Commit your territory to protecting the Climate.
**AN OVERALL APPROACH**

The Mohammed VI Foundation for Environmental Protection assists organizations (governments, territories and businesses) in managing greenhouse gas emissions (GHG).

It offers free access to a comprehensive and integrated approach that allows them to calculate their carbon footprint and to conduct reduction operations and possibly voluntary carbon offsetting.

**WHY CONDUCT A GHG EMISSIONS FOOTPRINT ASSESSMENT?**

- To understand climate impacts and mitigate them
  - Faced with the global climate change phenomenon, it is essential that the territories estimate their contribution to greenhouse gas emissions in order to identify the scope for reducing them.

- To reduce energy dependence
  - Since the signing of the Paris Climate Agreement (COP 21), reduction commitments for greenhouse gas emissions and regulatory pressures are increasing. When territories assess their carbon footprint, they pre-empt future national or international regulations.

- To anticipate regulatory constraints
  - A territory’s energy mix makes it either more or less dependent on fossil fuels, which are becoming scarce and inevitably more expensive.

- To address the growing concerns of citizens
  - Citizens are more sensitive to environmental issues and global warming as they directly feel the impacts. There is increased pressure on the territories to be involved in protecting the climate and improving the living environment of their citizens.

**THE FOUNDATION’S GHG ASSESSMENT TOOL**

The Foundation’s GHG Assessment tool is an environmental management tool. It permits the inventory of GHG total emissions generated by the activity of a company, an administration or territory, from easily quantifiable data. It determines the carbon footprint. It is a diagnostic and decision support tool.

**Based on ADEME’s expertise**

The Foundation’s GHG Footprint Assessment tool is adapted from the Bilan Carbone® carbon audit of the French Environment and Energy Management Agency (ADEME), a tool that is now widely used in Europe and Asia.

**Adapted the Moroccan context**

The GHG tool is based on the Foundation’s basic emission factors, a complete database of 300 factors, including about one hundred that are specifically tailored to Morocco.

**Compliant with international standards**

The GHG assessment tool complies with ISO 14069.

**A SELF-SERVICE TOOL**

The GHG footprint assessment tool is made freely available to any organization that wishes to conduct its footprint assessment of greenhouse gas emissions. The tool is in the form of an Excel spreadsheet, linked to a database of specific emission factors.
A tool to deploy

The Foundation provides the territories with a guide on how to establish a scope of work for an external expert.

The Foundation organizes trainings on using the GHG footprint assessment tool and on how to develop a greenhouse gas emissions footprint assessment.

These trainings are organized with the support from ADEME, the Directorate General of Local Authorities (DGCL), and ADEREE.

Three major emissions levels

The emission factors are divided into three emission levels:

- Direct emissions (heating, manufacturing processes, etc.)
- Emissions linked to indirect energy-related activities (transportation, commuting, electricity supply, etc.)
- Emissions indirectly attributed to activities (use of finished products, depreciation, end of life, etc.).

A complete database with 300 emission factors

Established on study findings conducted by the Foundation with support from ADEME (French Environment and Energy Management Agency), the Foundation’s emission factors database or carbon database includes 300 emissions factors, including one hundred calculated taking into account the realities of Morocco.

Database updates

The basic emission factors are regularly updated to take account of the economic, industrial and technical evolution of the country. Organizations can update their GHG footprint assessment automatically with each database update.

Exclusive in Morocco

The basic emission factors that have been developed by the Foundation comprise the only database of factors adapted to local realities. It is the only database that enables a close estimate of GHG emissions.

Level 1: Direct GHG emissions

Direct emissions from stationary and mobile facilities located within the organization’s boundary (emissions from sources owned or controlled by the organization).

Level 2: Indirect energy emissions

Indirect emissions associated with the production of electricity, heat or steam imported for the organization’s activities.

Level 3: Other indirect emissions

Other emissions indirectly produced during the organization’s activities that are not covered by the first two levels but which are related to the complete value chain.

Air transport

- 293g CO₂ per passenger per km (economy class)
- 660g CO₂ per passenger per km (business class).

Car transport

- Diesel: 2,518kg CO₂ per liter
- Gasoline: 2,464kg CO₂ per liter per km
- 352g CO₂ per km in city during rush hour.
Energy and Climate Awareness
Awareness helps to understand the reasons for a GHG footprint assessment and encourages involvement in the project led by the territory. It explains the:
• Physical phenomenon of the greenhouse effect
• Nature and sources of greenhouse gas emissions
• Expected impacts of global warming
• Balance of global fossil fuel reserves (how many years of consumption are left?)
• Interest and the process of the carbon footprint assessment
• Potential solutions

Data collection
Data collection is conducted from all available sources. It depends on the selected operational perimeter.
The territory collects data from suppliers, users, and public sector.
All types of data are collected: invoices, statistics, surveys, general or secondary data, etc.

Data processing
The territory’s activity is converted into CO2 equivalent tons (tCO2 e) and emissions are put into GHG categories (agriculture, mobility, waste, building, etc.).

GHG footprint presentation
The results help to map the GHG emissions and carbon vulnerability of a territory.

Define and schedule reduction targets
The results are reviewed and relevant solutions, (cost / effectiveness) are proposed to reduce a territory’s greenhouse gas emissions. A prioritized action plan is established. The GHG footprint assessment becomes a strategic tool for decision support.
The Foundation provides territories examples of actions and feasible projects.

Implementation and Monitoring
The actions are monitored and evaluated in order to highlight the progress made in reducing greenhouse gas emissions.
Compensation actions for incompressible emissions are proposed.

The Mohammed VI Foundation for Environmental Protection has tested the GHG footprint assessment on its own activities. It then embarked on actions to reduce emissions (introduction of energy efficient lights, waste sorting, composting, solar energy, etc.).
The Mohammed VI Foundation for Environmental Protection was created in June 2001 at the initiative of His Majesty King Mohammed VI. From the start, the Chairpersonship was entrusted to Her Royal Highness Princess Lalla Hasnaa. Its fundamental mission is raising environmental awareness and education. For this mission, the Foundation works with all audiences, from schoolchildren to political and economic decision makers. The Foundation raises awareness about environmental issues to fully commit to the path of sustainable development. The Foundation educates, mobilizes, unites, and trains. It relies on a network of 15 international partners and over 70 national partners. It operates in six areas:
- Education for sustainable development
- Coastal protection
- Responsible tourism
- Restoring historic gardens
- Protecting the Marrakech palm grove
- Air quality and climate

The Foundation has been working to improve the air quality since the 2002 launch of its “Qualit’Air” program. It has expanded its program to the problem of global warming with the 2009 launch of the “Voluntary Carbon Offsetting” program. This allowed the Foundation to be admitted as an observing member to the Conference of Parties (COP) for the UN Framework Convention on Climate Change (UNFCCC) at COP15 in Copenhagen in 2009. This long-term work led to the signing of a Qualit’Air pact on February 11, 2016, which commits Moroccan companies in the General Confederation of Moroccan Enterprises (CGEM) to assessing their carbon footprint with the help of the GHG tool, and if they wish, to offset their emissions within the Foundation’s dedicated offsetting program.