.

Resilient communities respond to change proactively and make choices about alternative development and livelihood strategies, which requires access to resources, assets and knowledge. They have positive coping strategies that enable them to 'ride through a difficult period and to promptly rebuild or recover what they have lost' (Pasteur 2011: 14), without depleting their productive assets. Vulnerable people without external support are often forced to sell off or consume their assets, which undermines their livelihood strategies in the long run (Pasteur 2011).

One of the coping strategies used by the NES2 community was to build partnerships with neighbouring communities. Such partnerships help to reduce vulnerabilities and consolidate community priorities through shared practices and lessons. When the housing development plan stalled, the NES2 community engaged with the Glenwood 2 community and made use of the Housing Support Centre. The Housing Support Centre advised the community to approach BESG for support. The NES2 community was also exposed to and adopted housing *stokvels* (savings clubs), whereby members support each other in saving towards the purchase or production of blocks for house construction. The Housing Support Centre provided a space for sharing and engaging in community development priorities. The community had chosen the Enhanced People's Housing Process (EPHP) subsidy instrument, which promotes choice and self-management of housing processes among communities. The community would have to be involved and engaged throughout the delivery process and assist in resolving beneficiary and contractor issues affecting development, in line with 'compulsory community contribution' of the EPHP policy. Several community initiatives were taken, including:

- ✦ Creating a community facility, by occupying and fencing in an old farmhouse on the site. This facility is used by residents as a crèche and

meeting place, as well as by several support non-governmental organisations (NGOs) that provide services in the area.

- ✦ Participating in an emergency housing programme in 2008 (managed by BESG and financed by a South American relief agency, SELAVIP) for 40 destitute households whose dwellings were in dangerous condition.
- ✦ Cleaning up the area. In 2011, the city was placed under provincial administration, and municipal maintenance services collapsed. The community organised a clean-up campaign (rubbish collection and grass cutting) that was modelled on a BESG community-based maintenance project, which the then Department of Provincial and Local Government studied as a model for alternative municipal service delivery.

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In addition to the above, the community requested facilitation support from BESG to develop a management and maintenance plan. These community-led actions indicate proactive acquiring of knowledge and skills needed by the community in order to advance community resilience.

The NES2 development committee was able to decide who would be the beneficiaries of the SELAVIP emergency housing funds thanks to strong internal community capacity and cohesion, as well as meaningful participation from the wider community. The SELAVIP funding was not enough to develop the whole community, and so BESG suggested that the existing shacks be upgraded to a more liveable condition. However, the community opted for the

construction of block houses for the most destitute households, even if fewer households would benefit because of the higher dwelling costs. This action demonstrated the community's ability to identify collective vulnerabilities, risks and hazards. Realising that household sizes differ, the development committee (as part of the social compact with the municipality and the IA) asked if families could keep their well-built existing structures for a period of two years so as to alleviate over-crowding upon them receiving a housing subsidy. After two years, the community accepted that the existing structures would have to be demolished, with the option of recycling old building materials to extend their subsidy houses. This agreement was reached at the behest of the community and with the support of BESG, in recognition that households have invested substantially in meeting their own housing needs.

### MAKING COMMUNITIES RESILIENT

The NES2 case study provides a good example of how a community can build resilience, by taking intentional action to enhance the personal and collective capacity to respond to social and economic stresses. Community resilience determines whether communities survive, merely cope with a declining quality of life or successfully adapt and prosper (Centre for Community Enterprise 2000). All communities possess characteristics that can either enable or constrain their ability to adapt and change. The Centre for Community Enterprise (2000) identifies four components: people, organisations, resources and community processes (see Figure 2). These four dimensions are inter-linked. The ability to understand vulnerabilities, and in turn create the indispensable social capital and manage development trade-offs, has enabled the community to achieve some measure of resilience.

**Figure 2: Dimensions of community resilience (Centre for Community Enterprise, 2000: 11)**



According to the Centre for Community Enterprise (2000: 11) the first dimension – ‘people’ – refers to an individual or group’s attitudes and behaviours, which create community norms that can either promote or hinder resilience. This dimension explores attitudes and behaviours related to attributes such as leadership, initiative, education and optimism. The NES2 community appears to show some of these characteristics, as it was steadfast in its pursuit of development, refusing to be relocated for the second time. Strong community cohesion and leadership (NES2 Development Committee) has enabled the exploration of new ideas and development alternatives to enhancing livelihood strategies. To effectively strengthen urban resilience, communities need to be engaged as stakeholders and equal partners in development (RSIS Centre for NTS Studies 2013). Positive coping strategies rely on engagement with internal and external stakeholders.

This leads to the next dimension of 'organisations' within a community. Organisations within resilient communities must have sufficient capacity or influence to provide the necessary leadership and resources (Centre for Community Enterprise 2000). Through collaborating, organisations, agencies and networks within a community can be an asset in times of social and economic change. Internal and external partnerships in resilient communities have been shown to be an advantage in achieving positive coping mechanisms. In the case of NES2, external stakeholder support was critical in building the capacity of the local community to be able to mobilise, establish a development committee and engage local government. Capacity building enables local citizens and communities to contribute through knowledge, while allowing parties to assess and examine priorities from a learning perspective. The NES2 case study seems to be strong in this aspect, as the community consulted BESG and learned from neighbouring communities.

The third dimension is the 'resources' required to make change in communities. What is most important is how resources are viewed and used. Resilient communities use both their own resources and external resources to achieve their goals. Ideally they seek to reduce 'dependency on outside ownership' (Centre for Community Enterprise 2000: 12). In the case of NES2, resources took the form of individual resources (household livelihoods, skills and knowledge), group resources (housing *stokvels*, community gardens) and community resources (converting the old farmhouse to a community facility). Mobilising resources differs according to coping mechanisms employed. The focus needs to be on relatively short-term and day-to-day needs, in order to generate support and buy-in, while at the same time planning with a long-term strategic outlook.

The last dimension, 'community processes' describes the approaches and structures available to a community for organising and using these resources in a positive way. Resilient communities take the time to research, analyse and plan for development, through a shared vision for the future and involving key sectors in the implementation of goals (Centre for Community Enterprise 2000: 12). Through its collective quest for housing, the NES2 community has managed to develop a shared vision and establish partnerships that involve key sectors. Furthermore, by opting for the EPHP subsidy, the community has contributed towards the development. This affects decision making, which is a critical part of building resilience, for example in the prioritisation and allocation of limited resources.

### RESILIENCE THROUGH COLLECTIVE COMMUNITY CAPACITY

Resilience can be understood as a community transformative force through the understanding of settlement systems beyond the physical environment, encompassing 'social, economic and ecological sub-systems and processes on which communities are dependent' (DPCD 2008 in Van Huyssteen et al. 2013: 2). Risk implications are obviously higher in areas characterised by high and increasing development pressures on the environment coupled with high socio-economic vulnerability. In order to build resilience, it is important to harness individual and collective coping strategies that communities employ in the face of vulnerability. Collective coping mechanisms are reinforced by strong social capital with shared expectations for actions (World Bank 2010) such that, despite weak ties among community members, the existence of shared values and expectations can enable a community to achieve common goals. According to the Centre



for Community Enterprise (2000: 7, 8), in order to achieve resilience, vulnerable communities have to:

- ✦ Take a multi-functional approach to create a sustainable (economically, ecologically, politically and socially) development system within the community.
- ✦ Initiate efforts that maximise the use of their limited time and resources in those areas that yields the greatest overall benefits.
- ✦ Develop plans that merge social and economic goals and build local capacity.
- ✦ Mobilise key sectors of the community around priorities.
- ✦ Focus energies on mobilising internal assets (both financial and human) while also leveraging outside resources to achieve their goals.
- ✦ Establish partnerships with external organisations through which locally based initiatives are implemented and evaluated.

These represent a multifaceted, bottom-up approach directed towards attaining community resilience.

Informal settlement communities are at risk of compound, everyday risks, not just major events. Therefore, to build resilience, a broader institutional framework is needed that moves beyond community and local leadership. For such a framework to work, the different stakeholders (in government and society) have a role to play in building resilience.

### THE ROLE OF DIFFERENT STAKEHOLDERS IN BUILDING RESILIENCE

It is generally recognised that partnerships must be formed across the different sectors of society in order to build sustainable community resilience. In most instances, much of the capacity needed to strengthen resilience already exists across a loosely associated system of groups, networks and organisations (Chandra et al. 2011). However, to harness that

capacity, all stakeholders and partners need to share a common ground in the pursuit of joint action. 'Policy, capacity and intervention are mutually reinforcing', as 'intervention occurs on a short-term basis, while policy and capacity building target longer term benefits' (RSIS Centre for NTS Studies 2013: 12). Building on community-led initiatives is more evident in the areas of basic needs and livelihoods, as within these areas communities experience the greatest vulnerabilities and are in the position to begin to respond (Huairou Commission 2013). The establishment of external partnerships, particularly with NGOs, should be aimed at building the capacity of the local community and leadership. Support should be offered through leadership training, empowerment and organisational development (as in the case of the NES2 community setting up a development committee). Support should be on-going, building on internal community efforts aimed at resource mobilisation and learning for resilience. It is based on a long-term strategy of building capacity for community initiatives agreed upon in a participatory manner.

Apart from seeking support from civic organisations, communities should be able to engage local government. Integration of multi-sector partners can enhance collaboration, which improves community resilience and wellbeing. Intervention at local level can only be successful if it is not politically motivated or influenced, as this will enable a move beyond local action towards addressing the wider structural issues of community vulnerability in, for example, informal settlements. The role of local government should shift from being responsive to being proactive, with local government becoming an effective partner in making human settlements viable, equitable and sustainable. Government's role should not be limited to being the provider of services and resources but should scale up to include informing and facilitating actions by households, communities and civil society

(Archer 2013). The long-term aim is to establish a more facilitative policy framework, which will enable the root causes of vulnerability to be tackled on a wider scale. For this, partnerships are critical in order to identify outcomes and measures of community resilience as well as local vulnerabilities.

## CONCLUSION

Given the magnitude of challenges that rapid urbanisation leading to unsustainable urban growth poses, building resilience requires cooperative and complementary actions among multiple stakeholders. Resilience has traditionally been linked with disasters associated with ecological systems. As a result, a huge gap exists in good practice that determines and explores community resilience from the human settlements perspective. However, as shown above, the shift has begun to encompass the interaction between communities and socio-economic and ecological systems. In the case of NES2, resilience is multi-dimensional, based on a community suffering an extended state of vulnerability. The community experienced a major shock of eviction and relocation

but has for the past 16 years built its capacity for adaptation and learning. Although the community has remained committed and resilient in its pursuit of housing, not all coping strategies have tended to be positive. The NES2 community's story should not over-romanticise community resilience, as the NES2 community does not possess all the characteristics of a sustainable, resilient community. However, it shows how a community in distress has managed to use its limited resources to overcome, cope and adapt to its challenges. In reflecting on the various challenges and breakthroughs, the case study portrays some of the possible implications of community coping mechanisms in addressing vulnerability in the context of human settlements. Nevertheless, settlements are dynamic, and actions directed towards building community resilience are not necessarily place-specific. A community's capacity to build resilience needs to draw on formal and informal institutions to leverage resources and access positive coping strategies, through linking community efforts with broader initiatives at different levels of government and society.

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NOTES

- <sup>1</sup> Immediate vulnerabilities refer to fragile livelihoods, weak governance and exposure to hazards and stresses.
- <sup>2</sup> Non-erosive refers to strategies that do not lead to depletion or disposal of productive assets.
- <sup>3</sup> According to the Less Formal Township Establishment Act 113 of 1991, this type of development refers to the establishment of townships for less formal forms of residential settlement.
- <sup>4</sup> The National Housing Code (2009) Part 3: Incremental Interventions – Emergency Housing Programme.