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GARDHO

FIRST STEPS TOWARDS STRATEGIC URBAN PLANNING

INTRODUCTION

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The city of Gardho has been undertaking, in collaboration with UN-HABITAT, a series of steps towards a balanced urban development.

This publication presents the results of the **urban spatial analysis** carried out by UN-HABITAT experts under the guidance of municipal authorities. The analysis gives a basic spatial understanding of the town and highlights concrete challenges and priority areas of intervention. A proposed **strategic urban development plan** for the town is also presented.

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ABOUT GARDHO

Gardho is the capital of Gardho District, located in the Bari Region of the Puntland State of Somalia.

population

The population of Gardho is estimated to be between 25,000 and 40,000, including a difficult-to-verify number of displaced people. Some sources estimate the total population at 70,000. The population increases during the hot season when many people relocate to Gardho from the hot coastal cities.

climate

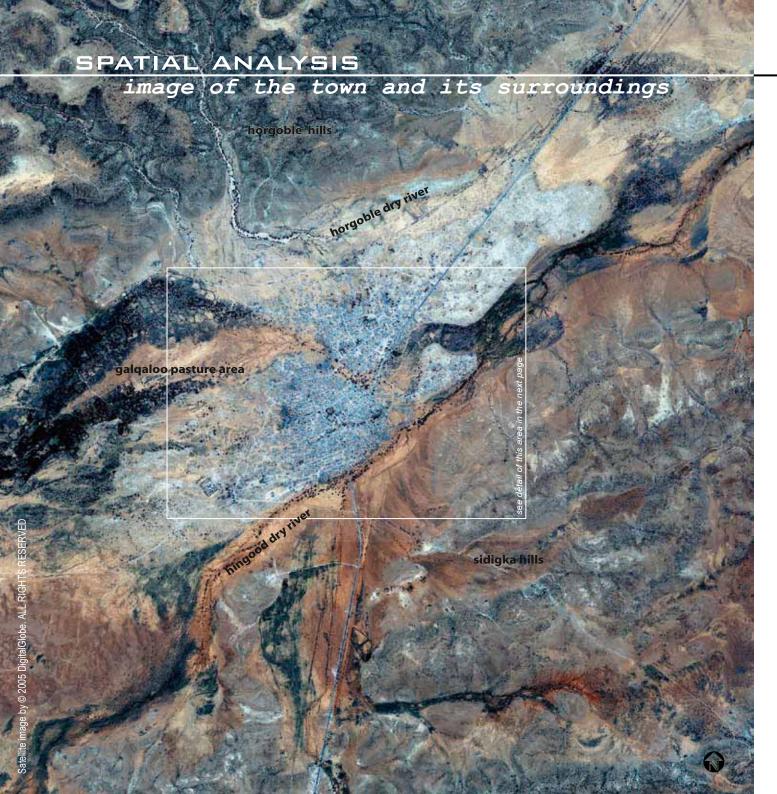
Temperatures range between 18 and 34 degrees Celsius. In the cold months of December and January, temperatures go as low as 14 degrees. There is not much rainfall: The highest levels occur in May, which has an average of 51 mm. The average annual rainfall is 10.8 mm.

topography

Situated in north-eastern Somalia, Gardho sits at an average elevation of 850 metres above sea level. The landscape around the town is semi-desert.

SPATIAL ANALYSIS

The spatial analysis helps to develop a basic spatial understanding of the town, including its main characteristics and its potential. It is one of the most important tools for strategic planning, because it enables planning and positioning interventions according to an overall development strategy, thus maximizing the results of the investments to benefit the whole city.



The developed area of the town is approximately 280 hectares. Calculations are based on the satellite image taken in 2005.

The town is expanding in three main directions:

- → in the north-east along the national road;
- → in the north-west along the Horgoble hills;
- → in the south-east between the pastures of Galqaloo and the banks of Hingood River.

DRY RIVERBEDS

The town is situated between two dry riverbeds: In the north is Horgoble River and in the south is the Hingood. For most of the year these two riverbeds are completely dry. After rains in the upper regions of the rivers, both receive considerable amounts of water.

FLOODING AREA

Rapid floods from the two rivers affect large parts of the territory.



land use

MAINLY RESIDENTIAL

Most of the land developed in the town is for residential purposes. However, mixed land use does occur, with small shops and workshops sited in residential areas. There are also religious centres and schools in the vicinity, as well as the community buildings from which international organizations operate.

MAINLY COMMERCIAL

Retail activities maintain a strong presence within the town, especially along the main road. Other activities include vehicle maintenance, hotel accommodation, and parking. In the oldest part of the town, land use is quite mixed; there is a high density of shops, making it an important retail area.

PRODUCTIVE

The use of land for production remains very limited. The only notable activity is the production of electricity, which is not a common endeavour. The storage of goods remains marginal also; no major warehousing facilities were identified in the town.

IDP SETTLEMENTS

There is one large concentration of IDPs in the town, located on the very edge of the developed areas. The displaced live in makeshift tents on land often offered by the municipality. Due to their very dire living conditions, international programmes principally target this population.

EDUCATION

There are several primary and secondary schools. While half of them are located in the built-up area, the rest are being built in the expansion areas to the north and west. These locations serve the needs of households situated on the edge of the urbanized area.

INSTITUTIONAL AND PUBLIC

The town has a small number of administrative buildings located in the oldest part of the town. In addition, a military base and a prison are on the extreme northern edge of the town.

RELIGIOUS

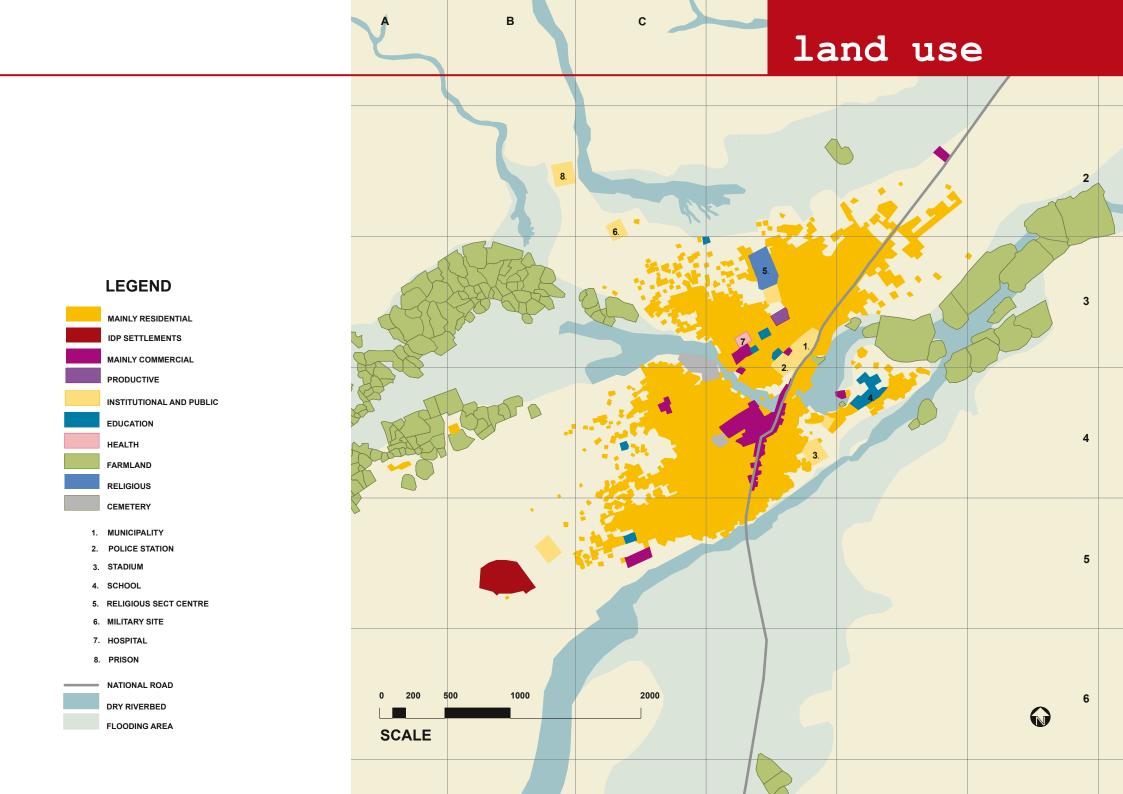
Most of the sites used for religious activities are scattered throughout the commercial and residential areas.

HEALTH

The hospital is found in the inner part of the town.

SPORTS

The only sporting facility is a field reserved for football games. No facilities for the organization of matches are available.



SPATIAL ANALYSIS

density

the city, the services, and the poor -

Creating a compact city, which accommodates new expansions in the vacant space of the consolidated urban fabric, allows the efficient and cost-effective maintenance of urban services and infrastructure. This reduces the cost of services for the urban poor as well as for the host community. The diagrams below represent two opposite types of development logic:



LEGEND:

onsolidated settlements

() new settlements

services

- rapid urban expansion and great land consumption.
- → increased cost of services and infrastructure.
- → more difficult and expensive administration.
- → encouraged social and economic segregation.

dispersed city means: doubling of services = doubling of costs



- → establishing a separate settlement implies establishing all the services and infrastructure that goes with it.
- the doubling of infrastructure doubles the immediate installation costs and also the long-term maintenance costs.
- → there is no opportunity to subsidize, rehabilitate, and share existing services.





- → filled vacant land within the town limits.
- → limited consumption of land.
- → shared facilities and services.
- → easier and more cost-effective administration.
- integration of communities.
- enhancement of local economic development opportunities.

The average density of the consolidated built-up area of the town is approximately 14 buildings per hectare, corresponding to about 90 people per hectare. The density is not uniform. Generally, it is possible to distinguish three density categories, which are related to the character of the areas and also the period in which the development takes place.

MORE THAN 25 BUILDINGS PER HECTARE

The highest density parts of the built-up area are found in the centre of the area. This includes some of the old parts of the town. There are very few plots left undeveloped. The buildings in this category mostly have one storey. Given the high densities in the inner part, future development is not expected unless it is "redevelopment", which would imply replacing existing buildings with new buildings that have increased floor size and height.

15-25 BUILDINGS PER HECTARE

A large part of the consolidated built-up area has a low density. These areas have experienced rapid development over the last decade, predominantly for residential purposes. The density decreases significantly towards the edges of the built-up area. As this category can still be considered to be experiencing development, higher densities are expected in the future.

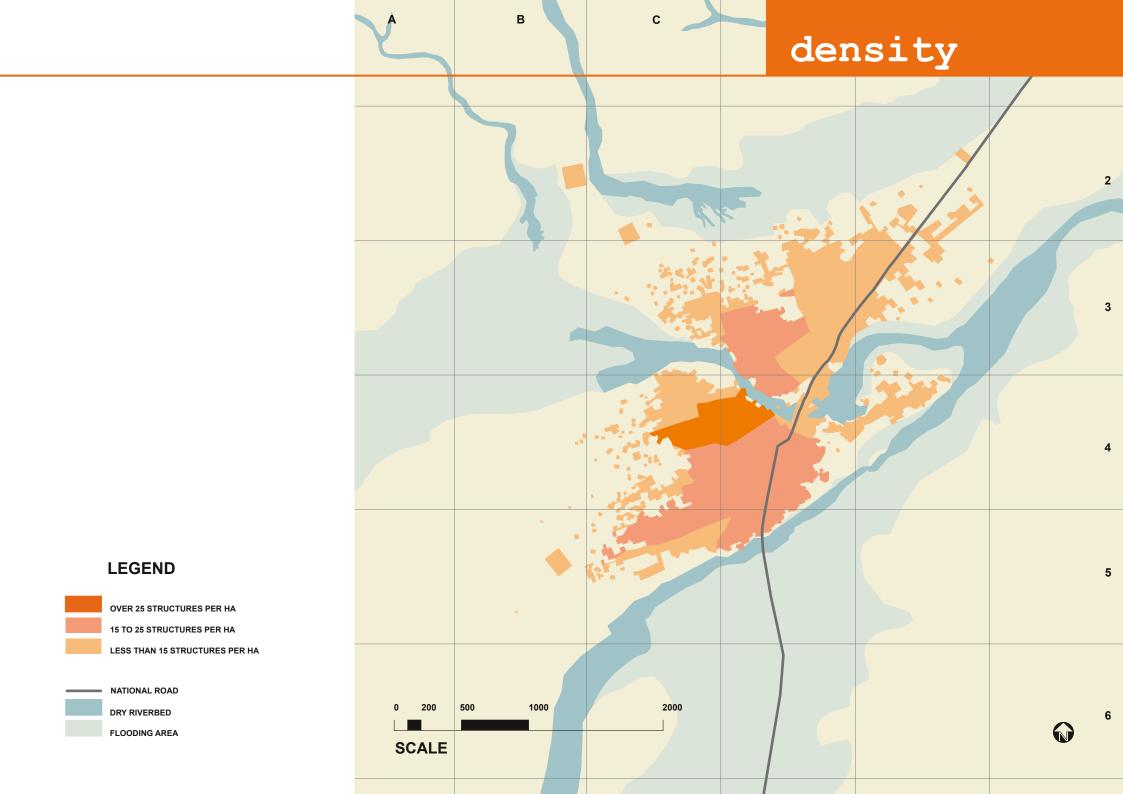
FEWER THAN 15 BUILDINGS PER HECTARE

These are the newest areas under development pressure. Buildings are rather sporadic and surrounded either by other structures under construction or by plots awaiting development. The residential areas in this category are quite a distance from the town centre.

DENSIFICATION

The edges of the town represent areas where the current land development is still sparse. The densities in these areas are very low, which presents opportunities for easing the demand for land for housing and economic purposes in other areas of the town. This development will aim to create neighbourhoods with a consolidated urban physical fabric. The area considered for this development is approximately 250 hectares. The intention is to accommodate up to 6,250 residential structures and a population of close to 40,000.

This is the urban development model suggested for Gardho!



SPATIAL ANALYSIS

NATIONAL ROAD

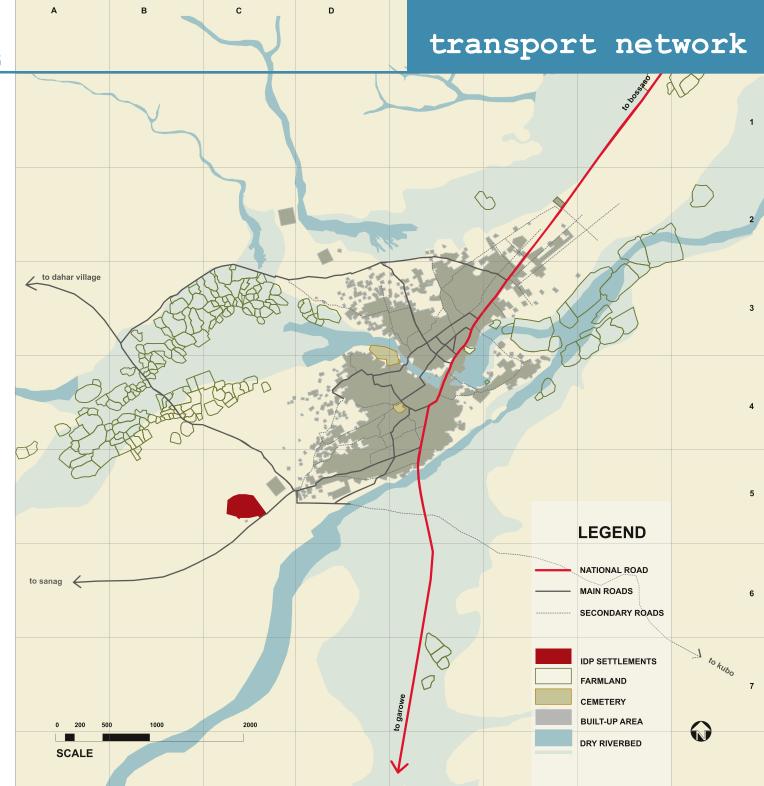
This is the only all-weather (tarmac) road of the town. It goes through the built-up area, cutting the town in half. It is primarily used for transporting people and merchandise through the town; the growth of the town and its increasing activities are gradually transforming this road into the main town road. It is very likely that in the near future, the current traffic problem might deteriorate to the extent that the road becomes very congested.

MAIN ROADS

There are only a few main roads, but they are key to the circulation of people and goods within the town and its surroundings. Their importance has grown gradually following the expansion of the town. At present, these are all dirt roads. Their space, especially in the older section of the town, is shared by vehicles, vendors, and pedestrians. Along some of these routes, this competition for space has become problematic.

SECONDARY ROADS

These are routes used for circulation within the inner part or the consolidated built-up area. Some of them also function as major circulation routes within the mainly residential areas. Others have the potential to increase in importance and become town routes.



FARMLANDS AND GRAZING LAND

A number of plots located to the west of the builtup area are used for farming. However, most of the other plots found in the Galgaloo are used for grazing. The herds use water from nearby shallow wells. A smaller number of farms are situated south of the built-up area in the Hingood dry riverbed. The two farming areas represent very valuable economic and environmental assets for the town.

SPONTANEOUS VEGETATION

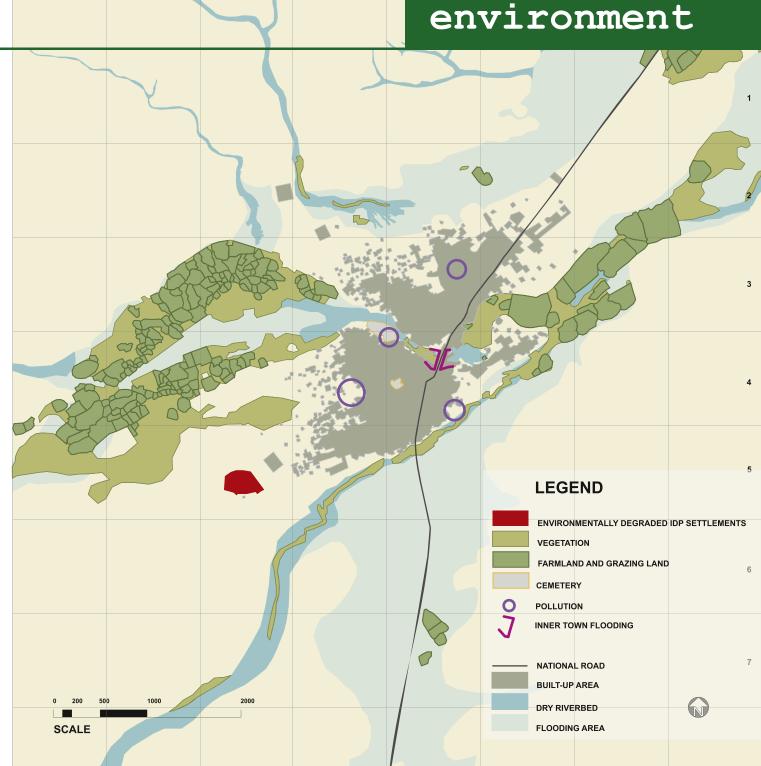
These are bushes or small trees growing in their natural state. The presence of this natural vegetation largely depends on the groundwater found in the Hingood riverbed.

MAIN DUMPING SITES

There are a number of places that have been serving as temporary dumping sites, some of which are found within the urban areas. The situation is critical since the dispersal of solid waste is occurring next to residential areas. The municipality has designated and operates a dumping site far from the town, along with a number of collection points in the town centre.

TOWN FLOODING

After heavy rains, the indicated spot usually floods. It causes traffic flow problems on the national road and the irregular functioning of the commercial area around the spot.



DEVELOPMENT POTENTIAL AND STRATEGIC URBAN DEVELOPMENT PLAN

DEVELOPMENT POTENTIAL AND CONSTRAINTS

ROAD CONGESTION - CONGESTED AREA



The national road functions as main link between north and south Somalia as well as the backbone of the town's mobility. This is already the only major economic and administrative strip. In the southern sections, there are numerous commercial and retail activities. A significant number of central and local government offices are located along the upper part of the strip.

Despite the heavy traffic, the strip will continue to be a major economic hub compared to the other development axes and will also preserve the associated functions of government.

Shops and other commercial activities along the road are encroaching on the road reserve. This slows down the traffic and clogs the road, especially in the central part of the town, with negative effects on the surrounding areas.

ROAD NETWORK

KEY ROADS TO BE UPGRADED

The existing road network offers some possibilities for an improved future network. The existing routes will need to be transformed into wide roads through major physical enlargement projects. While such interventions would require significant financial resources, road development will also require changes in the physical fabric of the built-up area.

This will not only help reduce congestion on the national road, but will also provide better economic opportunities. A number of businesses might simply relocate from existing "jammed" parts of the inner town to the areas along the improved roads, and new business can arise. The road network will need to expand as the town grows.

FLOODING AREA



A branch of the Hingood River crosses the centre of the town, dividing it into two parts. Although the river is dry for most of the year, the rains bring erosion and flooding, and this creates environmental hazards that affect the population. With the town expansion, there is the risk that families with limited economic means will settle in this area.

EXPANSION AREA AND RESERVE TERRITORY



The town is gradually expanding in the north-east, north-west, and south-west. The north-east offers

potential for future growth due to better access to the national road. This area can also accommodate large-scale commercial and productive development and trade-related facilities.

It is calculated that the total growth potential is close 430 hectacres, within which several thousand households can reside and a number of economic activities could be undertaken.

Nevertheless, it is important to define the limits for residential expansion and the boundaries for the reserve territory, which will remain undeveloped for the coming decades. All efforts should be made to discourage any type of private or even public initiative for land development in this area.

The reasons for this are explained on page 10 of this publication: Compact city development is more appropriate for the town of Gardho than the urban sprawl.

EXPANSION AREA AND RESERVE TERRITORY



It is important to preserve and possibly expand the agricultural and grazing lands and to not allow urban sprawl to extend into the flooding areas.

D 0 200 500 **SCALE**

LEGEND



LEGEND BACKGROUND ELEMENTS

DEGRADED URBAN ENVIRONMENT – IDP SETTLEMENTS



STRATEGIC URBAN DEVELOPMENT PLAN

ROAD UPGRADING

UPGRADING OF THE NATIONAL ROAD

UPGRADING OF THE SECONDARY ROADS

The national road cutting through the town centre is severely congested, and a large number of businesses operating on both sides of the road compete with vehicles and each other for space. The intervention suggested would clearly define the area for businesses and roadside activities and the space for the traffic. Such interventions should be complemented with drainage systems, side pavements, street lighting, and tree planting.

The same type of upgrading activities should be carried out in the old part of the town as well.

Some of the most crucial secondary roads (indicated in red in the strategic development plan) should be upgraded and paved and transformed in proper axes for development. This will also help to reduce the congestion along the main road.

TOWN EXPANSION

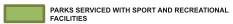


The area in brown indicates territories designated as optimal for the future expansion of the town. To ensure efficient and compact city growth, it is recommended that the municipality takes immediate action to demarcate the official boundaries of the residential expansion area.

Preparation of detailed local area plans would assist the municipality in steering the development, if not duly exercising some form of control over it. Identification and location of land for public use is a critical part of the urban development of this area, and adequate provision of services and infrastructure should be planned in line with the town's growth. The existing waste collection system should be extended to the whole town.

Due to flooding, a large area in the north-east is not available for construction. Certain types of residential infrastructure could help prevent flooding in this area, as it represents one of the most important areas for future growth.

PARKS SERVICED WITH SPORT AND RECREATIONAL FACILITIES



The problem of flooding and soil erosion along the gullies and the dry riverbed should be comprehensively addressed. Drainage works should be complemented with tree-planting interventions. Some places could be transformed into urban parks and equipped with facilities for recreation, sport, and other open-air activities, as well as spaces for children.

AGRICULTURAL RESERVE AND GRAZING LAND

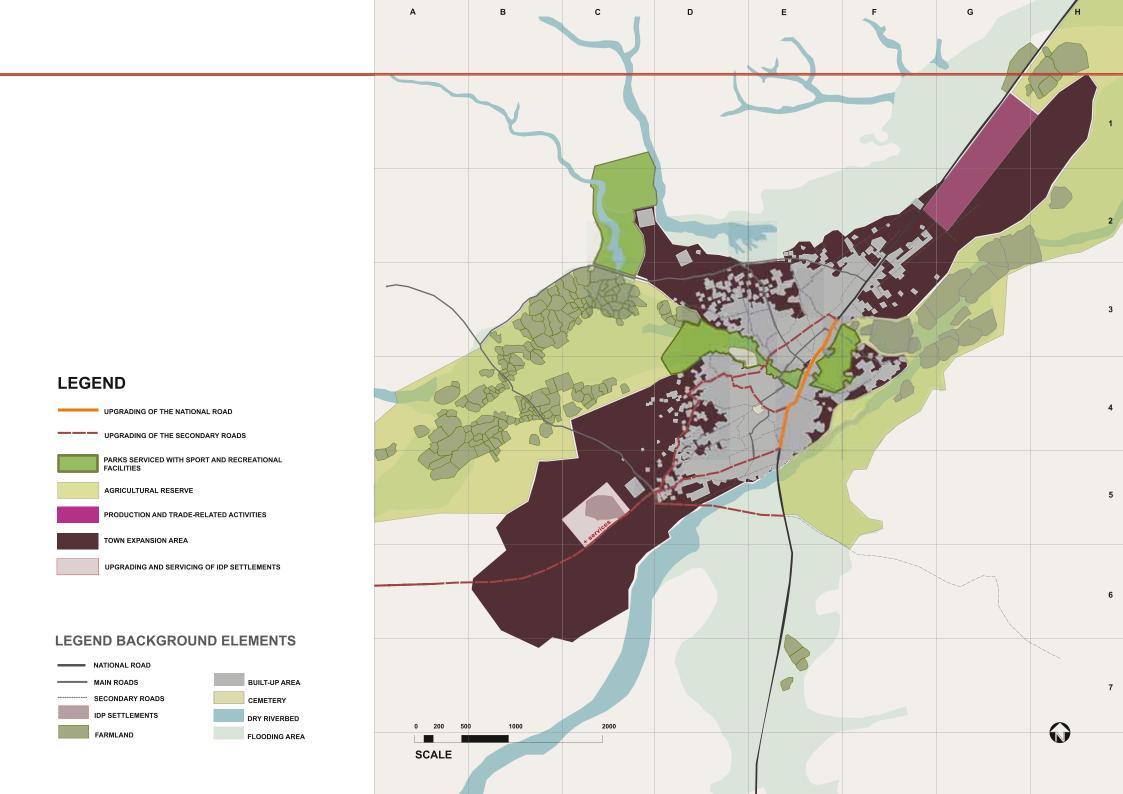
AGRICULTURAL RESERVE

Agricultural areas and grazing land should be preserved, expanded, and supported with infrastructure that aims to improve the local production of crops and enhance livestock production.

UPGRADING OF IDP SETTLEMENTS

UPGRADING AND SERVICING OF IDP SETTLEMENTS

The living environment and the living conditions of the displaced population should be improved. Adequate services and infrastructure should be provided to the southern part of town to be shared by the displaced and host communities settling in the surroundings.



URBAN SPATIAL ANALYSIS

Urban Spatial Analysis is a tool for understanding the dynamics, problems, and development opportunities of a city through its physical form.

objectives:

- → representing with maps and drawings the basic urban elements of the city: roads, services, infrastructure, major natural elements, traffic flow, main directions of urban expansion, key productive and commercial areas, public facilities, etc.
- → identifying and mapping the most vulnerable and problematic areas of the city by putting data into a spatial perspective.
- → providing to all urban development stakeholders a simple technical base for discussion to sustain the strategic planning process.
- → showing how the spatial analysis, combined with participatory planning, could be translated into specific projects integrated into a broader city development plan.
- → providing authorities, local and international agencies, and other public and private development actors with a flexible and simple tool to help direct investments and interventions.

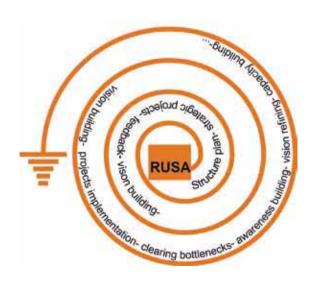
methodology:

The information presented in the urban spatial analysis is based on:

- → interviews with key municipal staff, officials from public institutions, and other key informers.
- → a desk study of the available documents.
- → site visits with the support of the relevant informers.
- → the preparation of preliminary maps, to be further detailed.
- → the collection of additional visual material (photos, graphics, etc.).
- → the finalization of the maps, incorporating all information collected.

THE APPROACH

URBAN SPATIAL ANALYSIS AND STRATEGIC PLANNING

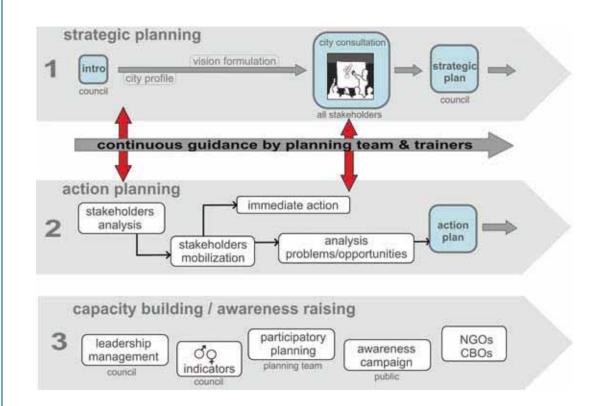


As shown in the graphic above, Rapid Urban Spatial Analysis is just one of the first steps of the planning process.

Planning is a continuous engagement with the needs and demands of an urban environment, complemented with capacity building, awareness raising, and continuous participative discussion among all stakeholders concerned.

To allow for the successful implementation of planning decisions, sustainable monitoring mechanisms have to be developed to prevent negative outcomes and overcome bottlenecks.

The graphic below illustrates the three-dimensional strategic planning process.



UN-HABITAT ACTIVITIES IN SOMALIA

UN-HABITAT has been active in Puntland since 1996 and the main focus of its activities has been in the fields of:

- → capacity building of public institutions
- → governance (local leadership training)
- provision and management of basic services (in particular water supply and solid waste)
- → urban planning
- → land management, mapping, and development of urban land information systems
- → municipal finance, asset management, and revenue collection
- → assistance to IDPs and returnees, in particular site review and planning, shelter provision, and secure tenure

Following are the main programmes and activities implemented by UN-HABITAT in recent years. For more information: www. unhabitat.org/somali region

1. Urban Development Programme for the Somali Region

Activities: (1) legal and institutional reforms – assessment of land tenure options for IDPs and returnees, analysis of the land legal framework; (2) municipal governance – organization of urban forums; (3) strategic urban planning and development control – development of resettlement plans for displaced population in major towns, capacity building for local authorities, development of town plans; (4) urban land management; (5) municipal finance – training for municipal staff, assessment of municipal finance software options; (6) basic urban service delivery – assessment of solid waste systems, support to local authorities to set up improved solid waste management systems, technical and practical support to municipalities to set up waste collection systems; (7) local economic development – economic profiling of four towns, support to authorities to set up public-private partnerships, labour-intensive employment generation projects; (8) local projects – construction and rehabilitation markets and slaughterhouses.

- **2. Emergency Assistance for IDPs and Returnees Activities:** (1) construction of houses for IDPs, returnees, and urban poor in Garowe, Bossaso, and Hargeisa through a self-help methodology; (2) provision of security of tenure; (3) training of returnees and IDPs in the labour-intensive production of local construction materials and construction skills; (4) provision of job opportunities; and (5) developing community settlement governance and management techniques.
- **3. Support to Improved Service Delivery in Somali Cities Activities**: (1) solid waste management projects; (2) provision of technical, economic, and legal guidance to municipalities and representatives of the local consortia to strengthen their capacity and create a common understanding of sustainable and integrated solid waste management; and (3) training on appropriate technical solutions for local institutions and businesses to promote pro-poor public-private partnerships and income-generating activities in the waste sector.
- **4. Support to Priority Areas in the Urban Sector Programme Activities:** (1) preparation of municipal finance training material; (2) municipal finance training;(3) rehabilitation of Hargeisa, Boroma, and Garowe municipal buildings; (4) extension of the Ministry of Interior building in Hargeisa; (5) assistance in developing the Hargeisa City Charter and urban laws; (6) production of multi-purpose base maps of a few cities, and (7) rapid spatial urban analysis for main towns.
- **5. Good Local Governance and Leadership Training Programme Activities:** (1) training material on good local governance; (2) training on leadership management skills, gender, and action planning; (3) awareness campaigns on good local governance; (4) implementation of priority projects.
- **6. The Somalia Urban Sector Profile Study** An analysis of how to fill the gap between the EC's Country Support Strategy and individual urban project interventions, providing an instrument for policy dialogue and a basis for determining interventions.
- **7. The Reconstruction of the Tsunami-affected Village of Xaafuun Activities:** (1) construction of over 200 houses for the affected population; (2) community buildings; and (3) development plan for the town.

THE URBAN DEVELOPMENT PROGRAMME FOR THE SOMALI REGION: ITS DONORS AND IMPLEMENTING PARTNERS

The Urban Development Programme for the Somali Region is an umbrella programme for all urban interventions in the Somali region. UN-HABITAT is the lead agency, and its partners are the Italian NGO Consortium UNA, the International Labour Organization, Oxfam-Novib, UNICEF, the Danish Refugee Council, UNHCR, and a number of local NGOs. The programme is funded by the European Commission and UNDP, and co-funded by the Government of Italy, the Government of Japan, UNICEF, the Department for International Development of the United Kingdom, UNHCR, and the Humanitarian Response Fund. The programme receives support from WFP through food-for-work schemes.

SUDP activities encompass: urban governance, legal and institutional reform, donor coordination, urban management, land management, municipal finance, basic services and urban infrastructure (markets, slaughterhouses, roads and municipal building rehabilitation), local economic development, urban planning support, shelter provision for displaced population and the urban poor, slum upgrading, and solid waste management.

European Commission	The EC is the main donor of the SUDP and supported several other UN-HABITAT interventions in the Somali region. The commission provides funding as well as technical and strategic guidance to programme design and implementation.	
UNDP	UNDP's involvement in SUDP is part of its Governance and Financial Services Programme, under which long-term cooperation with UN-HABITAT exists. UNDP is the key coordinating agency for interventions in the region, and its partnership with UN-HABITAT extends to a wide range of programmes, most prominently the Joint Programme for Local Governance and Service Delivery.	
Government of Italy	The support of the Government of Italy has been consistent throughout UN-HABITAT's presence in the Somali region. It funds part of SUDP's core activities and service delivery programmes and is involved in the elaboration of the new Joint Programmes.	
Government of Japan	The Government of Japan funds the Assistance for the Resettlement of Returnees and Internally Displaced People programme in Hargeisa and Garowe.	
Department for International Development	Through DFID, the Government of the United Kingdom funds a number of governance-related aspects of SUDP and the new Joint Programmes. DFID support also extends to activities related to the Community-Driven Development and Reconstruction Programme.	
UNICEF	The UN Children's Fund partners with UN-HABITAT in the implementation of several activities, such as the Joint Programme for Local Governance and Service Delivery, and the Community-Driven Development and Reconstruction Programme. It also collaborates in strengthening the role of youth in local governance.	
UNA	The Italian NGO consortium UNA represents three Italian universities and a number of international NGOs. UNA takes the lead in the urban services component, which includes solid waste management and sanitation activities.	
International Labour Organization	ILO is responsible for the local economic development component of the SUDP and partners with UN-HABITAT in a number of other programmes, such as the Joint Programme for Local Governance and Service Delivery and the IDP resettlement interventions.	
Oxfam-Novib	Under the SUDP, Oxfam-Novib expanded its capacity-building activities for local NGOs and community-based organizations.	
World Food Programme	WFP supports UN-HABITAT shelter activities by providing food-for-work at the construction sites of the shelter projects.	
UNHCR	UNHCR is a key UN-HABITAT partner for the implementation of land-, shelter-, and IDP-related activities. UNHCR funds some IDP settlement upgrading components and supports joint research on land-related issues; in addition, UNHCR and UN-HABITAT are co-chairs of the Somali Shelter Cluster.	
Swedish Agency for International Development	SIDA financially supports UN-HABITAT for the implementation of shelter activities for IDPs and the urban poor in south central Somalia.	
Danish Refugee Council	DRC is one of the UN-HABITAT implementing partners, particularly concerning community development and IDP-related issues.	
Norwegian Refugee Council	NRC partners with UN-HABITAT in the implementation of shelter activities for IDPs and other vulnerable communities.	

