



RAPID URBANIZATION IN SUDAN

UN-HABITAT CHALLENGES AND LESSONS LEARNT (2006 - 2010)

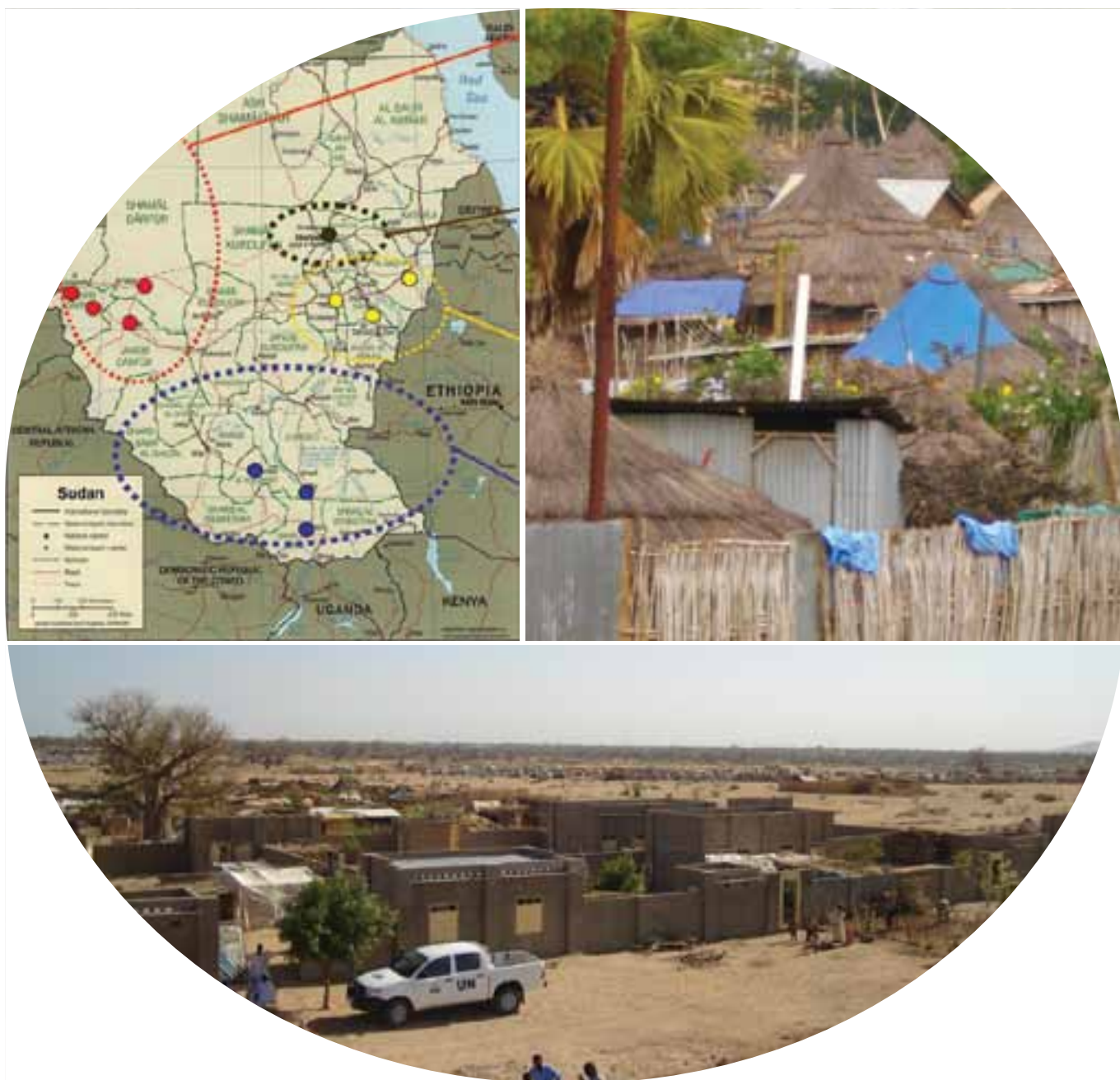


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International Guidelines on Decentralization and Access to Basic Services for All

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INTRODUCTION

This publication summarizes the outcomes from different projects carried out by UN-HABITAT in collaboration with the Sudanese Government and community organizations between 2006 and 2010. This period has special significance for Sudanese history: The signature of the peace agreement (2005) giving autonomy to the 10 states of southern Sudan, and its aftermath; and the escalating violence in the Darfur region which has led to the deteriorating situation of the refugees and internally displaced persons (IDPs) in the eastern region. This transitional period has now come to an end with the national election, and in 2011 there will be a referendum, in which the people of south Sudan will choose either to remain in a united Sudan or to become independent. The upcoming referendum, plus negotiations in Darfur and worsening instability in the eastern region place an enormous amount of political pressure on the normal life of the average Sudanese.

It is important to remember the tragedy of thousands of human beings who have lost families and belongings in the war, and who still suffer post-war trauma. The aftermath of the war can be seen in the harsh living conditions of refugees in IDP camps and shanty towns, which continue to spread and expand in the different regions. For these people, political agreements create hope for a better future. The supply of basic urban services, shelter and livelihood opportunities is, above all, the responsibility of the government. Support from the international community is also a necessary component, providing the opportunity to bring expertise to the country and build partnerships with the government.

So far, little or no improvement has been seen in the actual living conditions of majority of the population. This is as a result of complex political, social, economic, and environmental factors. Concrete interventions at community and city

level in terms of urban planning, provision of pro-poor housing and supply of basic urban services, are necessary for the reconstruction process of the economy to take place.

The main goal of this publication is to present simple approaches and achievements with respect to planning and transforming territories where people can live in peace. It illustrates how certain problems were addressed by means of approaches based on consultation, honest dialogue and agreements which engaged communities, working together with responsible authorities.

By bringing the experience acquired from addressing concrete rapid urbanization challenges with available tools and resources and presenting this information from region to region, it is hoped that this publication will open new dialogues and establish concrete guidelines, enabling the poor and the most vulnerable to progress toward a better life. In other words, it is our wish that the experience acquired and explained briefly in this publication, will contribute to developing sustainable urbanization models.

CONTEXT

Sudan is the biggest country in Africa, with an area of 2,506,000 square kilometres. It is rich and diverse in terms of its geography, ethnic groups and natural resources. North and South Sudan present a significant difference in terms of geography and culture: the north, which has a Muslim majority, is desert-like; the south, which is Christian dominated, is more fertile. Darfur, to the west, was an old kingdom with a very rich history and identity. Eastern Sudan which border Ethiopia, hosts a significant number of refugees and internally displaced persons as a result of the recently concluded war in Darfur.

The war between north and south, one of the bloodiest of the world's recent conflicts, ended in 2005 after the signature of the Comprehensive Peace Agreement (CPA), which gave autonomous status to the south. In 2011, it is scheduled that the 10 states of the south will vote in a referendum, which will determine whether the south will remain a part of Sudan, or whether it will secede and become an independent country. Meanwhile, Darfur continues to face serious conflict among different rebel groups fighting for autonomy and recognition against the central government in Khartoum.

UN-HABITAT's involvement in Sudan began recently. After the signature of the Comprehensive Peace Agreement, staff were deployed in Juba, providing technical support to the new autonomous government. Since then, UN-HABITAT has scaled up its operations in Sudan and operates in four regions: in Khartoum, in the 10 states of the south, in different regions of the east, and in the three states of Darfur (Figure 1). It has launched an ambitious project in Khartoum, seeking to build capacity in the Ministry of Physical Planning and to develop pro-poor policies, including implementation of pilot demonstration projects in key areas. During this process, a project targeting rehabilitation of public utilities and basic social infrastructure

and supporting refugees and internally displaced persons in the eastern region has been developed in partnership with UNHCR.

These various interventions, with their different results, provide an ample perspective to analyze Sudan's urbanization challenges. Demographic dynamics are definitely reshaping the country, influenced by political agreements and changing patterns in the distribution of wealth, coming essentially from the exploitation of natural resources. Sudan's particular circumstances require the introduction of a peace building perspective on urbanization trends, repackaging approaches and methodologies. They seek to comprehensively tackle issues related to rapid urbanization. Specific tools to carry out diagnosis and rapid urban study profiles, have served to identify priorities and action plans involving the participation of the population in general and particularly, the most vulnerable and those affected by war and natural disasters. In addition, forums have been created for specialists and technicians responsible for regulating urban development, to achieve consensus on urban and regional planning models and upgrading strategies for informal settlements, and promote ecologically friendly building technologies. The extensive regional coverage of these forums allows identification of specific human settlement problems and helps develop a menu of alternative ways to address them in the particular context of each region and state.

Khartoum, being the capital of Sudan, hosts two million internally displaced persons from southern Sudan. Most of the internally displaced live in slums and face frequent threats of eviction and forceful relocation. Human rights based approaches are needed to deal with recurrent land conflicts, which lead to mass eviction of people living in informal settlements. UN-HABITAT targets a policy review based on quick diagnosis, development of different approaches

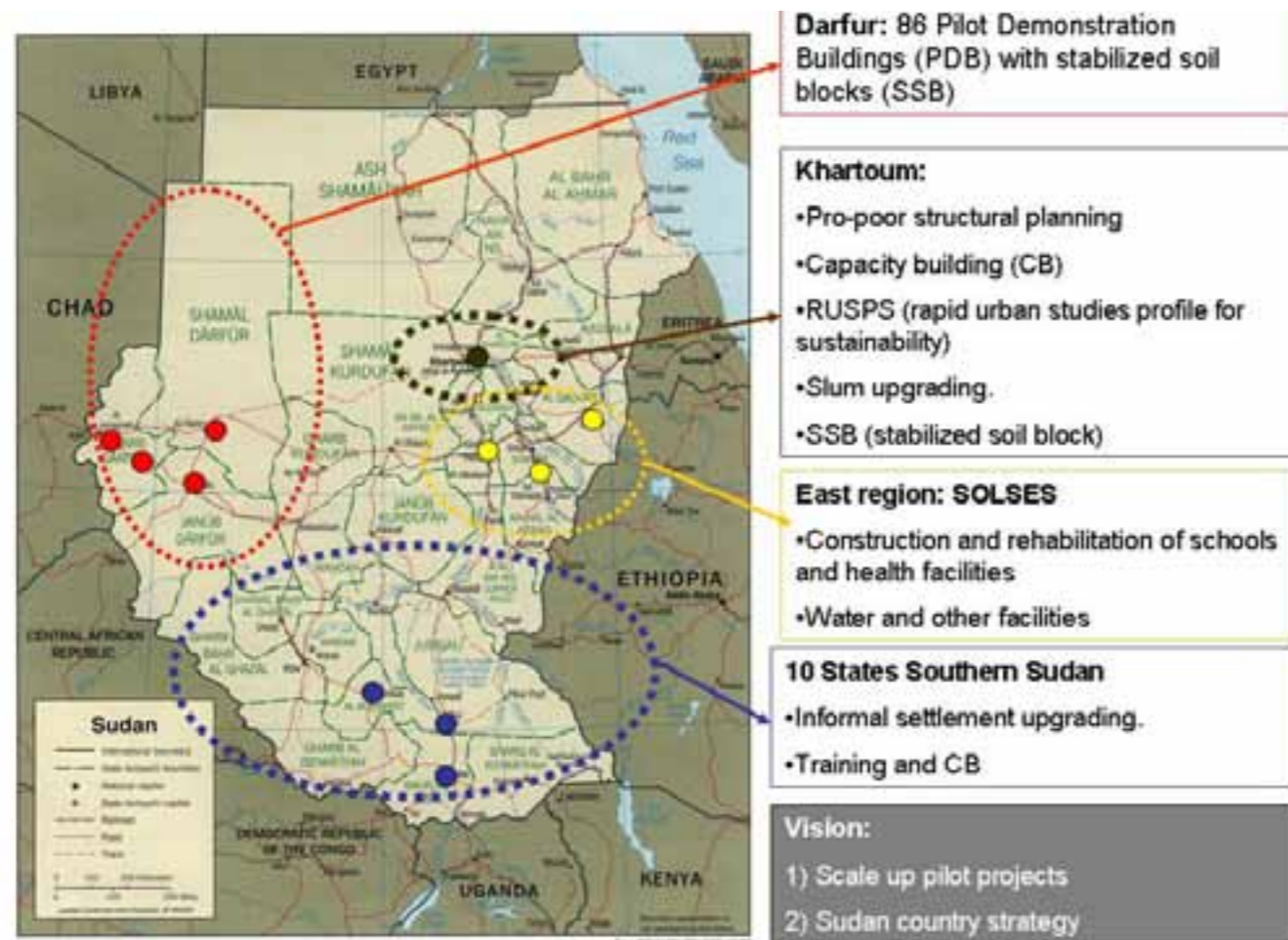


Figure 1. UN-HABITAT operations in Sudan

and methodologies, providing inputs for the design of demonstration project interventions, and the scaling up of policy design. The process (en Khartoum no?) began with a quick diagnosis of obstacles at metropolitan level, and those affecting rural-urban linkages from multiple perspectives, including land, housing, basic social services, local economic development, and physical planning. Based on that comprehensive study, a framework for pro-poor policy was developed to be included in the Khartoum Strategic Plan (KSP). Such pro-poor policies address critical bottlenecks affecting poor populations, like the system for accessing land and building regulations, which discourage densification and make basic infrastructure unaffordable for low income groups. In order to demonstrate the benefits of such pro-poor policies, pilot projects were designed introducing new approaches to planning and promoting appropriate technologies. These facilitate the integration of the poor into the urban fabric and promote their development.

In the south, the fragile planning administration and lack of infrastructure makes it difficult to get properly documented land and therefore discourages the return of IDPs and refugees. Ongoing conflicts among different ethnic groups, the lack of employment and lack of basic infrastructure also deters returnees. This means that the state capitals in the south have many landless poor, unemployed and vulnerable groups seeking asylum in towns and squatting in strategic areas. The growth of the informal sector has been associated with a rise in crime in the cities, motivating a massive demolition campaign by the government. Although the campaigns have currently been stopped, it is foreseen that they will continue as land become more scarce and no significant improvements in land administration are put in place. UN-HABITAT has designed and began the implementation of slum upgrading projects in Juba, Rumbek and Bor which are state capitals in South Sudan, together with the Ministry of Physical Infrastructure (MoPI) and the Ministry of Housing, Physical Planning

and Environment (MHPP&E). UN-HABITAT has recently started a land project that aims to empower the land commission. It needs to develop dialogue among different parties in order to analyze alternative approaches to dealing with land conflicts, and help to define roles and concrete activities among the different governmental entities, including MHPP&E at the Government of Southern Sudan (GOSS) level and MoPI at state level.



Figure 2. Aerial view of Khartoum

In Juba, at Hai Zandya, a centrally located slum, an upgrade process has been initiated, targeting 500 houses. A new area, called Durupi, has been allocated to settle 350 households in a sub-division project, which is currently opening roads and demarcating plots (Figure 3). In addition, plans for Bor (a small state capital) and Rumbek (a medium-sized city) have been prepared, identifying intervention areas and initiating preparatory tasks.

In support of these activities, parallel training for 100 public officials from the ministries and local governments of the 10 states has been provided, covering an ample range of subjects, for example, strategic planning and land management. Training in the technology of stabilized soil block (SSB) has been conducted successfully, producing the first stabilized soil block to be used in the construction of housing structures in Durupi. The construction of quality and affordable pro-poor housing and in Durupi will enable the relocation of slum dwellers to Durupi. Upgrading of the road infrastructure in Hai Zandya is also taking place.

In Darfur, the conflict has caused many internally displaced persons to settle in the major cities. This has led to the growth of camps housing a large number of the internally displaced, and increased political tensions as different political factions fight to gain the political support of the people residing in camps.

In a bid to curb further growth of the IDP camps, the government has been allocating land in various parts of Darfur, to the internally displaced. This is the case in Sakale, on the outskirts of Nyala, where a number of internally displaced persons from Kalma camp have moved into plots allocated to them by the government, and for which they are not required to pay land fees. UN-HABITAT is currently introducing the use of stabilized soil block in the three states of Darfur, providing training, stabilized soil block making machines and subsidizing the cost of cement used in producing stabilized soil block. Pilot demonstration buildings, such as schools and public health facilities, are being constructed in this way.

In the case of Sakale, in taking advantage of the governmental initiative to provide secure land tenure, six pilot houses were built, including sanitation and boundary walls (Figure 4) and construction of an additional 15 houses has began. On the same site, another 15 permanent houses are being constructed, utilizing stabilized soil block. Support is also being provided to the State Ministry of Physical Planning and Public Utilities (SMPPPU), to plan urban extensions following a "land guided approach", providing basic infrastructure such as trunk roads. The aim is to develop a pro-poor policies where people who have been displaced and still living in camps can be absorbed.



Figure 3. A slum in Juba

In the eastern region, IDPs escaping the conflict from neighbouring areas have created a significant amount of pressure on the social infrastructure. In order to prevent conflict, the Sustainable Options for Livelihood Security in Eastern Sudan (SOLSES) programme seeks to identify livelihood opportunities for IDPs, alleviate poverty and facilitate the relationship between the IDPs and host communities. The long conflict in eastern Sudan requires long term relief strategies that give continued support to vulnerable groups in the region, with pro-active urbanization strategies. One of these critical problems is recurrent flooding in the region, especially affecting the informal settlements located in areas prone to flooding, leading to destruction of property and disease outbreaks.



Figure 5. Above, a deteriorated classroom and below, a damaged school building in the eastern region



SUMMARY OF MAJOR ACHIEVEMENTS

UN-HABITAT has designed and implemented specific projects in the different regions, sharing similar approaches and methodologies, but with particular emphasis on responding to the specific demands of each region.

KHARTOUM

In Khartoum, the process started with the development of a sector analysis, including land, spatial planning, housing, basic urban services, and local economic development. Major obstacles in controlling urban development and delivering services, particularly those affecting the poor, were identified. A specific analysis of capacity building for major public institutions in charge of managing cities revealed specific institutional weakness and lack of training, which were addressed through systematic on the job training.

The approach applied by UN-HABITAT in Khartoum (Figure 6), interlinks several components that have been tested through the application of a pro-poor policy framework and

applied specifically through the pilot projects. Comprehensive multidisciplinary studies allowed a diagnosis, identifying categories of poor people and the specific factors affecting them. An action plan was then designed in order to respond to specific identified problems and exploit opportunities.

At this point, two results arose from the study; pro-poor policies were designed according to the diagnosis, and capacity building plans were made taking into account specific institutional limitations and bottlenecks to the implementation of pro-poor policies. The introduction of Rapid Urban Study Profile for Sustainability (RUSPS) provided an initial analysis in participation with communities, and proved to be an effective way to generate consensus and legitimize plans, as a result of people's endorsements and mobilization. The Rapid Urban Sector Profiling for Sustainability carried out in selected cases, provided key information needed to design pilot projects, combining direct interventions and an amendment to regulatory legal frameworks. Experience has shown that in the case of low

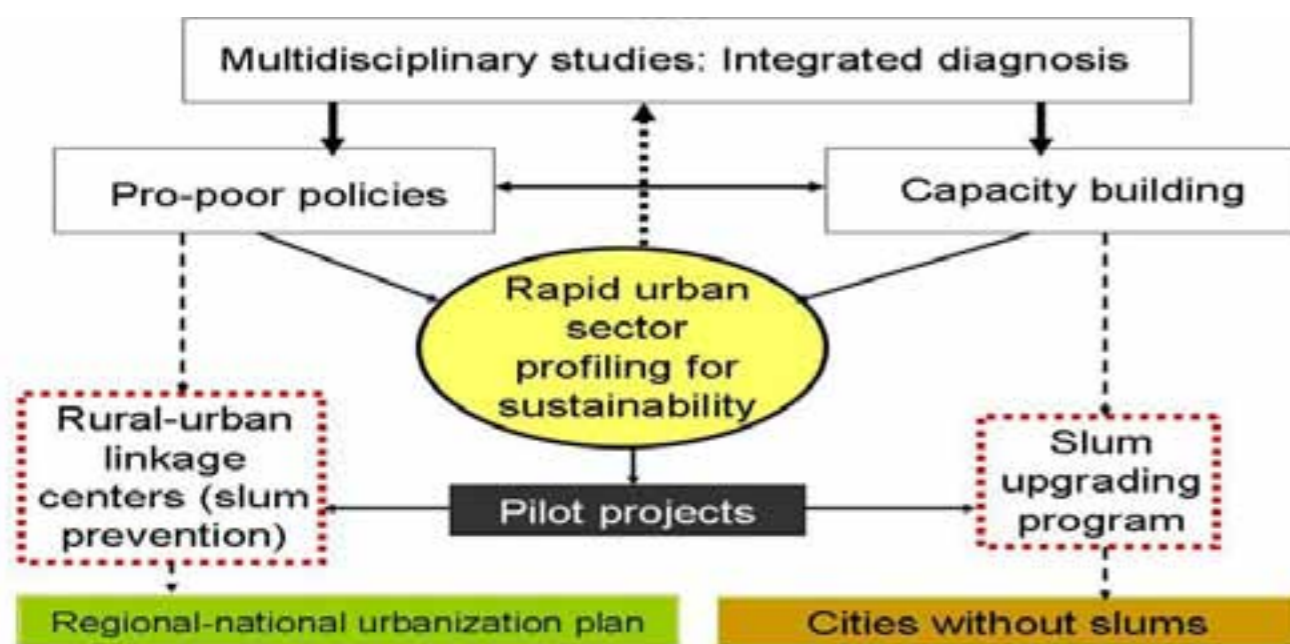


Figure 6. UN Habitat approach in Khartoum

income communities, participation without a concrete agenda for implementing basic infrastructure does not encourage people to engage in the process. However, Rapid Urban Sector Profiling for Sustainability in Khartoum has proved successful in engaging communities in deep discussion about their problems and opportunities to deal with them, and, at the same time, in encouraging agreement on a priority of actions to be taken to address their most critical difficulties.

These two approaches, applied both in a top-down and bottom-up way, provided consistency and reliability to the participatory planning process. Rapid Urban Sector Profiling for Sustainability itself is already a key step in pilot project design, involving all stakeholders. The approach supposes that pilot projects must be linked to a global strategy to tackle informal settlements through an upgrading programme. This requires a consistent vision to combine national, state and local efforts systematically, to revert informality trends and to prevent the formation of new slums, facilitating access to land and services through different modalities.

Pilot projects are useful to check advantages and disadvantages of different alternatives. They promote rural-urban linkages and provide strategic infrastructure such as reception centres for migrants and regional transport to enhance the integration of villages and towns into regional dynamics. Cases of pilot projects on the urban edge, such as Rasheed in Jewel Awlia, illustrate a viable way forward to harmonize the urban-rural exchange of production and services.

The design of pilot demonstration projects shows how intervening on critical issues even at a small scale can lead to concrete achievements, therefore demonstrating the potential for these projects to be scaled up. The pilot projects have targeted three relocation sites (Figure 7):

- Mansura, close to the consolidated urban fabric, where pockets of informal settlements were regularized;
- Mayo camp, out of the consolidated city, where an ongoing regularization process has facilitated the permanent settlement of population, complemented by the construction of basic utilities;
- Rasheed, in Jebel Awlia locality, on the extreme edge of the city, where families evicted from other areas have been settled and provided with secure land tenure.

The three locations present particular challenges that need to be faced in order to enhance local economic development. Rapid Urban Sector Profiling for Sustainability applied in these locations has provided the chance to initiate a community consultation and mobilization process, identifying concrete priorities and needs that the communities identified. The need for utilities and the need to provide livelihood opportunities appear recurrently. For this reason, the pilot projects were designed linking training in new building technologies (Stabilized Soil Block), with the construction of basic utilities, such as schools, clinics and drainage systems. The first phase has proved that training was engaging for the communities.

From the technical point of view, stabilized soil block is a very suitable material to be produced in situ as it only demands the allocation of hand press machines and a subsidy for cement. Stabilized Soil Block is 30 percent cheaper than fired brick and consumes half the amount of water that bricks consume, two very important advantages in terms of environmental protection. Stabilized Soil Block is also a very solid material; it is durable, waterproof and has a good thermal isolation performance, very appropriate for the building of public utilities.



Figure 7. Pilot projects in Mansura, Mayo and Rasheed, in Jebel Awlia, Khartoum

The creation of social infrastructure such as school and health clinics has already started to create a sense of neighbourhood among communities, and create confidence among the community members on their ability to improve their situations through self help projects. The projects have also developed multiple approaches to supporting different social groups as follows:

a) Providing the community residents with credit for building houses.

b) Applying the “Three block approach”, for the unemployed community residents. This involves providing cement and hand press machines for production of Stabilized Soil Block, which the community later repays in the form of blocks.

c) Providing subsidies for poor families and the disabled to enable them to access housing.



Figure 8. Women's centre in Mansura

Capacity building for the Ministry of Physical Planning and Public Utilities was carried out through training but also by advising on the roles and functions of the different departments. The institutional setting was also considered as a cornerstone for addressing urbanization challenges, promoting a more pro-active and decentralized approach and



Figure 9. Rapid Urban Sector Profiling for Sustainability Process (RUSPS)

empowering localities and popular committees. There has been a smooth transition from the previous approach of compulsory demolition of slums to the development of slum upgrading exercises, therefore fulfilling human rights in general and following the “Guiding Principles for Relocation” (GPR)¹. Both these elements were included in the pilot projects to test new approaches for affordable housing in informal settlements (Figure 9).

In addition, empowering technical capacity by providing technological tools like Geographic Information Systems (GIS), to identify inhabited areas prone to flooding, provides an effective guide for developing preventive strategies.

¹ Signed by the Governor (Wali) and backed by the UN and the EC.



Figure 10. Identification of areas prone to flooding in Khartoum using Geographic Information Systems (GIS)

SOUTHERN SUDAN

In southern Sudan, UN-HABITAT intervention has developed differently. Initial work focused on several issues in the 10 states, including formulation of strategic plans for rapid urbanization. Later, UN-HABITAT engaged in a slum upgrading and prevention exercise, targeting three state capitals, chosen on the basis of their contrasting sizes: Juba (a large city), Rumbek (a medium-sized city) and Bor (a smaller city). In each city, a survey of slums was carried out, in partnership with the Ministry of Physical Infrastructure (MoPI at State level) and the Ministry of Housing, Physical Planning and Environment at Government level).

The case of Juba was paradigmatic because the survey of slums produced criteria to select an area of manageable size and well located, in order to regularize the area. The maximum possible number of people were to be settled in the area, and those that could not be settled there, were to be relocated to a new specially assigned site in the city's outskirts.

The chosen area for resettlement was Hai Zandya, a congested slum, centrally located, where the population settled informally during the war. The program carried out a complete survey of the area, in collaboration with the residents, getting crucial information, such as the number of households and their social profile, in order to design an upgrade program. Of the 530 households that, according to the survey, exist in Hai Zandya, approximately 150 households will remain and 380 will be moved to Durupi (the newly assigned site), receiving bigger plots.

Figure 11. Slum upgrading in Juba (Hai Zandya and Durupi)



In Rumbek, the project targets a neighbourhood surrounding a market (Malith) where people have settled informally. Notoriously, the dwellers have registered land on their behalf, as part of a campaign that the government carried out seeking to regularized contested land. As Malith area is not congested, the project basically consists of actual demarcation of the plots and provision of the necessary requirements to complete the legal procedures for the legal registration of the plots. Because Malith market and the surrounding neighbourhood was expanding in a disorderly and uncontrolled way, the project includes the construction of a ring road, which will prevent further expansion of the market/neighbourhood and protect the privacy of Malith residents.



Figure 12. Ideogram showing potential subdivision of an area occupied by slum dwellers

The case of Bor, representing the smaller cities in southern Sudan but with a high urbanization rate, focused on block I of the Structural Plan. This block was sub-divided into third class plots, but the registered people remain in their existing locations, as the area lacks basic services like water. Meanwhile, other groups started to squat on the plots, building temporary structures. The project seeks to find alternative solutions to

avoid violent eviction of squatters, offering them incentives to move to a new location, returning the plots; negotiating with the registered tenants to compensate them for the occupation of their land or helping them to settle permanently in other areas, providing incentives such as water and sanitation, support to self-build their houses and proximity to income generating schemes.



Figure 13. Block I and Bor Master Plan

In the context of the Rapid Impact Emergency Project (RIEP), UN-HABITAT participates in mapping all non-governmental and community based organizations in the ten states of southern Sudan, providing a vital tool to know which organizations are available to support development projects, including construction work, socio-economic empowerment, and gender and vulnerability protection. This database has been published on the website (www.sudancapacity.org) and is updated regularly.

In addition, a community awareness strategy was developed, presenting simple messages on how to use and maintain the infrastructure built through the USD 1,000,000 Rapid Impact Emergency Project funds.

DARFUR

In Darfur, the entry point for UN-HABITAT was the development of seamless technologies to replace the use of fired bricks that require firewood for production. The construction of 86 pilot demonstration buildings (PDBs), typically public utilities built with stabilized soil block, has

shown the capacity of the technology to produce a large number of blocks and infrastructure. The on-job training of 2000 people is also a significant achievement in terms of developing interest and ownership by communities. A sample of 6 self-help housing units was built in order to test the stabilized soil block technology, in terms of its durability, quality and affordability. Because of the congestion currently being experienced in the IDPs camps, and growing conflicts and violence between different ethnic groups and political factions, the government, in an unprecedented move, has decided to allocate parcels on the outskirts of the major capitals without charging land fees. In Nyala, Sakale area was subdivided into third class plots and given to the internally displaced who voluntarily relocated to the new site from the camp where they originally lived. The experience was successful as the sample of 6 houses was expanded to another 15. Stabilized soil block making machines are being provided to new households to self-build their own homes. The plan is to continue disseminating the technology in order to completely replace fired bricks, and at the same time, create a model that is affordable for low income groups.



Figure 14. Construction of Pilot Demonstration Buildings in Darfur

THE EASTERN REGION

Previous experience in eastern Sudan carried out by UN-HABITAT, targeting the rehabilitation of basic infrastructure for the internally displaced and refugees, has provided the opportunity for testing several approaches for affordable and appropriate construction and rehabilitation techniques, working in collaboration with several United Nations (UN) agencies, particularly UNHCR and UNDP. Flooding in the region constitutes the major threat as the most vulnerable population settlements are in areas prone to flooding, which cause serious and recurrent damage. The high cost of flood-resistant building techniques is a major challenge that needs to be addressed in order to tackle the housing deficit for vulnerable groups. Development of alternative housing

tested through other pilot projects in Sudan has proved to be an effective and efficient way of building capacity at the ministerial level. It also empowers the community by creating an enabling environment in which support facilitates discussion and resources are provided to mobilize communities to resolve difficulties through their own efforts.

Achievements in the eastern region are diverse in scale and with respect to the sectors involved. In terms of health, many facilities have been rehabilitated, like Kassala hospital (the children's and the women's wards, the Paediatric and Chest departments); so have several educational facilities; and there has been progress in infrastructure projects, like water purification, and the development of livelihood opportunities.



Figure 15. Construction of new offices for the teachers in the eastern region

THE ROLE OF UN-HABITAT

UN-HABITAT has worked in Sudan since 2006. Initially, its activities were targeted at Juba and Khartoum, bringing its vast international expertise to contribute to the challenge of rapid urbanization, particularly after the signature of the Comprehensive Peace Agreement. Since then, UN-HABITAT has developed several projects in the 10 states of the south, in Khartoum, in the east and in Darfur, adopting different modalities according to the specific requirements for each region, and covering a broad range of subjects, including strategic planning, slum upgrading, introduction of environmental friendly technologies, training and capacity building, land management, and design of housing strategies. These different activities, involving several partners, have created in each particular context a platform and forum for discussion beyond the specificities of technical solutions. The applicability of the approaches to address socio-economic problems is related to the vicious circle of poverty, magnified because of war, violence and discrimination suffered by displaced and vulnerable groups. UN-HABITAT, as part of the United Nations family, is an agency specialized in urbanization and providing shelter and basic urban services for all. It focuses on finding durable housing solutions for those communities that are most affected.

From such a perspective, its contribution consists basically in bringing expertise from its international experience to work together with that of the localities, finding sustainable and appropriate solutions to habitat related problems, in this way preventing further conflicts. There is a close correlation between habitat problems and peace building, and hopefully it will be possible to tackle these issues together through unified and comprehensive approaches.

LESSONS LEARNT

Several lessons learnt can be presented as the main result at national level. To sum up, some similarities and particularities between regions can be observed, related to the following subjects:

a. Rapid urban sector profile for sustainability

replacing traditional planning diagnosis with **multiple scales** and **stakeholders**: The experience implementing RUSPS has proved to be an effective way of generating the necessary information to design pro-poor action plans, as an initial step forward; to amend policy frameworks and design more focused public works. In addition, such a participatory scheme provides the necessary legitimacy to the planning exercise, reducing the gap between theory and practice, and facilitating acceptance of interventions and cooperation to carry out necessary improvements.

b. Pro-poor policies (regulations and public works) designed based on sector assessments and inputs provided by the Rapid Urban Sector Profiling for Sustainability, introduce new approaches to address urbanization problems, linking ongoing regulatory frameworks and intervention programs, and seeking to tackle problems through comprehensive, multi-scale and pro-poor approaches.

c. Participatory slum upgrading and prevention:

Slums in Sudan are a controversial subject, as the government makes enormous efforts to avoid the formation of informal settlements. However, the official policy of "site and services", applied historically in Sudan, cannot cope with the actual demand; and the displacement of people, as a result of war and violence, created a significant influx of internally displaced persons, who for survival reasons settled informally in areas close to income generation sources. The official policy of re-planning and relocation implies eviction, which has increased concern

nationally and internationally because of its violation of human rights. The introduction of participatory approaches - engaging targeted populations in finding new ways to generate affordable dwellings through the introduction of new land subdivision schemes and building technologies - is the cornerstone for peace building and sustainable urbanization.

d. Providing affordable shelter alternatives to re-planning and evictions:

Governmental initiatives to demolish the slums have resulted in low income communities being evicted and forced to relocate with serious damage to the social fabric. Looking for alternative solutions to this problem, it was found that the policy of sub-dividing land, providing plots for low income groups, charging only the minimum fees to low income groups, allowing them to pay in installments (as in the case of southern Sudan), or not paying fees at all (as in the case of Darfur), allows household to access secure land tenure, a starting point in their development process. This policy implies a significant shift with respect to the previous one, based essentially in re-planning and eviction, and so raising criticism from the human rights perspective. It follows the "Guiding Principles for Relocation" in Khartoum, a written and formal agreement between Khartoum State and, on behalf of the international community and the European Commission. The agreement states how relocation of population must be organized, allowing it only when there are no other alternatives. Alternative plots with secure land tenure must always be provided and when travel is involved, food, water and basic supplies must be allocated until the family is properly settled.

e. Use of stabilized soil block as a response to environmental threats:

The rapid deforestation that has affected certain regions like Darfur demands innovative thinking.

Fired bricks, the most used building material in the region, must be replaced because they demand a significant amount of firewood and water, two precious resources. Although the situation is different in Khartoum, as there are many different building materials, the production of fired bricks using firewood is still practised, with its negative environmental consequences. The eastern region faces difficulties in applying stabilized soil block technology as the soil is not appropriate. Southern Sudan has already proved to be a suitable area for the introduction of this technology, but this varies from state to state.

f. Pilot projects for land, infrastructure and housing:

Pilot projects implemented in the different regions, involving land, infrastructure supply and self-help housing, have implemented pro-poor policies related to the delivery of land and the development of basic urban services, mobilizing communities in the production and construction with technologies like stabilized soil block. In a context in which poverty is associated with rapid urbanization and a significant number of inhabitants are recurrently evicted to remote locations, this integrated approach has had promising results. It has managed to permanently settle whole communities in the different regions, with secure land tenure and with communities taking ownership of the process, engaging actively in the production of stabilized soil block. In Darfur the approach has worked in terms of matching government efforts to permanently settle internally displaced persons by providing plots free of payment. In Khartoum, the pilot projects are part of a general framework of pro-poor policies, demonstrating how to guide urban development with the goal of integrating low income communities. In southern Sudan, informal settlement upgrading exercises are becoming a critical tool for urban planning, as southern Sudan state capitals are rapidly urbanizing. Pilots in three state capitals (Juba, Rumbek and Bor) have shown particular results and methodologies, including regularization and voluntarily relocation, illustrating different negotiated and agreed ways to solve land disputes.

g. Self-help construction as encouragement for permanent dwelling solutions:

The experience acquired in the different regions demonstrates that once basic resources and training in appropriate technologies have been provided, and when the political environment is peaceful and settled, people want to remain and look for affordable materials to build their homes. However, as the price of permanent materials is high, people choose fired bricks, which cause significant damage to the environment, and if they are very poor, they use sun-dried bricks. But the introduction of new technologies makes low income communities aware of the importance of protecting the environment and the possibility of building using environmental friendly building materials. Initially, the construction of public utilities, called pilot demonstration buildings (PDBs) serves the purpose of testing how appropriate stabilized soil block is for local weather conditions, and how easy it is to learn how to produce the blocks and build with them. Once this testing is done, housing construction is straightforward, depending only on the availability of support to provide machines for making stabilized soil block and to provide cement. Because cement is still expensive in most Sudanese cities, the technology is hard to disseminate en masse. However, alternatives such as using stabilized soil block for foundations, but adobe for the walls, and finding new solutions to the construction of boundary walls, can reduce housing costs drastically.

h. Subsidies, micro-credits, the “Three block approach” and livelihoods:

Perhaps the most challenging and crucial aspect of the activities performed is providing livelihood opportunities which are the foundation for the sustainability of the whole process. Beyond the provision of basic urban services and housing, the pilot project contributes an income generation source associated to the production of stabilized soil block. For extremely poor families, unable to afford construction, as is the case with vulnerable groups, the system of subsidies provides the opportunity to engage neighbours and families in the construction of their houses and basic facilities, providing stabilized soil block

making machines and cement. For those with regular jobs, micro-credit institutions with low interest rates provide the opportunity to access funds to buy secure land and housing. For those not having regular jobs but not in the category of the most vulnerable, probably the majority of the population, the “Three block approach” provides the opportunity to self-build their own house and generate income selling blocks in the market. Under this system, for every three blocks a person produces, one is dedicated to building public buildings, which acts as a kind of payment for the stabilized soil block making machine and the cement; the second block is used to self-build their own house and the third block is reserved to sell in the market as a source of income. Although it is still premature to assess results, it can be observed that the different approaches provide alternatives targeting different income groups, seeking in this way to meet people’s needs and encouraging them to take ownership of the process.

i. Participatory approaches overcoming traditional planning:

A key challenge faced in the projects implemented consists in the introduction of participatory methodologies as a way of engaging and mobilizing communities. The experience has shown that negotiating urban projects among different stakeholders can be an easy mechanism for resolving differences. During the process, different stakeholders shift from being mere participants to playing an active role leading the transformation process, showing the enormous potential for participation to empower vulnerable groups and find peaceful paths to deal with social conflicts arising from competition for scarce resources.

j. Strategic planning to empower urban-rural linkages:

Strategic planning has been introduced as a crucial tool to promote villages, identifying the critical infrastructure necessary to their development. The key to the exercise consists in forming a vision for regional development in which a public works plan, including construction of major infrastructures, empowers local development possibilities. The aim is to minimize displacements and shape more sustainable territorial patterns in the

framework of a pro-poor policy. Rural poverty pushing communities to the major cities, and conflicts in the different regions, forces people to migrate to cities, leading to congestion in the capital and growth of informal settlements and leaving the regions without the necessary human resources for their development.

k. Capacity building to support the long term vision:

In parallel to the different activities related to the pilot projects, a capacity building strategy consisting of training by doing and on the job training has been applied. Public officials learn from the process rather than from academic exercises or formal training and, at the same time, they train other public officials, therefore developing a systematic process of improvement. In addition, an assessment of the organizational structures, determining major gaps and bottlenecks, allows the introduction of strategic changes combined with the delivery of human resource development.

l. Community awareness: As part of the capacity building strategy, experience has shown that the development of simple and graphic material is extremely useful in communicating important messages, and in creating interest in possible actions to be taken.

THE WAY FORWARD: "CITIES WITHOUT SLUMS"

The lessons learnt point to a set of factors that need to be addressed in order to deal structurally with the causes of unsustainable urbanization, which lead to slums and marginalization. But systematic interventions on all these factors requires a strategy operational in the framework of a programme. The results of the pilot projects highlight the strengths and weaknesses of pro-poor policies, suggesting the major components of a program specifically dedicated to achieving "Cities without slums".

Taking into consideration the history of eviction and demolition in Khartoum, and also in Juba, two key cities, it is important to clarify that "Cities without Slums" refers to the very opposite of this. This is an important clarification, as many past efforts to "upgrade" the city involved evicting residents of informal settlements (Figure

16) and creating new subdivision schemes on the city outskirts, and were based on a site and services approach. The failure of these policies, demonstrated in many reports, and the success in other initiatives, such as the already mentioned "Dar El Salaam" approach, inspired the development of the pilot projects.

The transition from pilot projects to a systematic city-wide slum upgrading programme, requires simultaneous interventions in urban and rural areas. It is necessary to prevent the formation of new slums by improving living conditions in strategically located villages, with the capacity to attract population and avoid mass migration to the metropolis. It is also necessary to intervene in existing slums, providing affordable and appropriate alternatives to moving out. This goal constitutes an enormous challenge of capacity

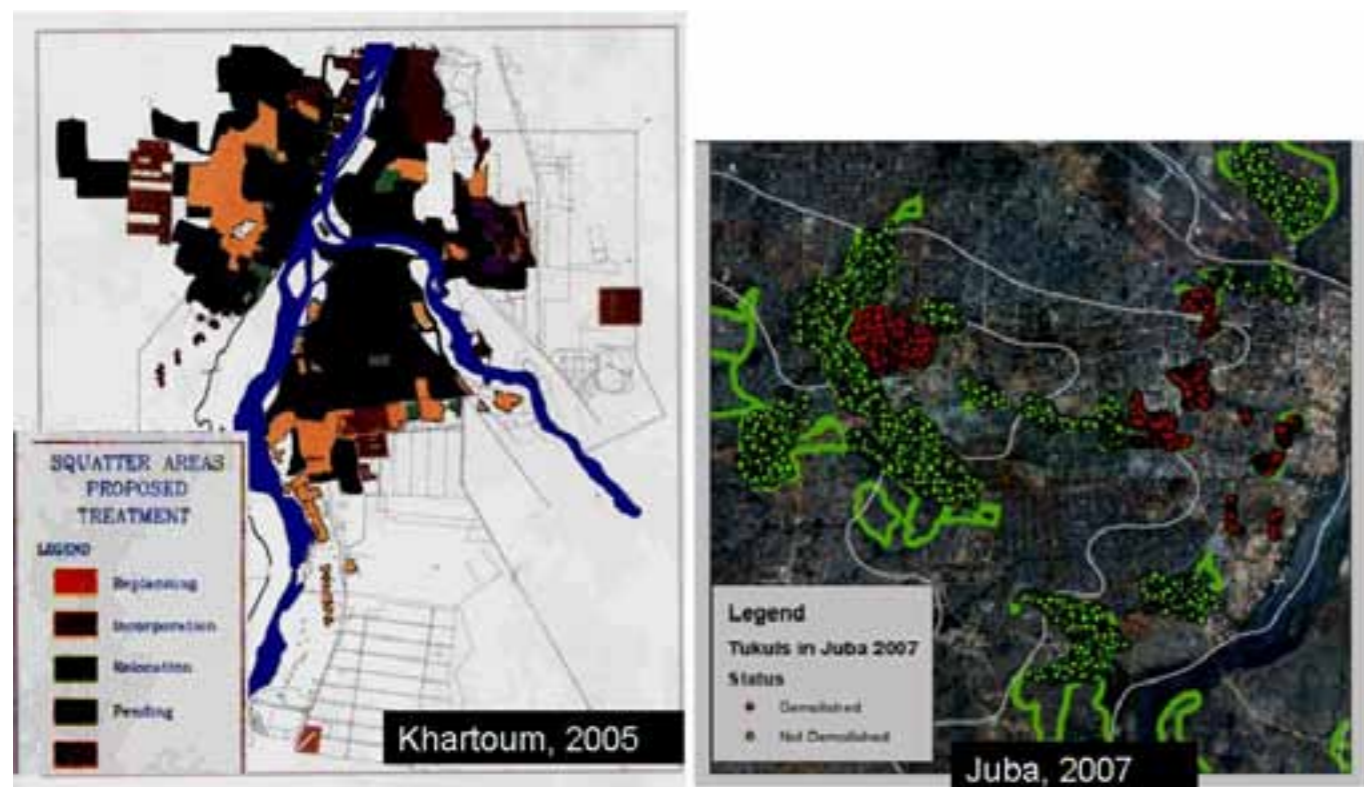


Figure 16. Map showing evictions in Khartoum (2005) and Juba (2007)

building, exceeding by far the current possibilities of the ministries. The involvement of external actors, such as the community and private sector, is critical, as is the role of United Nations agencies and international donors working in partnership with the government.

The foreseen institutional setting requires concrete relationships among stakeholders, all playing complementary roles (Figure 17): academic institutions, like training research institutes, backing community associations working to implement specific projects; United Nations agencies providing technical backstopping, facilitation and support on specific issues; and the Ministry of Planning and Urban Development (MPUD), in charge of coordination, monitoring, evaluation and updating of plans and standards, in order to ensure progress in the agenda of systematic slum upgrading, implementing pro-poor policies targeting specific disadvantaged social groups.

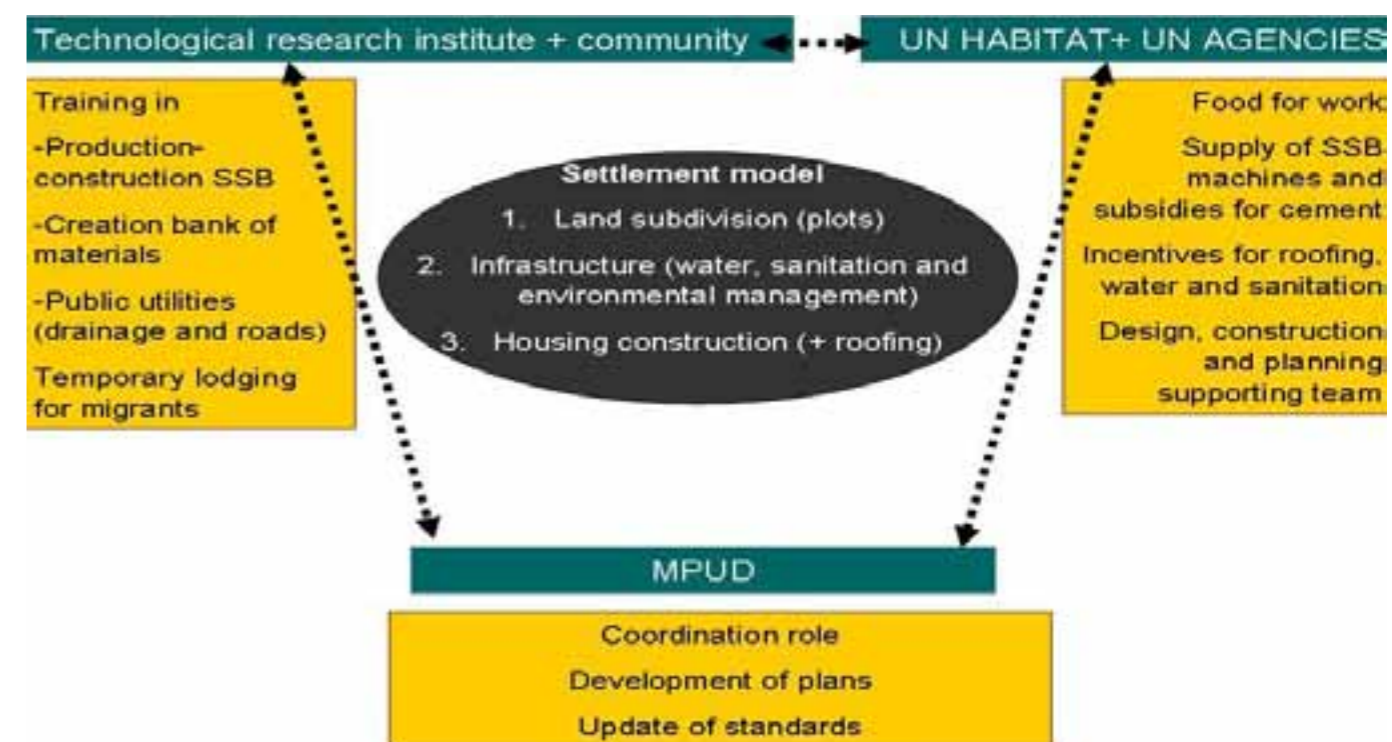


Figure 17. Proposed institutional structure for cities without slums

Based on this institutional setting, "Cities without slums" is designed according to three major components (Figure 18).

The first component integrates pro-poor policies and capacity building for the Ministry of Planning and Urban Development. This component includes the role of United Nations agencies introducing new techniques and approaches, with the necessary resources to test their results through pilot experiences. Its effectiveness once proven, can be incorporated as a pro-poor policy, receiving adequate training and institutional adjustments to ensure that the planning machinery is prepared for policy implementation and coordination of action plans. The second component refers to systematic slum upgrading measures, including as a subcomponent, production and construction with stabilized soil block and roofing, both associated to sustainable sanitation and public services. The third component completes the vision, introducing prevention of new informal settlements, treating lodging villages as satellite towns and developing rural-urban linkages by including basic infrastructure such as roads, and incentives for certain products through taxes and special facilities.

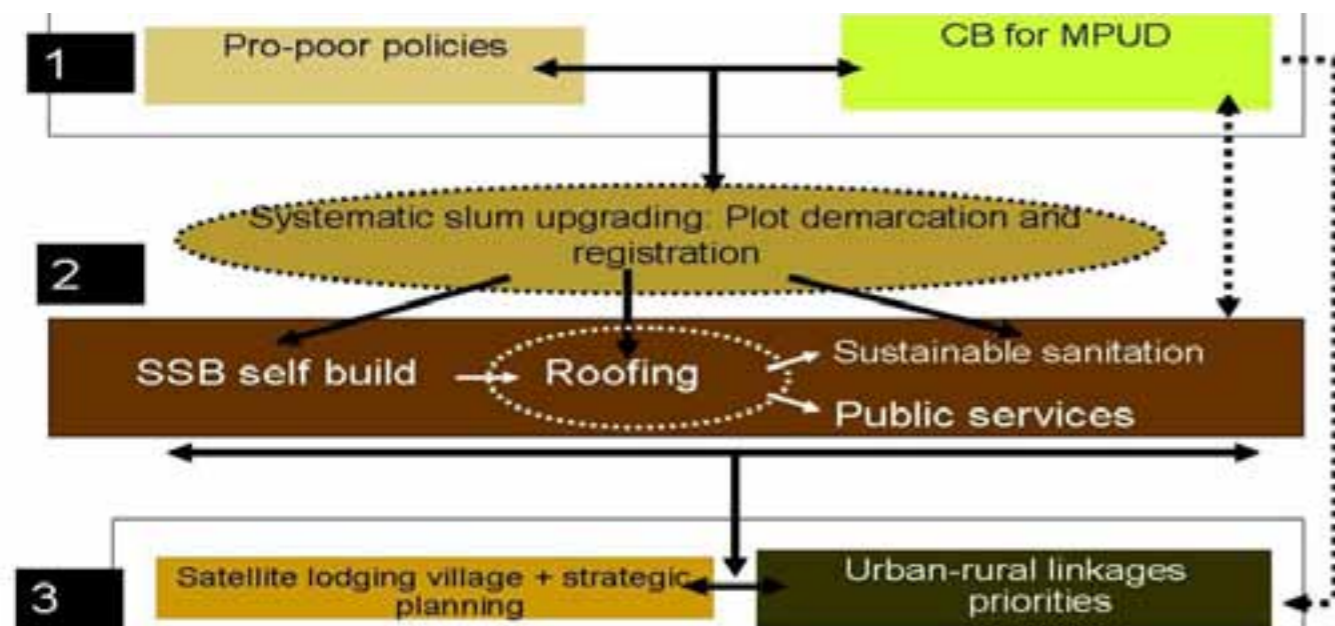


Figure 18. Components of "Cities without Slums" programme

A blueprint for an initial period of 18 months is proposed as the scheduled plan to implement the "Cities without Slums" programme. This blueprint integrates lessons learnt from the pilot projects, in addition to pro-poor policies and capacity building. A first semester will be dedicated to consulting the different slums targeted and preparing upgrading activities based on community discussions and prioritization. Rapid Urban Sector Profiling for Sustainability, adapted to work in simultaneously in several informal settlements, is expected to deliver coordinated action plans integrated into the "Cities without Slums" Programme. After these preparatory activities, the blueprint presented (Figure 19) provides a road map for scaling up pilot projects.

It proposes 6 months for initiating the massive production of stabilized soil block. Some numbers are presented to illustrate progress in each settlement being upgraded. In the first period, stabilized soil block making machines and cement will be delivered, organizing the beneficiaries in clusters of 5 households, each sharing one machine.

Different methodologies, including food for work, are foreseen to facilitate this process, which involves extremely vulnerable populations who may not have enough resources to sustain themselves during the stabilized soil block production and construction process. In cases

where people can support themselves, the "Three block approach" is proposed.

As it was explained before, "The three block approach" means that the beneficiary receives a hand press machine and cement, and pays back with one block, which is used to build public utilities; the second is used to self-build their own houses; and the third block is sold in the market as an income generation source. This approach is considered strategic in promoting community ownership of the process, and has various advantages. The approach has environmental advantage as the material prevents further deforestation, creating community consciousness on the need to protect the environment. The approach has social advantage, as it is affordable, and can be combined with adobe and other popular technologies, making the technology easily accessible to low income groups. The approach also has economic advantage as it creates the opportunity to generate income, overcoming the vicious circle of poverty and dependence on international aid.

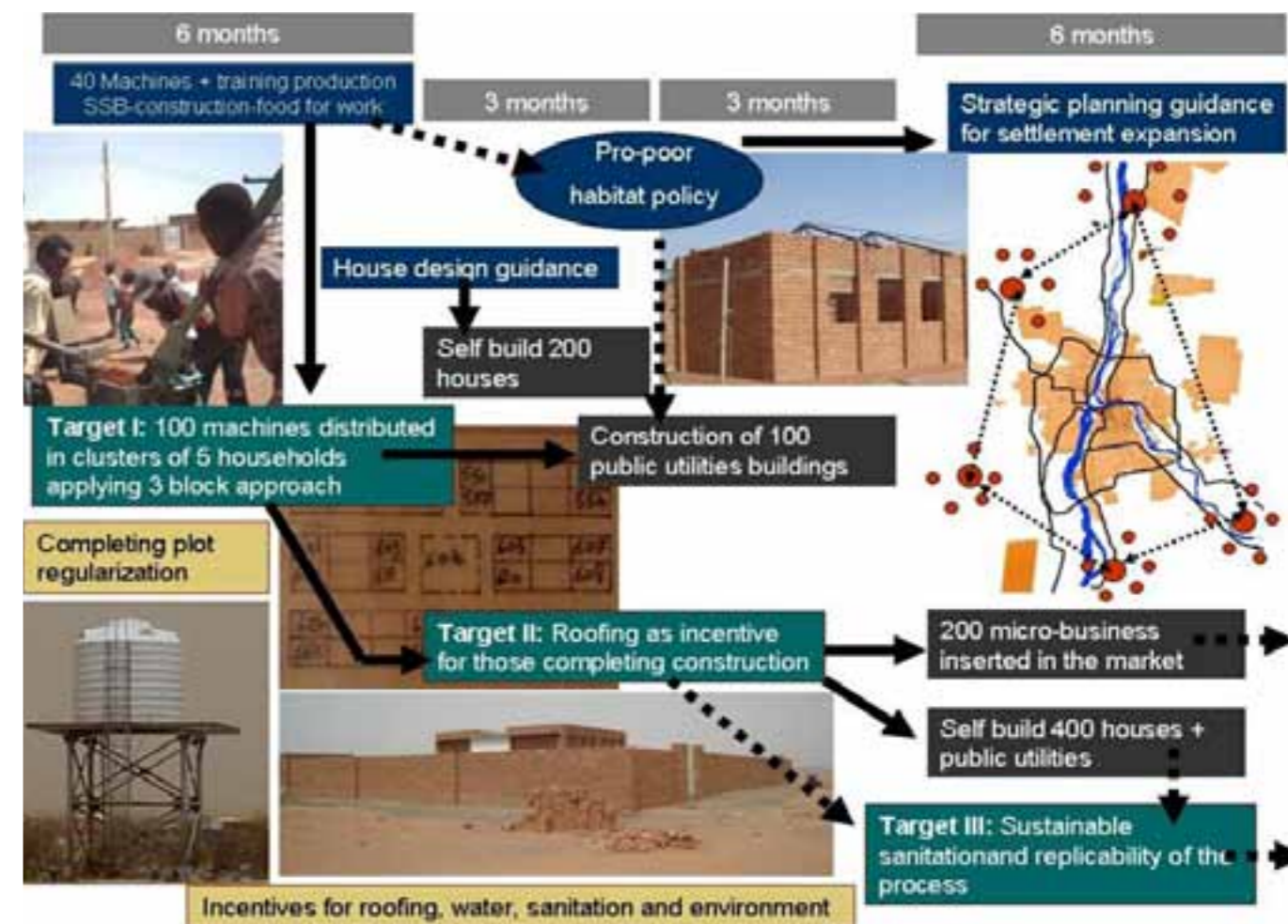


Figure 19. Blueprint for the implementation of Khartoum without slums programme

It is proposed to split the second semester into two trimesters. The first one will be dedicated to completing land registration, prioritizing public utilities and house design guidance and agreeing with beneficiaries on the details of the implementation of the action plan. The second trimester will be dedicated to construction of public utilities and self-building of housing.

In the third semester, the exercise will be replicated, providing more stabilized soil block hand pressing machines and expanding construction activities, and at the same time initiating development of the "lodging villages", where the beneficiaries of the slum upgrading exercise will be voluntarily relocated.

Four reasons can be highlighted regarding the importance of "Cities without Slums" initiative. The first is economic and relates to the fact that the strategy explained is more cost-effective than the approaches of eviction and relocation traditionally applied, and the social damage caused by eviction and relocation is avoided.

The second reason is institutional: It creates the chance for ministries to engage communities, gaining their support and learning together from the process. Thirdly, it introduces a rationale for supporting humanitarian efforts, shifting from pure assistance to systematic interventions with a recovery perspective and developing local institutional leadership and ownership. Finally, "Cities without Slums" facilitates the transition from emergency to early recovery and from early recovery to development, consolidating pro-poor policies.

FINAL REMARKS

Throughout the different regions and projects presented in this publication, different issues arise concerning the challenges of sustainable urbanization.

The first issue to highlight is the nature of urbanization trends in Sudan. In most countries, rural-urban migration responds to the higher development rates experienced in cities, but in Sudan it is a consequence of the forced displacement of people because of war, drought and conflicts. It is thus necessary to consider the possible return of people to their original villages. But urbanization trends and action plans are hard to develop because the percentage who will remain in towns or return to their villages is uncertain and there are some who remain in town but at the same time go back to their villages to avoid losing their land rights.

The different demonstration projects show how specific locations in urban areas and their particular insertion in the metropolitan structures affect the living conditions of residents and local economic perspectives. In the rural areas, there is need to better understand rural-urban linkages and potential growth and local economic development possibilities of villages.

It should be noted that better understanding acquired through the development of strategic plans for villages and demonstration projects in slum areas, helps to explain the causes behind poverty associated with rapid urbanization. Demonstration projects illustrate different approaches to supporting urbanization trends, with particular constraints and potentials related closely to their geographic configuration and social fabrics.

A second issue to be addressed relates to the transition from policy making to pilot demonstration projects. Policy making works through regulatory frameworks with a systematic

and general approach that essential in tackling the causes of poverty. Such policies may easily be misguided if they do not match particular circumstances.

Pilot projects update pro-poor policies, providing concrete feedback on their impact, extension and also failures. Adjustment of pro-poor policies and strategies, through lessons learnt are an effective tool for any planning review.

Critical analysis of the capacity to reintegrate relocation areas emphasizes the importance of an enabling environment through which populations, according to their specific profile, contribute resources or labour to implement community priority projects. It is clear that without such an enabling component, it can not be expected that the pro-poor framework will work. On the contrary, it could even promote segregation.

This observation introduces a third issue for discussion. It is clear that the different states in which projects have been implemented, play active roles in promoting or preventing migration to their capitals. Khartoum, as the heartland of the country, attracts large numbers of low income populations from other regions. It is expected that future national political turbulence will have a direct impact on the increase of informal settlements. Pro-poor policy recommends integration of vulnerable groups into the urban fabric, providing land, subsidizing public works, introducing flexible building regulations and facilitating mass production of affordable building materials. The strategic planning vision sees coordinated and simultaneous work on urban and rural areas as crucial. In rural areas, empowering rural-urban linkages by developing "lodging villages" gets to the root of the problems of squatting and poverty. Intervening in urban areas by upgrading slums in line with the

"Khartoum/Cities without Slums" programme, supports the State planning system, and involves community and private stakeholders. It is necessary to develop the legal framework so that all stakeholders involved in slum upgrading can operate with clear rules.

In southern Sudan, the very complex dynamics of rapid urbanization in the major cities, combined with policies to encourage returnees to go back to the villages, except those with investment to carry on business in town, increase the divide between poor villages and rich urban cities. Furthermore, the concentration of public investment in major cities in southern Sudan at the expense of the rural areas, ignites new conflicts that must be addressed. There is need for a significant change in the mentality of public officials, in order for them to shape pro-poor policies and see urbanization as an opportunity for development and social promotion, rather than a threat to the general wellbeing.

Darfur faces very similar challenges in many aspects, such as rapid expansion of its major cities, and a construction boom with high speculation on land and building materials. However, the main difference is that there is a more pro-poor attitude with a readiness to settle permanently displaced people by providing plots without payment of land lease fees. However, there continues to be considerable political tension associated with massive IDP camps and the recurrent pressure for them to be done away with. The eastern region also faces the challenge of dealing with a high number of internally displaced persons and the large number of settlements situated in flood prone areas. As the problem is recurrent, it introduces another dimension to the poverty and marginalization of these groups, as they reject any relocation initiatives.

Participatory mechanisms applied in the different regions facilitate the process whereby stakeholders can agree on fair rules. Beneficiaries need to realize the importance of putting in their own efforts both in self-building their houses and in self-organizing to mobilize resources for community works. The private sector must also assume its role, encouraging local economic development trends in a professional manner and delivering the best services at prices that

are affordable to low income groups. Last but not least, through the participatory exercise the government assumes its role as facilitator and enabler of pro-poor policies, implemented in partnership with communities and the private sector.

A fourth issue relates to capacity building. Strategic planning demands a team adequately prepared to deliver strategic action plans for towns and villages, consolidating previously drafted pro-poor policies and capacity building recommendations. Different approaches to settle people in strategic locations between cities and villages provide alternatives to facilitate the integration of low income populations in urban areas, locating training centres where such populations can adjust to the demands of urban life. Training centres provide skills necessary for finding work, strategies for survival in towns and key information on how to get involved in solidarity and social promotion networks.

The study and testing of building typologies to address the challenge of increasing urban densities in Juba and Khartoum using pro-poor policies, has led to proposals for introducing multi-storey design and construction techniques in low income neighborhoods. Multi-storey buildings with low cost technologies allow the urban poor to keep part of their plots free to carry out income generation activities, typically commercial activities or micro-industrial workshops on the ground floors. Diversity and flexibility in low income neighbourhoods are an efficient and attractive way of satisfying the physical, social and psychological needs of the communities.



Figure 20. Multi-storey building in low income neighbourhood

A fifth issue relates to strategic planning as a tool for the sustainable progress of the poor. The experience in preparing strategic planning for villages and small towns has been shown to be achievable in the short term, with encouraging results in terms of participation and community involvement. Clearly, participation has proved to be the basis for pro-poor planning implementation.

Achievements so far show significant progress in strategic planning, with the creation of draft versions resulting from community consultation and discussions. The development of a business plan and a manual system for all activities, have had significant impact. They have provided the way forward for responsible bodies from the ministries to continue in their systematic management of all activities. The transfer of methodologies and concepts in the form of training of trainers and on the job training; is the cornerstone of the capacity building strategy.

A sixth and final issue relates to inputs obtained by testing innovative technological approaches. Demonstration projects in Khartoum, such as Mansura, an area in the process of regularization close to the urban fabric, and with a booming real estate market, require appropriate approaches to respond to the demand for affordable housing. With flooding being a major problem in the area, the priority in the action plan was to develop a new drainage system and social infrastructure. Similar activities are taking place in Juba in Hai Zandya and Durupi areas, where land speculation threatens to drive the poor out of these areas. They face the temptation of selling their plots in order to make some money, and in so doing losing the chance to be part of local real estate dynamics, which is increasing the value of their property. Particular attention must be given to this real estate process as it undermines all efforts made to promote social inclusion and the promotion of low income groups living in the informal settlements.

The increasing involvement of academic institutions as technical partners, identifying lessons learnt and sharing them with the communities, has helped to sustain the process of sustainable urbanization. The construction of model houses (Figure 21) demonstrates the feasibility of introducing innovation in construction technologies with respect to costs and constraints. However, the high cost of cement constitutes a major difficulty for stabilized soil block technology. A combination of technologies and approaches is recommended to enlarge the social target of the plans and it is vital to develop the technical capacity to respond to different requirements. Particular attention has been given to finding new and more effective sanitation designs, building alternative slabs and seeking affordable solutions that can be mass produced. Alternative roofing has also been explored, with the use of ferro-cement and pre-cast slabs.



Figure 21. Titulo

A third component of technological innovation involves the development of multi-storey building prototypes, using pre-cast concrete slabs and external staircases for low income housing. One of the model houses is multi-storey, seeking to respond to the need to increase densities and minimizing infrastructure costs. Based on innovative design and technology, the pilot demonstration buildings seek to achieve several goals: allocating 5 housing units in a small parcel; minimizing construction costs by using common walls and reducing room sizes; and eliminating redundant spaces like corridors, replacing them by common areas that can be used as semi-private areas. These technological innovations are crucial for encouraging denser urban development and minimizing urban expansion.

Enhancement of mosques, schools or buildings respected by communities as part of their historical or cultural heritage provides additional benefits, encouraging the support of the whole community for upgrading exercises, avoiding the typical duality between the internally displaced or the landless poor and host communities, as happened in the case of Mayo-Mandela camp.

Finally, it is important to stress that passing from policy design to pilot demonstration projects is an achievement in itself. The experience shows that multidimensional, integrative and participatory approaches contribute a significant step forward towards the achievement of the vision of pro-poor urbanization. Unless concrete results are obtained through pilots, no approach can be considered applicable.

All hypotheses for social change and development need to be tested, assessing all positive and negative consequences. Such testing provides the necessary feedback to adjust, amend and re-orientate policies, matching the specific requirements of each case. Only then can pro-poor policies and general legal frameworks be complemented with incentives and action plans targeting specific vulnerable groups.



Figure 22. Mosque in Mayo-Mandela

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REFERENCES

ACRONYMS

CBO	Community Based Organization
CPA	Comprehensive Peace Agreement
EC	European Commission
GIS	Geographic Information System
GPR	Guiding Principles for Relocation
GOSS	Government of Southern Sudan
IDP	Internally Displaced Person
ILO	International Labor Organization
KSP	Khartoum Strategic Plan
KWS	Khartoum without Slums
LED	Local Economic Development
MoPI	Ministry of Physical Infrastructure
MPPPU	Ministry of Physical Planning and Public Utilities
MHPP&E	Ministry of Housing, Physical Planning and Environment
MP&UD	Ministry of Planning and Urban Development
NGO	non-governmental organization
OJT	on the job training
PDB	Pilot Demonstration Building
PDP	Pilot Demonstration Project
RIEP	Rapid Impact Emergency Project
RUSPS	Rapid Urban Study Profile for Sustainability
SDF	Social Development Foundation
SSB	Stabilized Soil Block
TRI	Training Research Institute
TOT	training of trainers
UN	United Nations
UNCHS	United Nations Centre for Human Settlements
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UN-HABITAT	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
UNRISD	United Nations Research Institute for Social Development
UNIDO	United Nations Industrial Development Organization
WHO	World Health Organization