The Sustainable Sity - Student Competition
Architect, Physical Planner and Industrial design students’ idea competition – Athi River
The sustainable city - student competition

Architect, Physical Planner and Industrial Design
students’ idea competition – Athi River Sustainable Neighborhood Program (SNP)

1 INTRODUCTION

“With 50% of the world’s population living in cities and towns, the environmental future of the planet is closely linked to sustainable urbanization. Good environmental management must prioritize the urgent needs of the urban poor”

Mrs. Anna K. Tibajjuka, Executive Director, UN-HABITAT

By 2050 the proportion of people living in cities will be close to two-thirds of the population. In many major cities of the developing world, the number of slum dwellers is already estimated at more than 50% of the population. Sustainable development is key to reducing the amount of people living in slums. Without a sustainable approach to development, the number of persons living in slums could rise to 2 billion within the next 30 years alone.

Rapid urbanisation profoundly impacts cities and communities. It leads, among others, to reduced living standards, increased poverty, increased costs and loss of productivity. Securing inhabitants daily income, making sure that they have adequate sanitation and proper housing should be taken into account in effective urban planning.

Sustainable ecological, economical to social development throughout the whole society makes cities more hospitable places to live and work in. A sustainable city is “a city where achievements in social, economic and physical development are made to last. It has a lasting supply of the environmental resources on which its development depends, using them only at a level of sustainable yield. A sustainable city maintains a lasting security from environmental hazards that have the potential to threaten development achievements, allowing only for acceptable risk” Sustainable Cities Programme 1990 to 2000, UN-HABITAT and UNEP

1.1 Invitation

UN-HABITAT together with the Government of Finland is organizing an Architect, Physical Planner and Industrial design students’ idea competition within the Sustainable Neighborhood Program in the Athi River area in Nairobi.

1.2 Background

Kenya

Kenya’s housing sector is currently besieged with a formidable combination of challenges. Factors such as unprecedented urbanization coupled with high population growth rates, poor domestic policy performance and the associated debt burdens have had devastating impacts on development policies and strategies. According to estimates, the number of urban centers has increased from 34 in 1962 to 277 in 1999. The urbanization process is itself not the problem in these areas. The main problem is that the urban centers and the authorities responsible for their developments have not been able to cater for the basic needs of the increasing population resulting in many negative developments accompanying the urbanization process. The negative developments have manifested themselves in the forms of unemployment, widespread poverty, deficient housing and homelessness among others.

The problem is more acute in the urban areas where more than five million residents now live in deficient, health threatening houses and conditions. Deficient housing manifests itself in the rapid formation and growth of informal settlements and tenement structures matched by deficiencies in the supply of the most basic infrastructure and public facilities required for humane habitation. Therefore the living conditions tend to deteriorate at alarming rate. This notwithstanding, it is also worth noting that approximately half of Kenya’s urban population live in slums and informal settlements.

Nairobi

According to the current statistics, the rate of urban population growth in the City of Nairobi is 4.5%. The present population, estimated at 2.5 million, is expected to reach 5 million by 2025. The majority of this growth will be among residents of informal settlements. Conditions for this majority are rapidly deteriorating. They lack affordable shelter, access to basic services, gainful employment and income, access to credit and markets, and tenure security. People living in informal settlements face a combination of high density and insecure tenure. Worse still, they are regarded as squatters who occupy land that is owned either by the state, the local authority, or private individuals. The situation is complicated by irregular allocation of public land to private individuals who construct temporary structures for rent. Renting is the most prominent form of tenure. People in slums risk both the threat of forced eviction without due process and the threat of displacement resulting from market-induced eviction (shifts in investment patterns that bring about unaffordable rents).

Like many cities in developing countries, Nairobi is poorly managed, fractured and declining. Poor governance and a declining economic base have affected revenue collection. Long term infrastructural deterioration is evident. All these trends have been dramatically exacerbated by the increasing numbers of poor people coming to Nairobi.

1.3 Athi River area and the Government of Finland

The project site has been provided for the project by the Government of Kenya through an arrangement between the Governments of Kenya and Finland as well as Habitat. Finland is also supporting the Sustainable Neighborhood Program with 750 000,- euro.

1.4 The competition site

The site

The site is located 15 kilometers southeast from Nairobi City center along the Nairobi Mombasa road and it is considered as the future expansion area of Nairobi. It is surrounded by small suburb’s government land and the nearest urban center being Milongo, approximately 3 kilometers southwest from the site. The whole area covers 100 hectares. To the north of the site lies proposed school and Youth Rehabilitation Center. The surrounding plot to the east,
south and west, more than 1000 Ha. is government land. The area between the competition area and the access road has plans varying from commercial use to residential area. The entries are not bound by these plans, new ideas and solutions are welcomed. To the north lies Syokimau Farm, which has been divided into over 500 residential plots, approximately one acre each. Crescent Construction Company quarry is located to the southwest.

The climate
Altitude in Nairobi area is around 1600 meters above sea level. The climate is dry and hot with rainy season from March to May. In addition there is another shorter rainy season in November. The average temperature in Nairobi is between 21 and 26 degrees year around.

Vegetation
The area is flat and treeless, with only some acacia thorn bush, aloe and cactus.

2 COMPETITION BRIEF

2.1 Competition objective
The general objective of the idea competition is to present innovative sustainable urban solutions in terms of affordability, ecology and social/cultural integration. The competition aims to find different approaches ranging from town planning concepts to the innovative design and technical ideas viable for the urban poor.

2.1.1 Physical planning concept
Due to the location of the Athi River area competitors are encouraged to find ways to restore the linkage between Nairobi city center and the competition area in larger scale as well as propose smaller scale mixed housing types and sustainable land use for the area.

Primarily the beneficiaries earn less than 150 euros a month. Therefore, the approach should focus on low cost housing applicable to subsidy-funded housing and/or that the houses to be constructed by the dwellers themselves. The concept ought to ensure good quality and high density planning and housing solutions for the urban poor.

Compared to the mass housing areas, inner city communities are characterized as lively and more prominent for future investments. In order to achieve these qualities the competitors are encouraged to propose well integrated neighborhoods with identity and safe public open spaces. Typically solutions that allow income-generating opportunities, small informal shops, areas for the growing of vegetables etc. are well received in the urban poor context. Also ecological consideration including alternative energy solutions, sanitation and public transport should be taken into account when finding sustainable system solutions.

Primary issues to be stressed in the physical planning concept:
- Density
- Mixed housing types
- Mixed land use
- Sustainable system solutions (environment, transport, energy, water, sanitation, waste)

2.1.2 Innovative design and technical ideas
Ecological awareness and implementations of sustainable technical solutions is ever-growing in the world. Innovative design that contributes to this and is low cost and easy to access for the beneficiaries is welcomed. These proposals can range from sustainable construction solutions to ecological, technical and sustainable design of everyday necessities ranging from sanitation to food preparing etc.

- Innovative design
- Sustainable technical solutions
- Sustainable construction proposals
- Ecological consideration
- Low cost solutions

3 COMPETITION RULES AND CONDITIONS

3.1 Rules and regulations

3.1.1 Eligibility
Students who are enrolled in any of the following universities can take part of the competition:

- Helsinki University of Technology, Department of Architecture
- Tampere University of Technology, Department of Architecture
- University of Oulu, Department of Architecture
- University of Art and Design Helsinki
- University of Nairobi, Faculty of Architecture, Design and Development
- Jomo Kenyatta University of Agriculture and Technology, School of Architecture and Building Sciences

3.1.2 Registration
The entry for the competition is free of charge. Competitors will be asked to register when they download the materials concerning the competition. The competition materials can be downloaded from www.unhabitat.org/studentcompetition from July 1st on.

Photos of the competition area are taken from places 1-6
3.1.3 Competition time
July 1st through August 20th

3.1.4 Competition submission address
The Kenyan submissions should be delivered to the following address by September 1st by 12 PM. Submission that are handed in after 12 PM will not take part in the competition.

UN-HABITAT Headquarters
Visitor’s Pavilion
Gigiri, Nairobi

The Finnish submissions should be sent to Barcelona. The address will be posted on the UN-HABITAT website, www.unhabitat.org/studentcompetition shortly.

3.1.5 Questions
Competitors will have the opportunity to ask questions. All questions must be sent by e-mail to the competition secretary by July 16th and they will be answered by July 26th. The answers will be available on the UN-HABITAT website, www.unhabitat.org/studentcompetition shortly.

Questions may be sent by email to: student.competition@unhabitat.org

3.1.6 Anonymity
All the entries shall be anonymous until the judging has been completed. No document shall have any indication, logo or other mark of the author. However, competitors are required to place a six-digit code in the backside of each panel. Code can be made up from letter/numbers, for example 123ABC. To maintain the anonymity throughout the competitions the entries must include a sealed envelope attached to the back of one of the panels submitted. The sealed envelope must include:
- The six-digit number, both in the top and inside
- Name of the author(s)
- Full address, including the country
- E-mail address, if available
- Phone numbers where the competitor can be reached, including country and area codes

3.1.7 Copyright
Authors may retain copyright to their entries. Organizers shall have the right to use the entries free of charge for non-commercials purposes such as official purposes, including exhibition and publication. The Organizer will not be obliged to return the submissions to competitors.

3.1.8 Jury
The following persons are invited to the Jury:
Mrs. Anna Kajumolo Tibaijuka, Executive Director, UN-HABITAT
Mr. Matti Kaariainen, the Ambassador of Finland, Kenya
Dr. Maria Nyström, Lund Institute of Technology, Program of Architecture and Industrial design, Division of Architecture and Development Studies
Representative from the University of Nairobi
Representative from Jomo Kenyatta University
Professional representative from Finland

The Competition Secretary is Katja Mäkeläinen

Should any of the Jury members be unable to perform his/her duties, the Organizers may appoint a replacement. Jury may also use technical assistance or consultants if needed.

3.2 Competition

3.2.1 Competition documents
Entries must fulfill the following:
- All drawings must be mounted on a flat, white cardboard in size A1 landscape. No more than two panels per entry are allowed. Rolls of drawings are not accepted.
- Competitors must also include a one reduced set of A3 black and white copies of the panels, not mounted, and no more than one A4 sheet with written clarification of their concept.
- All drawing must be in metric scales. Bar scales must be indicated on the drawings.
- Scale models or other three dimensional material may not be submitted

- Finnish entries: A3 PDF file of the entry should be submitted to student.competition@unhabitat.org by August 20th.
- Kenyan entries: A3 PDF file of the entry is highly recommended to be sent to student.competition@unhabitat.org by August 20th.
- Kenyan entries that will be delivered to the Visitors Pavilion (see 3.1.4) must be wrapped in one package so that it is possible to transport them easily. Any lose cardboard’s or A3 sets may not be submitted. On top of the package should be indicated: Athi River Student Competition

English is the official language of the competition.

3.2.2 Awards
The following awards will be made:
Two first prizes:
- For Finnish students: a one week trip for one person to Kenya
- For Kenyan students: a one week trip for one person to Finland

Honorary mentions

4 TIMETABLE

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EXHIBITION

All the entries are intended to be exhibited in the Second World Urban Forum organized by UN-HABITAT in Barcelona 13th - 17th of September.

The 2nd World Urban Forum is part of the glittering Universal Forum of Cultures that is being hosted by the city of Barcelona from May 9 to September 26, 2004. It aims to encourage dialogue and reflection around the three central themes of cultural diversity, sustainable development and the conditions necessary for peace. Jointly organized by the Barcelona City Council, the Catalan Autonomous Government, the Spanish Government, the Universal Forum of Cultures encompass a series of exhibitions, meetings and shows, covering a range of urban experiences including art, design, music and markets throughout the city. Held over 141 days, the Universal Forum of Cultures is expected to attract over a million visitors.

One of the culminating events of the Universal Forum of Cultures will be the World Urban Forum and Barcelona is ready to receive delegates representing governments, local authorities, non-governmental organizations and other experts on urban issues from around the world.

The Second World Urban Forum is a key United Nations event on the international calendar designed to help highlight the problems and possibilities of cities. With 50% of the world’s population already living in urban areas, and the figure set to increase within the next 50 years to two thirds of humanity, the Forum is intended to help the world community meet one of the main challenges of the new millennium - Urbanization.

The aim for the World Urban Forum is to provide an open forum for debate and discussion for everyone from government officials and mayors to academics and slum dwellers. Simply stated, the World Urban Forum is a think tank that does away with the formal rules of procedure which usually govern official UN meetings. At the Second World Urban Forum there will be 3000 m² exhibition area for partners, international, nongovernmental and governmental organizations, universities etc to exhibit their work on displays and video presentations with focus on the future of cities.

More information on the Second World Urban Forum and the Universal Forum of Cultures:
www.unhabitat.org/wuf
www.barcelona2004.org
Competition area is marked with the blue dot. The whole map is part of the competition materials available on www.unhabitat.org/studentcompetition