

Greening Sfax: Carbon Auditing & Reduction

Description of the project

Over recent years the municipality of Sfax has been pursuing an urban renewal policy with the goal of becoming a model green town. The city has adopted a conurbation-scale 'Grand Sfax' development strategy that has ambitious environmental objectives and its sustainable development strand has supported the creation of a Sustainable Development Observatory. In 2013 the city carried out a carbon audit with a view to reducing its greenhouse gas emissions. This was the first carbon audit in Tunisia (as well as in north Africa and even in Africa).

In Tunisia, Sfax has pioneered both reducing energy consumption and enhancing the urban environment. It is also the first town in Tunisia to have joined the Covenant of Mayors, which was established in October 2015 to encourage and support towns and cities to include climate change in



the urban policies.

The city's general objective is to put in place a robust GHG accounting protocol coupled with an emissions reduction strategy. Its specific objectives are to:

- have as comprehensive a picture as possible of the GHG emissions of various classes of users and their activities. The users may be a company, an industrial sector, a government administration or a territory.

- measure Sfax's dependence on fossil energies, whose increasing planetary rarity constitutes a risk for all users/activities. The accounting methodology measures the vulnerability of economic activities in the event of an increase in the price of oil and gas. The main beneficiaries are the city's citizens: the idea is to offer them a healthy and sustainable lifestyle and to encourage their participation in the fight against climate change. Sfax also benefits through lower energy costs in its municipal budget and an improved urban environment. The GHG emission calculation uses activity related data such as: the number of HGVs and distances travelled, the number of tonnes of steel purchased or the area of buildings heated, etc. It then uses coefficients to convert this data into equivalent units of CO₂ emissions (expressed in kg) generated by the activity in question.

The *Bilan Carbone*[®] (carbon accounting method) uses data on the flows of physical things associated with the users' activities (flows of people, waste, energy, raw materials, etc.) and calculates the GHG emissions they generate. What is important to note is that the entirety of related flows is considered. This includes not only the flows generated directly by the user, but also any other flows its activities rely on.

The Grand Sfax conurbation uses the *Bilan Carbone* approach to assess 9 areas of human activity: energy, industry, services, agriculture and fisheries, housing, roads, waste, goods transport and urban transport.

At the city scale, the approach is applied to the entirety of the municipality's activities and services: general administration, sport, culture, housing, city roads, waste and green spaces.

Key results and achievements of the project

- The carbon audit found that the city's total emissions stood at around 6,100 CO₂ equivalent (tonnes) in 2010.
- The launch of an action plan to reduce Sfax's energy consumption and pollution: the city's objective is to reduce its energy consumption by 20 % by 2020.
- The organisation of an international Conference: 'Cities and climate change' in Sfax, in September 2013.
- The renewal of the city's bus fleet, including equipping vehicles with GPS and improvements in management.
- Creation of the Sfax Métro Léger (Sfax Light Metro) Company and launch of studies on the introduction of public transport along dedicated routes.

Project leader

Municipality of Sfax
Sfax
300,000 inhabitants
Tunisia

Brief description of the authority

Sfax is the second largest city in Tunisia behind the capital, Tunis. It has a population of some 300,000, rising to 500,000 in the wider conurbation of Grand Sfax. Sfax is a highly industrial port city and popular tourist destination. It has a large port, an international airport and large industrial sites. Flows of people and goods are growing continuously and energy use has been growing in step. The consequences of these activities have been an increase in GHG emissions, acute urban air pollution and a lower quality of life for the city's inhabitants.

Partners

- German Technical Cooperation Agency
- National Agency for Energy Conservation of Tunisia
- Municipalities of the Grand Sfax

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