GREEN CITIES FOR A GREENER FUTURE

#EU GREEN WEEK
21 > 25 May 2018
USING SUMP FOR A GREENER CITY
– the Turda example

Radu ANDRONIC
USING SUMP FOR A GREENER CITY
– the Turda example

Turda example

• 6th SUMP Awards Winner
• SUMP at 1st edition
• SUMP designed and approved by September 2017
USING SUMP FOR A GREENER CITY
– the Turda example

Some key facts about Turda:

- North-west Transilvania
- 57,000 inhabitants
- Node on TEN-T network
- Ancient history (Roman castrum of Potaissa)
- Balneoclimacteric spa city
- Salt mine – most visited touristical objective in Trasilvania, with 600,000 tourists last year
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Turda environmental issues

Heavy traffic in the city center – generates air pollution

Noise generated by traffic

Polluting public transport vehicles

Deforestation of the urban landscape and urban (pedestrian) areas

Heat
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Turda environmental issues

Key environmental assessment indicators used in Turda SUMP:

- Total quantity of emissions (powders), in tones/year.
- Total amount of greenhouse gases (equivalent CO₂ tones per year)
- Noise (db)
- Energy consumption (kj for trip)

<table>
<thead>
<tr>
<th>Obiective generală</th>
<th>Indicatori</th>
<th>UM</th>
<th>Valoare an bază 2016</th>
<th>Valoare Do Minimum 2020</th>
<th>Valoare Do Minimum 2023</th>
<th>Valoare Do Minimum 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impactul asupra mediului</td>
<td>Emisiile CO₂</td>
<td>Tone pe an</td>
<td>32,734</td>
<td>39,823</td>
<td>45,140</td>
<td>57,546</td>
</tr>
<tr>
<td></td>
<td>Emisiile noxe, pulberi</td>
<td>Tone pe an</td>
<td>200.9</td>
<td>199.4</td>
<td>198.3</td>
<td>195.7</td>
</tr>
</tbody>
</table>
USING SUMP FOR A GREENER CITY
– the Turda example

How to use SUMP

A strategic tool
In line with urban/regional and national planning

A functional tool
Access to EU finance, project engineering

An operational tool
New internal structures, procedures
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National SUMP framework

SUMP are mandatory in order to access ERDF financing for infrastructure, public transport and alternative mobility solutions in Romania, no matter the size of the city.

SUMP are mandatory at national level as annex of the General Urban Plans.

SUMPs’ strategic objectives are set up by law:
1. Accessibility,
2. Safety,
3. Environment protection,
4. Economical efficiency,
5. Quality of urban areas.
### USING SUMP FOR A GREENER CITY – the Turda example

In line with

<table>
<thead>
<tr>
<th>Nivel sectorial/ Nivel teritorial</th>
<th>Nivel european</th>
<th>Nivel național</th>
<th>Nivel local</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planificare Spațială</td>
<td>Schema de Dezvoltare a Spațiului Comunitar</td>
<td>Planul de Amenajare al Teritoriului Național</td>
<td>Strategia de Dezvoltare Teritorială a României</td>
</tr>
<tr>
<td>Sănătate</td>
<td>Cartea albă - Împreună pentru sănătate. O abordare strategică a UE</td>
<td>Strategia Națională de Sănătate 2014-2020</td>
<td></td>
</tr>
<tr>
<td>Economie</td>
<td>Strategia Națională pentru Competitivitate</td>
<td></td>
<td>Strategia de Dezvoltare Durabilă Integrată a mun. Turda, 2017-2020-2030</td>
</tr>
<tr>
<td>Condiții de locuire</td>
<td>Strategia Națională a Locuirii</td>
<td></td>
<td>Strategia de Dezvoltare Durabilă Integrată a mun. Turda, 2017-2020-2030</td>
</tr>
<tr>
<td>Protecție socială</td>
<td>Strategia națională privind incluziunea socială și reducerea săraciei pentru</td>
<td></td>
<td>Strategia de Dezvoltare Durabilă Integrată a mun. Turda, 2017-2020-2030</td>
</tr>
<tr>
<td>Societate informațională</td>
<td>Planul Strategic pentru Tehnologia Transportului</td>
<td>Strategia Națională privind Agenda Digitală pentru România</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>Carta albă 2011 - Traseul către o zonă unică a Transportului European</td>
<td>Master Planul General de Transport al României</td>
<td></td>
</tr>
</tbody>
</table>

**GREEN CITIES FOR A GREENER FUTURE**

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– the Turda example

In line with


EU Sustainable Development Strategy
Reduction of pollutant emissions, Reduction of greenhouse gases
SUMP results:
Decrease CO2 emissions with 15.9% by the end of 2030
Decrease other toxic emissions (PM10) with 16% by the end of 2030

The white book: Transport (2011)
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Turda vision
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– the Turda example

- environmentally friendly city,
- a modern infrastructure network based on integrated mobility axes,
- clean and green urban areas,
- a city that capitalizes on its anthropic and natural potential,
- A city that assumes and promotes, through accessibility and visibility, the historical heritage
- A city that affirms its local identity at national and EU level,
- a dynamic and modern urban center, at the intersection of the main corridors of national and European mobility
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Objectives

INTEGRATED TURDA

Shift from car-oriented infrastructure to a multimodal oriented infrastructure
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Objectives

- Increase the movement of people and goods in and out of the city
- Better accessibility of urban spaces
- Better fluence
- Not the least, accessibility as a social equity purpose
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Objectives

SUSTAINABLE TURDA

Ecologic public transport

Implement alternative transport structures (eg: bike-sharing)
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– the Turda example

Objectives

- Increase the quality of urban landscape
- Expand pedestrian zones
- Make spaces/city attractive to the people

!!One key factor in MCA was Increase of pedestrian space
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Objectives

SMART TURDA

Integrate the smart-city concepts and technologies in transport and infrastructure

Embrace innovation

Unify the supporting systems for various transport modes and facilities (eg: public transport + parking + bike-sharing + smart traffic management)
## Using SUMP for a Greener City – the Turda Example

### SUMP Environment Analysis

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impactul asupra mediului</td>
<td>Emissie CO2</td>
<td>Tone pe an</td>
<td>39,734</td>
<td>39,823</td>
<td>45,410</td>
<td>57,316</td>
<td>38,454</td>
<td>44,244</td>
<td>49,718</td>
<td>-3.6%</td>
<td>-9.3%</td>
</tr>
<tr>
<td></td>
<td>Emissie noxe, pulbere</td>
<td>Tone pe an</td>
<td>200.9</td>
<td>199.4</td>
<td>198.3</td>
<td>195.7</td>
<td>192.2</td>
<td>184.8</td>
<td>168.7</td>
<td>-2.7%</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

**Image Description:**
- The image contains a table with data about SUMP Environment Analysis for a greener city, specifically focusing on Turda as an example.
- The table outlines objectives such as environmental impact and indicators like CO2 emissions and particulate matter emissions.
- The data includes specific values for 2020, 2021, and 2022, along with variations for different years.
- Additional visual elements include a cityscape and green city slogans, emphasizing sustainability and environmental goals.
### USING SUMP FOR A GREENER CITY
– the Turda example

#### SUMP internal tools

<table>
<thead>
<tr>
<th>Obiective generale</th>
<th>Indicatori</th>
<th>Pondere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eficiența Economică</td>
<td>Valoarea intarzierilor in retea</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Procentul subventiei in total venituri operator</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>RIR/E</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>Impactul asupra mediului</td>
<td>Emisii CO2</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75%</td>
</tr>
<tr>
<td></td>
<td>Emisii noxe, pulberi</td>
<td>25%</td>
</tr>
<tr>
<td>Accesibilitate</td>
<td>Durata de asteptare</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Durata de deplasare</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td>Viteza de deplasare</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Populatie deservita de TP</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Populatie deservita de 2 moduri transport public</td>
<td>11%</td>
</tr>
<tr>
<td>Siguranță</td>
<td>Numar accidente</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Km trotuar protejat</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Nr treceri de pietoni modernizate</td>
<td>20%</td>
</tr>
<tr>
<td>Calitatea vieții</td>
<td>Mp spatiu pietonal</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Nivelul costului cu transportul in total buget familie</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Fluenta circulatiei</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Nivel Serviciu</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Raport unitar cerere/oferta locuri parcare in zona centrala/ zone rezidentiala</td>
<td>15%</td>
</tr>
</tbody>
</table>
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SUMP projects for a greener city

Multimodal infrastructure
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SUMP projects for a greener city

Alternative transport - Bike-sharing
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SUMP projects for a greener city

Soft measures
- Parking policy
- Car pooling app
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SUMP projects for a greener city

Electric public transport

Tender for electric buses launched – 4th of June

Turda will be the 1st city in Romania with fully electric public bus fleet

ERDF contracts to be signed by 18th of June – 31 M euro investment (98% grant)
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THANK YOU!

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