Localizing Urban SDGs Methodologies
Experiences from Tunisia

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Implementation of SDGs in Tunisia (1)

• Political coordination by two Ministries: Development and Foreign affairs

• Work is under way to constitute technical Framework for SDG’s implementation

• First Voluntary National Evaluation (VNE) to be presented in 2019 at the High Level Political Forum
Implementation of SDGs in Tunisia(2)

• Civil society, private sector and government stakeholders are closely associated in SDG’S appropriation

• Reporting on the Data gap assessment: first step
Urban SDGs & Human settlements indicators: Tunisia Case

Make Cities and Human Settlements Inclusive, Safe, Resilient and Sustainable
Data sources

- National Statistic Institute produce a part of information needed for urban SDGs
- Other Statistic data required are produced by Public Statistic Structures
- Civil Society: special domains

More than 10 agencies produce data for urban SDGs
Shortlist Agencies

1. Statistique Tunisie
2. Housing, Building and territory management Ministry
3. Transport Ministry
4. Local collectivities Ministry
5. Tunisian Environmental and sustainable Development Observatory
7. Local municipalities
8. .....etc
Collaboration

République Tunisienne
Ministère du développement
de l'investissement
et de la coopération internationale

الجمهورية التونسية
وزارة التنمية والإستثمار
والتعاون الدولي

collaboration

Republique Tunisienne
Ministere de l'interieur
وزارة الداخلية

La Ruche
dela Citoyenneté Active

Société Tunisienne
de l'Electricité et du Gaz

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Société Tunisienne
de l'Electricité et du Gaz

ANGeD

رئاسة المشتركة

Gouvernment de Monastir

Gouvernment de Monastir

Office National de l’Agrainissement

الهيئة الوطنية للتنمية الصناعية

مكتب المرأة والأسرة والمطهوة

Office National de l’Agrainissement

Office National de l’Agrainissement

Statistiques Tunisie

المؤسسة الوطنية للتراث

Institut National du Patrimoine
Monitoring Urban SDGs using Geospatial Information
Background

Tunisian National Statistics Institute is:

- **Strengthening** statistical production and dissemination by using geospatial methods
- Implementation of the **Global Statistical Geospatial Framework** in NSI’s production
- Carry out **experiences** to decide about best practices in geospatial data use to **measure** SDGs
Geospatial Information in Monitoring Urban SDGs

SDG 11 Indicators with a direct spatial component

11.2.1 Transport
11.3.1 Land Consumption
11.7.1 Public Space

Spatial Analysis
- New form of data collection
- New form of analysis

Using the Geospatial Information components to monitor Urban SDGs
SDG 11 Working

National Sample of Cities:
A consistent set of cities representative of Tunisian cities, to report on urban progress in a systematic manner at city level

Indicator 11.2.1:
Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities

Indicator 11.7.1:
Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities

Under Development
Geospatial Information for City boundaries

We Don’t know the correct definition and identification of Cities YET

- Before, we utilized administrative definition
- Now, Tunisian territory is all communal classified and distinction between urban and rural areas is not feasible according to a well-established definition
Geospatial Information for City boundaries

• Urban SDG indicators are dependent of cities boundaries
  We have developed our own Methodology of cities delimitation

• Partnership with OECD, European Statistic Institutes, ...
  Adapt the “City” definition of EU to the Tunisian case
Tunisian Cities Boundaries

Data

• **Google Earth Imagery** as baseline
• **Enumeration Area shape** (Census) for communal and non-communal zones
• **Statistics Data** (population data) at EA level
Tunisian Cities Boundaries

Method:

1. Location of densely populated Urban Cores
2. Associate less-populated surrounding territories: municipalities, and rural areas that are socio-economically tied
3. Encompass all of them to the urban core

List of Cities
National Sample of Cities

To report for urban SDG indicators:

a consistent set of cities that is representative of the territory, geography and history of Tunisia

Method:

1. Identifying and compiling a complete listing of all the cities

2. Defining and localizing the selection criteria (population, household, area, ...)

3. Selection of the Sample of Cities: Technical support needed

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<th>Périmètre (km²) de la ville</th>
<th>Area (km²) de la ville</th>
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Legend
- City
- Governorate

0 150 300 60 90 120 150 Kilometers
Using Google Earth, EA shapes and GIS tools to define cities Boundaries

Define the selection criteria: City population size, City area size, Geographical location, Regional distribution

Create database with attributes for selected cities

Integration Statistics with Geospatial data to analyze the representation of cities

the National Sample of Cities???
Indicator 11.2.1: Proportion of the population that has convenient access to public transport by sex, age and persons with disabilities
11.2.1: Data and Method

- Choose of Tozeur as pilot city
- Google Earth Imagery
- Data collected from transport authorities (public transport stops) and georeferenced by INS
- Population data at Enumeration Area level (Census)
- Method of calculation based on buffering distance
11.2.1 Data and Methods: Test

Processing: use of GIS software

1. **Delimitation** of Tozeur urban agglomeration

2. **Identification** of transport stops

3. Computation of service areas: **Buffering** each of the stops at distance field of 500 meters

4. **Overlay** service area with population

5. **Calculation** of the population within service areas

Population with access to public transport = 100 x City population
Inconvenients

- Methodology does not take barriers into account like crossing closed roads, rivers, railways, etc.
- Street network detained by authorities is not complete, can’t use network to calculate service area using network methodology.
  » Possible use of OpenStreetMap
- Lack of georeferenced transportation data in most cities.
- People use other kinds of transportation.
Use of GIS to calculate Indicator 11.7.1

Indicator 11.7.1: Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities
11.7.1 Data and Method

Under study

11.3.1: Data and Method

- GIS data for Monastir city boundary
- OpenStreetMap to download data streets data in GIS formats
- Google Earth as a baseline for identification of open public spaces and urban extent
- Development urban plans as urban extent data and base data for open public spaces
11.7.1 Data and Method

Under Study: Monastir city for test

Urban Extent
- Delimit the built-up area of the urban agglomeration

Land allocated to streets
- Download Streets from OpenStreetMap
- Computation of total Land allocated to streets

Public Open spaces
- Selection of open public space from urban plan and Google Earth
- Computation of total area of open public space

Estimation of share of population with access to open public spaces
The Project supports the two countries to:

- Design monitoring tools to improve availability and access to data at city & urban national levels for systematic reporting over time
- Create a consistent sample set of cities for national level reporting
- Strengthen capacities for quality data production, multilevel coordination & inter-linking with SDG 11 and others related with urban components to monitor and report
UN-Habitat Project: Tunisia

• Selection of two cities: Monastir and Tozeur
• Two Regional workshops conducted last June in the two cities
• Participants: Central and local beneficiaries from civil society, government producers of the SDG 11 data, researchers,... etc
• 7 training modules
NSI is the UN-Habitat Focal point: Coordinate all the relevant stakeholders

1. **Consultation** with administrations, civil society, researchers,... about availability data
2. **Collecting** Data
3. **Computing** indicators
4. **Reporting**
5. SDG 11 **Monitoring**
6. Calculate the **City Prosperity Initiative (CPI)** for Monastir and Tozeur cities.
Opportunities

• **Combining and integrating** various methods and data sources

• **Non-traditional** sources (imagery, remote sensing,...) for spatial analysis available over time
  
  ➡️ *Enhance* the statistical capacities

• **Censuses and Surveys** at Blocks level
  
  ➡️ Possibility of Aggregation methodologies

• **Partnership** involving intergovernmental organizations, NGOs, universities, etc.
  
  ➡️ Inclusive dialogue improving the development of cooperation and actions.
Challenges

Urban data Monitoring and reporting present important challenges

• Possible missing values for some indicators or collection years

• Availability of data, especially *disaggregated data* just from censuses

Need of *capacity building* to produce urban SDGs:

• Supporting in data collection, computing and monitoring

• Spatial analysis and data disaggregation concepts and use

• Improving our data integrated (geographic and statistic information) capability even more
Moving Forward

- More integration of Statistical and Geospatial information
- Test other methodologies for urban SDGs with geospatial dimension
- Affinate methodologies of urban SDGs
- Use of new Sources and technologies: Earth observations, Big Data,…
- Work with OECD and UN-Habitat on the Tunisian Cities boundaries
Thank you for your Attention

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