

## Case Study // Round Table SDG 11: Promoting resilient and sustainable cities and human settlements: intersectoral cooperation and evidence-based policies

### Using the Key Performance Indicators for Smart Sustainable Cities to address the major development issues and implement the SDGs in the city of Goris, Armenia.

**Armenia**  
*Level: local*

#### Summary

The case study will describe the approach of developing a smart sustainable city profile for the city of Goris, by using the Key Performance Indicators for Smart Sustainable Cities. The case study will show how the use of indicators and the development of the smart sustainable city profile for Goris was crucial to formulate policy recommendations, enable transparency, engage all relevant stakeholders and promote sustainable urban development in the city.

#### Situation

Goris is a medium-sized city in Armenia and is located in the southern province of Syunik. The city currently has 23,200 inhabitants and is the second-largest city in Syunik. It is considered one of the most important historical and cultural sites in Armenia and a favoured touristic destination

Goris is also interesting from an environmental point of view despite the fact it is quite prone to natural hazards, in particular to earthquakes and landslides.

The economy of the city is mainly based on light industry, and it is home to several food-processing plants. Other quite developed industrial sectors are those of electric energy, food, textile and sewing, aluminium and metal-plastic products, woodworking and stone processing, and electronics.

From the analysis of the Key Performance Indicators for Smart Sustainable Cities which supported the elaboration of a city profile for Goris the following situation was found.

Armenia was part of the former Soviet Union, whose dissolution in 1991 had serious consequences on the country's economy, because of its strong dependence on cooperation with other ex-Soviet republics especially Russian Federation. Armenia's economic reliance on remittances from abroad remained after its independence, due to the very large number of its working-age population living and working outside of the country. Armenia has also been greatly affected by the global financial crises in 2008-2009, which resulted in a dramatic increase in poverty. Rural regions were most affected, with about one third of the population living in poverty. Unemployment remains high, with general unemployment at 18%, including youth unemployment at 35 % (2014).

The potential for economic improvement is very high. However, capacity-building and awareness-raising concerning the opportunities provided by ICTs is needed.

In 2011 Goris was declared a touristic center and has the potential to become a transit zone between Armenia and Iran and contribute to the formation of the Great Silk Road touristic route."

From an environmental point of view, the city is very rich in natural resources and in spring water which is supplied from the mountains and is of good quality. Its main environmental issues refer to waste management, the insufficient number of green areas, natural hazard adaptation and mitigation, and air quality. Concerning waste management, littering is a big issue, together with illegal waste dumping and burning. Air quality is not monitored in the city. This needs to be improved. Air quality monitoring stations should be built for at least the main cities in the country, because climate change adaptation is a priority for Armenia. The Government should help municipalities to limit their greenhouse gas emissions and improve energy efficiency in the residential sector.

Disaster risk reduction is a key priority for all levels of government in Armenia. Measures have been taken to address this issue and minimize the risk of environmental disasters and their impact, such as the development of policies for disaster risk reduction and the preparation of seismic hazard assessment maps. Goris is located in a risky seismic zone and is frequently subject to floods from the river Vararakn. Floods represent a permanent danger for Goris' inhabitants and its infrastructure, in particular during the rainy periods, and they affect the city's urban topography.

From a socio-cultural perspective Goris can improve by introducing more ICTs in schools, libraries and hospitals; the encouragement of adult education and professional skill building; the promotion of a healthier lifestyle; and the building of cultural and recreation facilities. The main issues in this area include insufficient maintenance of the current housing stock, safety and poverty.

Goris lacks a proper financial system. The budgetary capabilities of the municipality are highly restricted, with little room for manoeuvre.

Cooperation with international and public organizations is very strong. Many international donors and international financing institutions (IFIs) are already acquainted with the needs and possibilities of the city, and support diverse projects in Goris. Finding a common objective can facilitate the development of relevant projects and maximize synergies.

## Strategy

### PHASE 1: THE EXPERT WORKSHOP AND THE STAKEHOLDER CONSULTATION

The fact-finding mission to Yerevan, the capital of Armenia, and to Goris, was undertaken from 9 to 13 February 2015. It was organized by the UNECE, the State Urban Development Committee of Armenia, the city of Goris, the United Nations Development Programme of Armenia, and REC Caucasus. The mission included interviews with representatives of stakeholders, desk research, an expert workshop and a stakeholder consultation.

During the stakeholder consultation, the methodology of the preparation of the smart sustainable city profile, which is based on indicators, was presented and discussed. Further, an interactive discussion with national and local stakeholders was organized; the discussion allowed for the collection of information on data and perceptions related to the current situation of the city's environment, urban planning, energy-efficiency, and economic and social perspectives.

### PHASE 2. EVALUATING CITIES' PERFORMANCES WITH SMART SUSTAINABLE CITIES INDICATORS

The city's performance was evaluated using the Key Performance Indicators for Smart Sustainable City Indicators, developed by ITU, and UNECE in consultation with other stakeholders in 2015. The list includes 72 indicators which are grouped under the following structure:

- Pillars of sustainability: economy, environment, society and culture; and
- Thematic areas of indicators. Eighteen (18) major thematic areas including ICT, innovation, employment, Trade, productivity, physical infrastructure, energy, air and environmental quality, noise, biodiversity, education, health, culture, housing, safety and social inclusion.

The above-mentioned indicators have been used to develop the Smart Sustainable City Profile of Goris. The Profile helps the local authorities to understand the needs of the city in order to become “smarter” and more sustainable. The list of KPIs was finalized in 2017 under the initiative United for Smart Sustainable Cities (U4SSC) which includes 16 UN bodies and other partners.

### Results and impact

The analysis of the city of Goris supported by the Key Performance Indicators and described and addressed in the Smart Sustainable City Profile for Goris produced the following impacts:

- It supported the city to assess its performance in the areas of environmental sustainability, economic and social development and culture;
- it supported the city to identify its strengths and weaknesses and set priorities for action;
- it enhanced cooperation among city stakeholders on urban development activities;
- It promoted the implementation of the SDGs and the New Urban Agenda at the local level ;
- It increased the city's visibility at the national and international level.

The development of the Smart Sustainable City Profile for Goris gave the following impacts:

- promotion of knowledge and best practice transfer concerning sustainable urban development;
- provided support to national and local authorities to develop policies on sustainable urban development;
- strengthening partnerships and cooperation between stakeholders and identified and developed smart financing mechanisms;
- the concept of smart cities extended to low- and medium-income economies;
- support in shaping strategic vision and planned action through collaborative effort and identification of the most efficient use of city resources.

We have produced the following 1) **Smart Sustainable Cities Profile for Goris**: the Profile is a study of the current situation of a city by using the above-mentioned KPIs. Profiles measure the city's performance against the Indicators. It furthermore provides recommendations for the city to implement, in order to improve its sustainable urban development. A city action plan could be developed by the local experts with the support of international experts when funds are available. Goris has become a member of United Smart Cities platform: the online platform, which can be found at <http://unitedsmartcities.com/>, provides a place where stakeholders can share expertise, good practices, and lessons learned, in relation to smart and sustainable urban development.

### Challenges and lessons learned

The challenges identified during the elaboration of the City Profile and the collection of the data for the KPIs are as follows:

- One of the key challenges identified during the design of the Goris Smart City profile was lack of data in some particular areas, for example of some of environmental matters and indicators, due to which data on cities was not collected or updated.
- Diversification of collection practices according to the different city/country/region departments and offices;
- Lack of human and financial resources to maintain a good database or to collect data;
- Expertise, skills and information on which data to collect

To improve visibility of Goris city has lots of potential for becoming larger tourism destination, and not only within the country, but for the region and for tourists worldwide, especially from Iran, Russia and other countries.

Local economy can benefit from improved cooperation with the local university and support the establishment of science-based SMEs.

City could improve and regulate the street network, by building ropeways, elevators and paths, as well as change the roads in the city centre into pedestrian zones, so as to reduce transport noise and air pollution.

The vulnerability assessment of the city shows the urgent need to implement preventive measures to control floods and to develop awareness programmes for earthquakes. In particular:

Flood risk: research suggests carrying out preventive measures in the areas identified as flooded or flood-prone areas, such as cleaning the Vararakn riverbed and flood channels; eliminating blockages; cleaning the bed of the Schori Dzor river and strengthening its dam.

### Potential for replication

The development of Smart Sustainable City Profile and the collection of the data for the KPIs ON Smart Sustainable Cities is replicable for the cities of Armenia, and in general, for the region. It gives a positive impetus for development of systematic, smart and well-planned approach in urban development, covering almost all important and vital priority areas which matter for the future prosperity, healthy and environmentally friendly city, providing jobs, social care and technology solutions for its citizens. UNECE should continue working on Smart Sustainable City Profiles in Armenian cities, and also continue implementation of recommended measures through partnership with local stakeholders, municipalities, central government, civil society, banks and donor organizations.

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