

Ethiopia 2050 – Challenges and opportunities

Lessons learned in Rural Urbanization

the case of BuraNEST

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Urban Ethiopia –

in Ethiopia, urbanization will be inevitable and irreversible

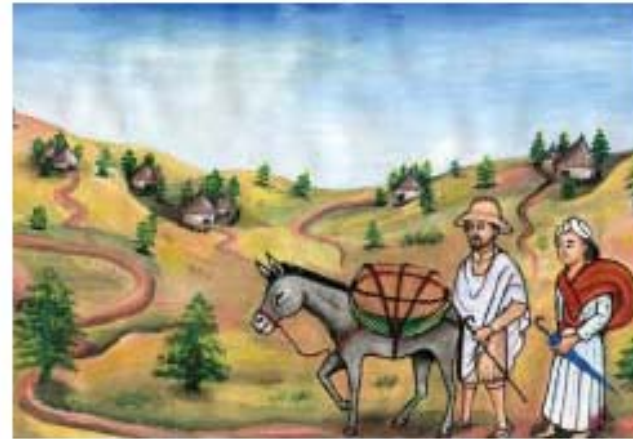


- The current urban population is around 17% of 80 million;
- The recent urban growth rates haven't been spectacular; around 5 % p.a.
→ 30% urban population in 2020.
- “Urban primacy” – Addis Ababa is with 4 million (2010) ten times larger than the 2nd largest city – Dire Dawa with 400.000 inhabit.
- Of the 927 cities/towns are only 10 with more than 100.000 inhabit.
- Following to UN HABITAT more than 80% of the urban population do not have access to adequate housing and lack access to safe water and sanitation.

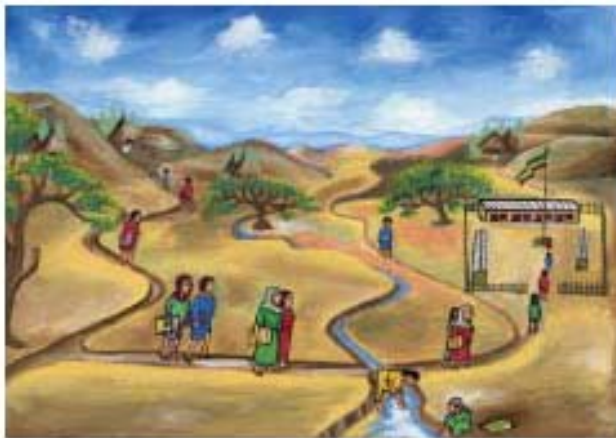
Simple facts about rural life in Ethiopia



Dispersed settlement



Unavailability of market nearby



Unavailability of school nearby



kids and womens fetch water from rivers after long distance walking

NesTown - New Ethiopian Sustainable Town

is a workshop where the inhabitants learn to build their own town.

NEST provides to its inhabitants, from the start, sources of income and professional training and communal urban institutions.



R E A L L I F E E X P E R I M E N T
KEY IMPLEMENTATION CONCEPTS_KEY PLACES_KEY MOMENTS_KEY ACTORS

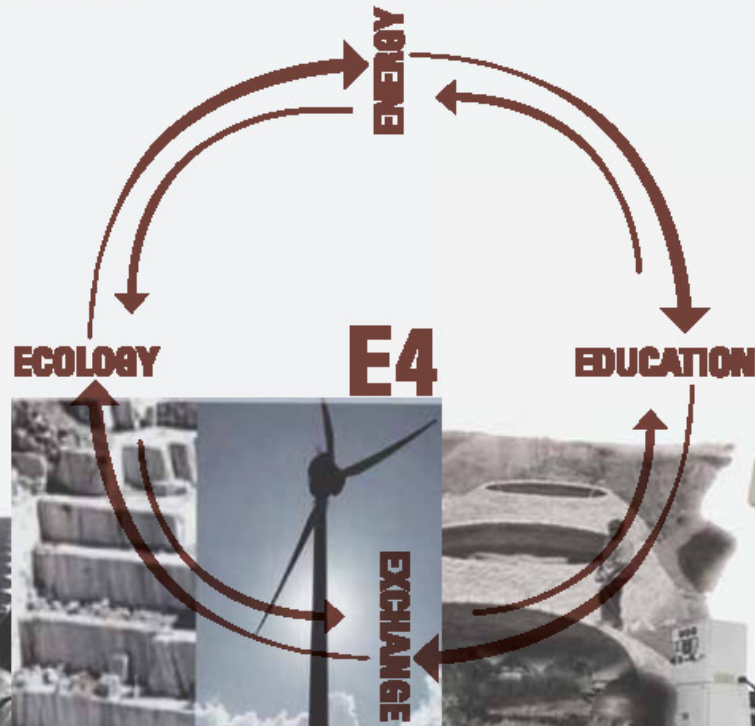
nesTown IMPLEMENTED THROUGH 4E:

EDUCATION

ECOLOGY

ENERGY

EXCHANGE



IMPLEMENTING 4E: EXCHANGE_ *nesTown* START-UP INIATIVE FOR NEW BUSINESS

IS A CAMPAIGN AND RELIEF FUND TO:
 Encourage young entrepreneurs to start there own business,
 Award micro loans.

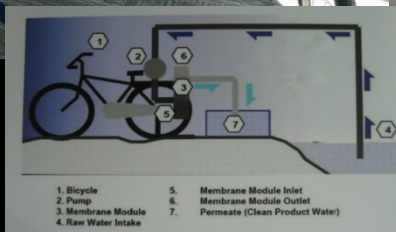
Generate new working places and is focussed on topics of improving everyday life such as:
 Replacing legs, arms and muscle strength by wheels.
 Reducing time of interactions between farmland, market place by cheap transportation

Machinery for working the land and transportation have to be developed, introduced maintained and re-manufactured.

Promoting innovative cooking stoves to save fire wood.

As new stoves have been developed all over the world there is the need for inventing and introducing an Amhara Tana solution.

Encouraging women to start there own business in micro industry and handicraft.
 It is a search for women entrepreneurship in collaboration with the University of Bahir Dar.



MODEL: RULE 3_SURFACE RATIO AND WATER IRRIGATION

BUILDINGS COVER MAX. HALF OF PARCEL AREA AND FOUNDATIONS PERMIT BUILDING THREE FLOORS (MAX.); ALL BUILDINGS COLLECT AND IRRIGATE RAIN WATER TO TOWN COMMUNITY.

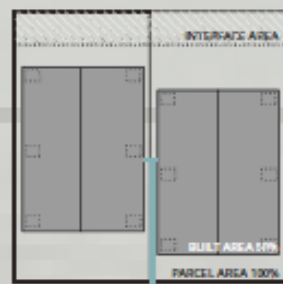
High building density correlates with short distances. Both are prerequisites for the efficient resource management of rain water.

One of the prime motivations of building the high density town is to achieve resource efficiency.

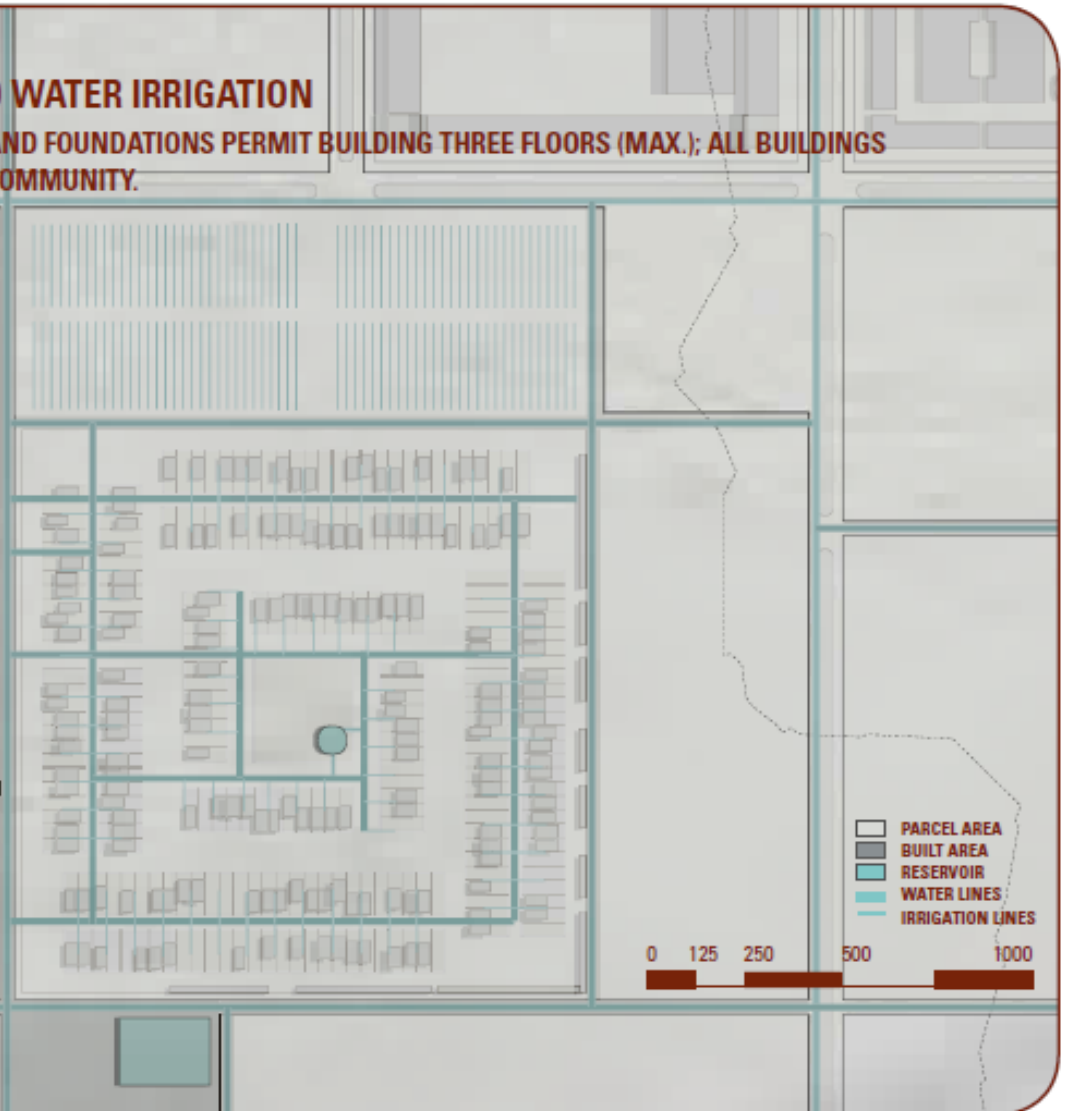
Buildings may cover at most 50% of a plot. Building foundations allow a maximum of 3 floors.

All buildings collect rainwater which is drained into the fountains and cisterns with water purification.

Never lose a drop of rain water, serves as the townbuilders' guideline.

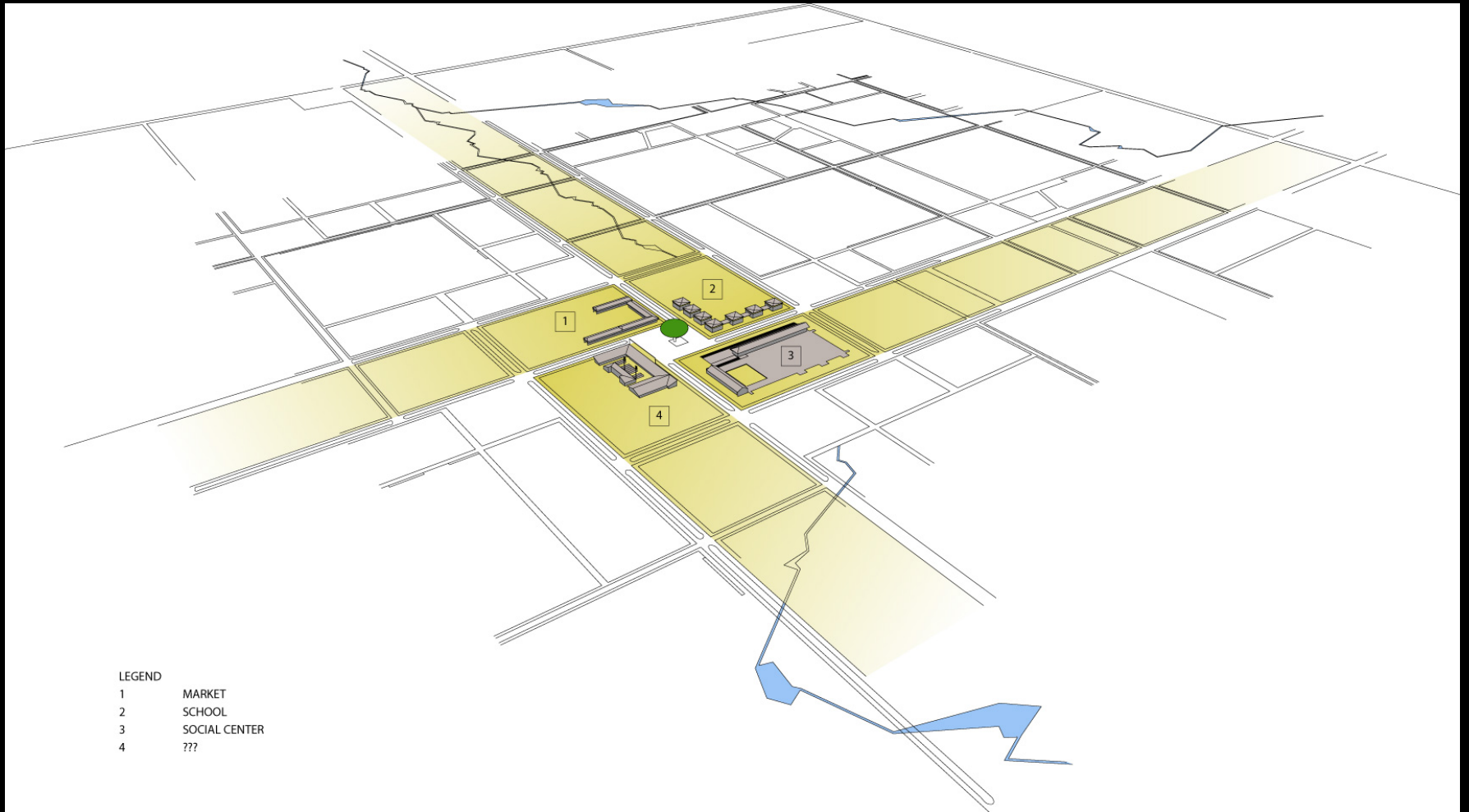


PARCEL AREA DIAGRAM



R E A L L I F E E X P E R I M E N T

KEY IMPLEMENTATION CONCEPTS _ KEY PLACES _ KEY MOMENTS _ KEY ACTORS



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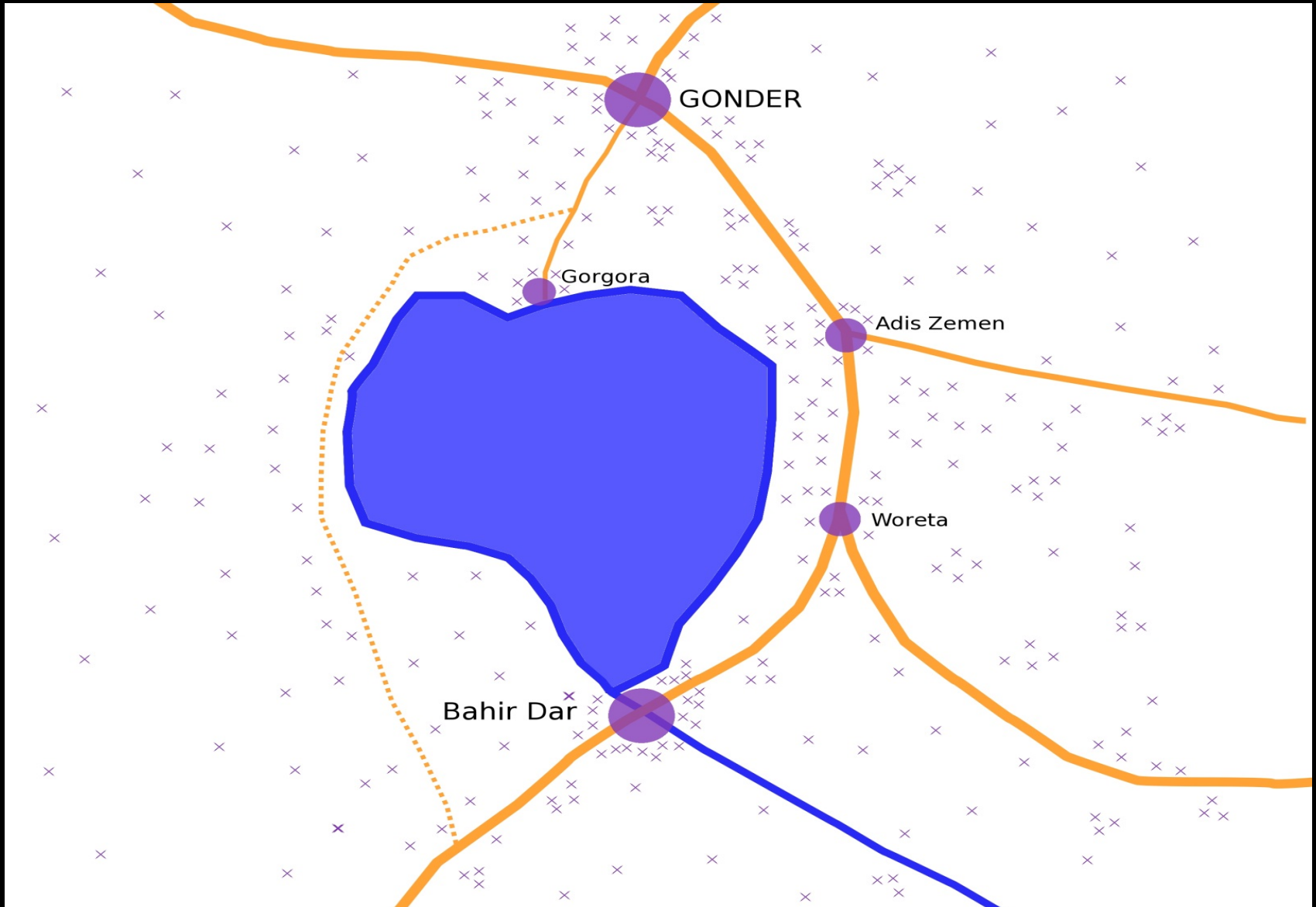


BURA NESTown

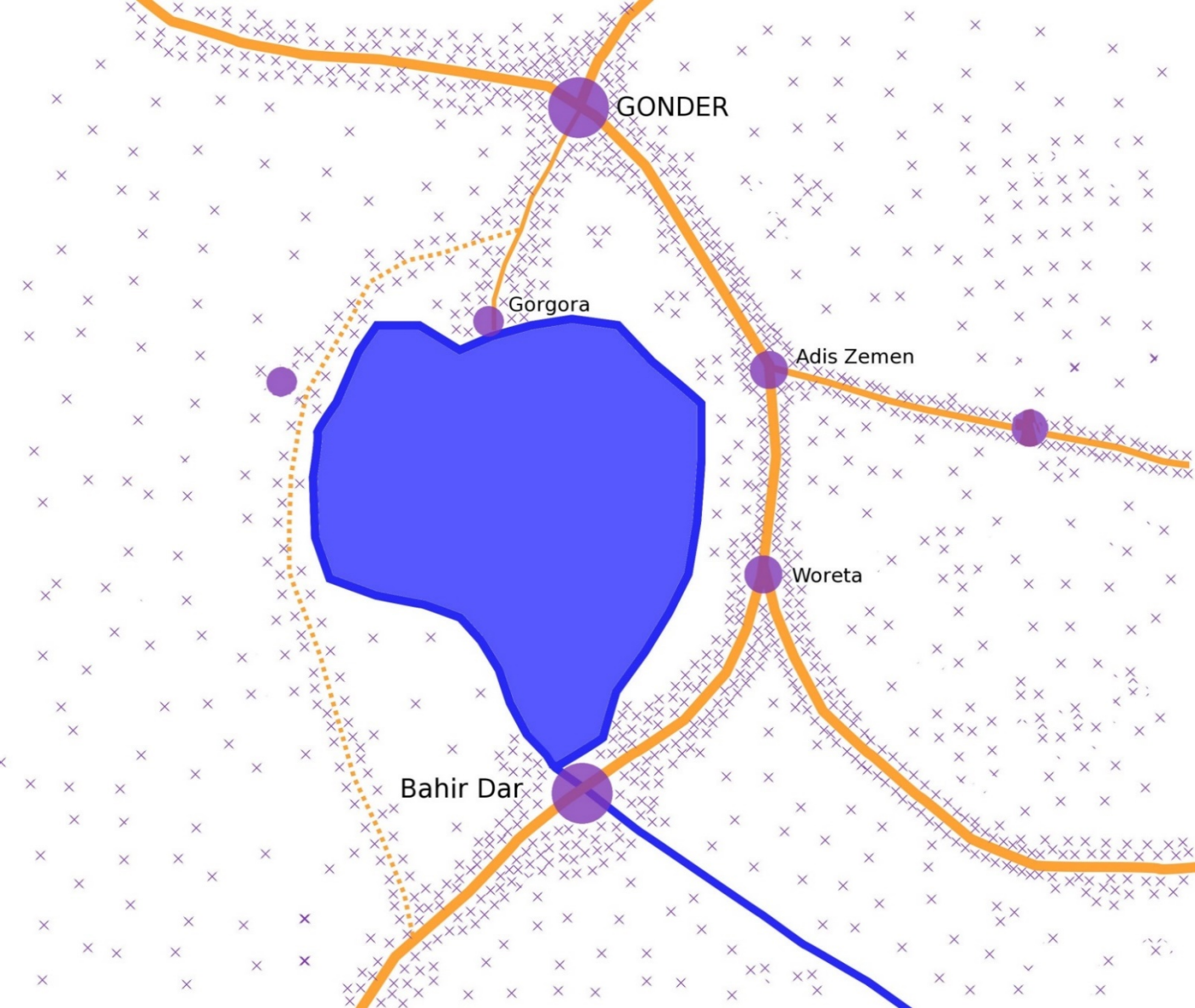


VISIT 9 FROM JUNE 23 TO JUNE 28, 2010

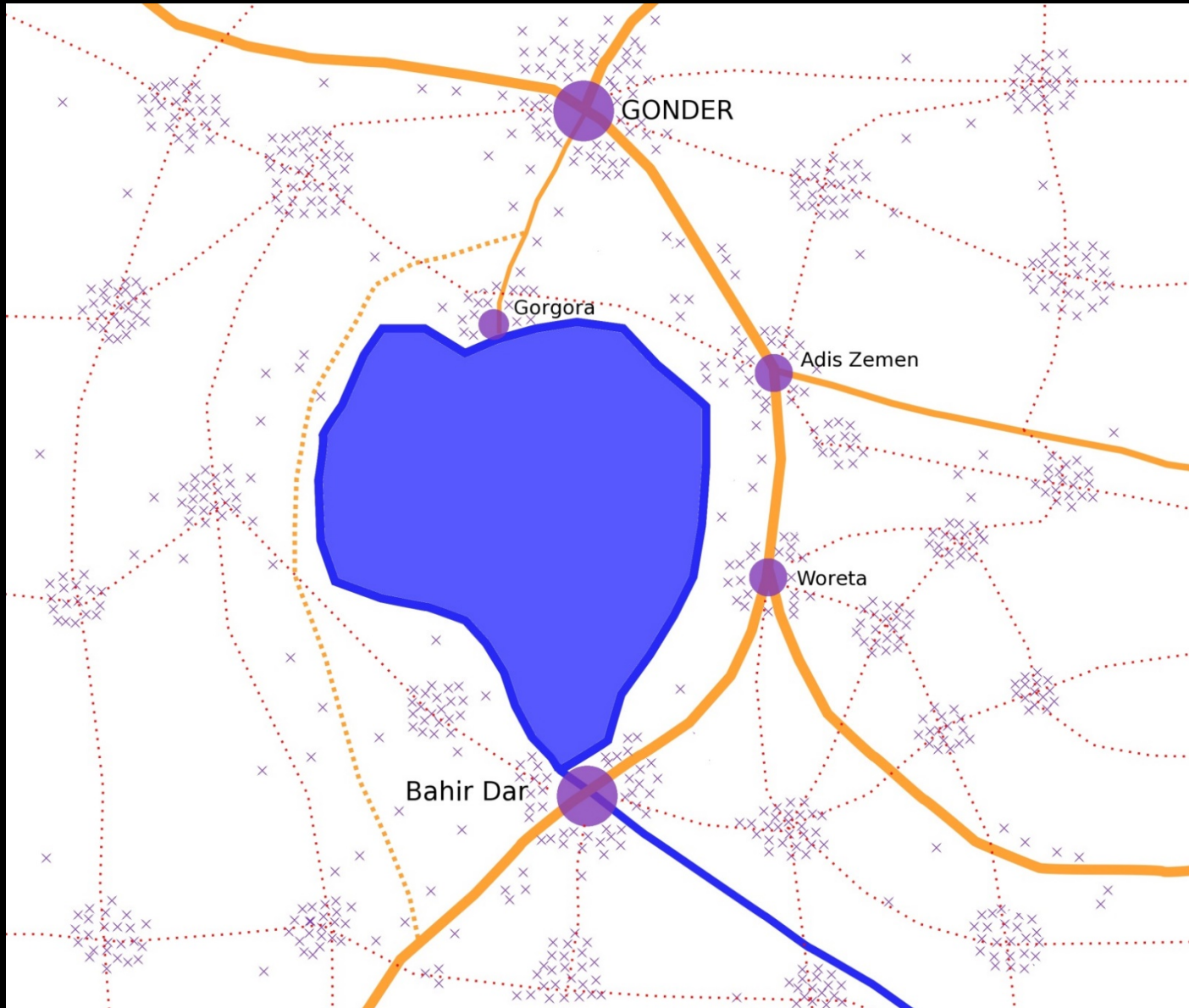
The present settlements



The future following current trends



Planned future with NEST planning concept





Existing traditional house construction and domestic life in Bura area







BURA-NEST TOWN MASTER PLAN LAYOUT D3

STEPS 54321
 SET-OUT 2010_06_14







Community meetings



Rain Water Units – RWU

RWUs are the new housing type for the New Town.

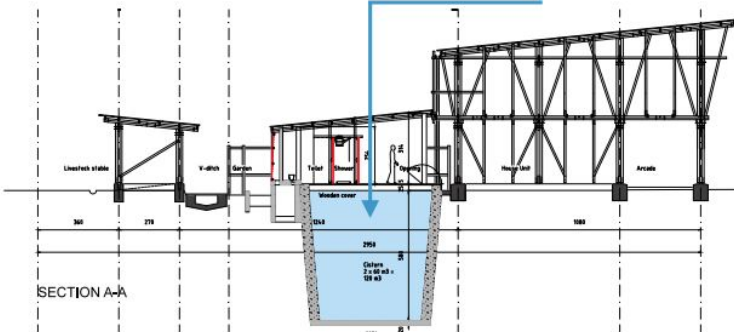
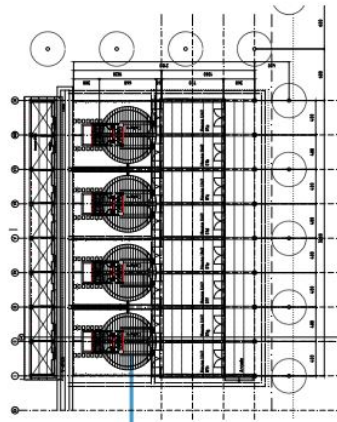
RWUs manage the natural resources: they save productive soil, they transform solar or wind energy into electrical power, they reuse waste as building material.

RWUs harvest water for human and animal use and for irrigation.

One RWU can be for 1 to 8 households, with 1 to 3 stories, depending on site plan and cooperative by-laws.

Each RWU has a front and back yard, stable structure for flexible use at the back, cistern, dry toilet and allocated land for horticulture and animal husbandry.

Each RWU can be implemented in various phases according to needs, labor potential and finances of the individual household or cooperative society.



Construction of the first prototype



Trained carpenters with their certificates





Community members
working in different
construction works



Training the youth in construction and urban agriculture



AMHARA MODEL TOWN
www.amt.gov.et

BuFTC
Paling
Southern facade





Step B | Soil mixing
 Soil mixture: 100 m³
 Dagusa: 10 trailers
 Toff: 10 trailers
 Time requirement: 35 days
 (February and March 2004)
 Unskilled labour: 8 P

Experiments in earth block construction



Step B | Adobe walls + electrical installation
 Common walls: 128 m²
 Individual walls: 270 m²
 Planks 15 cm: 6 pieces
 Electrical material
 Time requirement: 42 days
 (April until June 2004)
 Unskilled labourers: 16 P
 (Performance: 160 blocks per day = Total 6700 blocks)
 Skilled labour: 1 P
 Electrician: 1 P



Forming 2 cooperatives with the help of CPA (cooperative propmotion agency)






One of the first housing blocks



Youth at work in BuraNEST






**AMHARA
MODEL TOWN**
www.amharamodeltown.org
 Amhara Model Town
 BuraNEST
 Laboratory

 Project component C
 BuCTC


 School building

 ICT Northern wall
 reconstruction

Picture 29
Project component C

BuCTC
School Building




**AMHARA
MODEL TOWN**
www.amharamodeltown.org
 Amhara Model Town
 BuraNEST
 Laboratory

 Project component C

 BuCTC
 School Building

 Wall plastering
 ICT Wall

Picture 25
Project component C

BuCTC
School Building

Picture By -BJ
20.10.2016



BUCTC, (Bura community training center) building

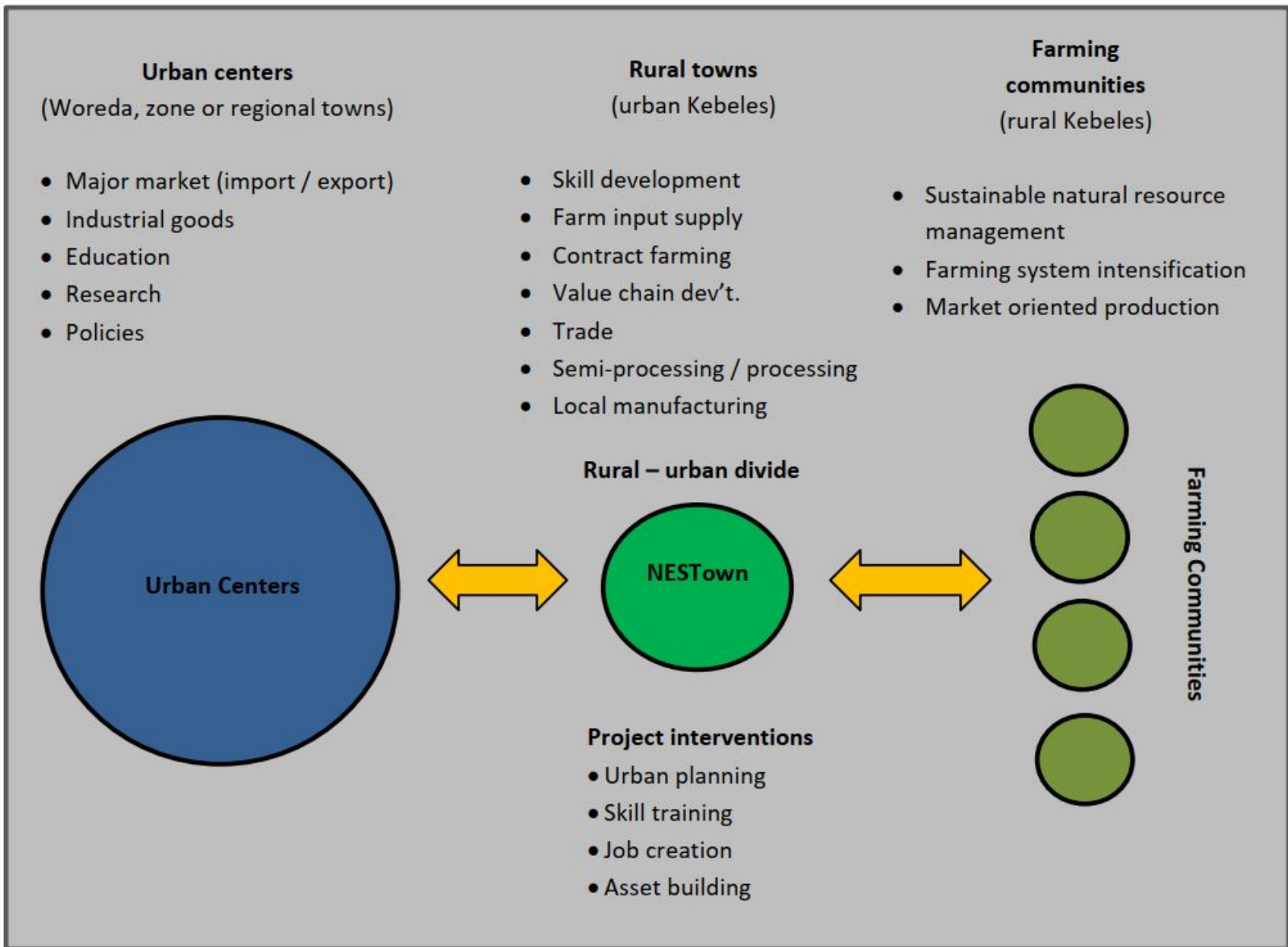


Figure 1: Illustrated concept for sustainable urban - rural development and reduced migration
(Source: TerraPlan Solutions GmbH)

Addis Ababa's emerging skyline





The Addis Ababa grand stadium



The way forward from lessons learned, some suggestions

- Better wealth distribution, investing in sustainable and cost efficient projects
- Strengthening the education sector by improving quality, evaluating the relevance of technical and higher education for the development of the country and reforming it. **Quality, diversity and relevance**
- Enabling rural and Semi-rural communities to have good governance, strengthening community participation and access to social services and infrastructure.
- Enabling communities and the private sector through access to finance, better management training
- Improving market efficiency in rural-urban linkages Learning from best practices from local and international experience.

The task in Ethiopia is urgent as it is increasingly apparent that the urbanization process needs to be more sustainable, efficient, resilient and inclusive in order to support the development of the country and accommodate the population.