

Aid and Quality

Assessment of greenhouse gas emissions in the humanitarian sector: what we have learned from initial experiences

The Humanitarian Environment Network

There is a broad scientific consensus that attributes the rise in global temperatures to the greenhouse gas emissions produced by humans, particularly carbon dioxide from the burning of fossil fuels (transport, the production of electricity, heating) and methane from agriculture and the decomposition of waste. The effects of climate change can already be observed and they are primarily affecting the most fragile populations: increase in the frequency of extreme weather events, reduction of agricultural yields, extension of areas where there is a prevalence of diseases like malaria, dengue fever, etc. Taking into account the current rate of emissions and the lifespan of greenhouse gases in the atmosphere, without a major technological or economic change, this phenomenon is going to continue to grow in the decades to come.

In order to remain faithful to their principles (notably, the objective of doing no harm) and to ensure that there is coherence between what they do and their mandate and public positioning, several humanitarian organizations have decided to evaluate their carbon footprint by assessing their greenhouse gas emissions, in order to then put in place measures to reduce them. What does this type of assessment involve and what lessons can be drawn from these first experiences?

An essential precondition: choosing the methodology and the scope of the assessment

The objective of these assessments is to evaluate the volume of greenhouse gas emitted within a given area of activity and to use this to establish an action plan to reduce emissions.

The gases which are taken into account are generally the six greenhouse gases included in the Kyoto Protocol: carbon dioxide (CO₂), methane, nitrous oxide and three fluorinated gases which are essentially of industrial origin. All these gases have different effects and life spans in the atmosphere. As carbon dioxide is the main greenhouse gas globally, assessments are generally expressed in tons of CO₂ equivalent (TeqCO₂), calculated on the basis of a century. One ton of methane, for example, equals 23 TeqCO₂¹.

The first step in an assessment of greenhouse gas emissions is to define the scope of the assessment. This step

has a major influence on the results. For example, it is possible to only take into account direct emissions from sources belonging to the organisation (fleets of vehicles, generators, etc.) or, at the other extreme, to take into account all direct and indirect emissions, including those that are caused by the production of goods and services and by energy bought. Certain tools impose the scope, such as the *Bilan Carbone*². The scope can also be imposed by law. In France, article 75 of the Grenelle II Law makes it legally binding for corporate bodies which employ more than 500 people to carry out an assessment of their emissions which includes their direct emissions and their indirect emissions linked to energy bought. Smaller private organizations, including the majority of humanitarian organizations, do not have any legal obligations in this area for the time being.

Measure, analyse, reduce... and then start again

Once the methodology has been chosen and the scope has been defined, the next step consists of collecting the data needed for the assessment. This is done by answering the following questions: What data is needed? Does it exist within the organisation? If not, can it be deduced from existing data? What is the margin of error?

This phase is generally the longest and is followed by the calculation and analysis of results. The calculation method is almost always based on the same principle: data about an activity (for example, the number of kilometres covered in long-haul passenger flights) is multiplied by an emission factor (in this example, according to the French Environment and Energy Management Agency, 242 grammes eqCO₂ per kilometer and per passenger) to obtain an evaluation of emissions.

Next is the drawing up of an action plan. The drawing up of the action plan is the genuine goal of the study more than calculating a figure for total emissions. It can include actions to avoid emissions (for example, using electricity produced with renewable energy or reducing travel by adopting video-conferencing), or to reduce emissions (for example, by adopting a policy to reduce electricity consumption or to encourage the use of direct flights and the train), or, as a final resort, to compensate for emissions (for example, by running a project involving the distribution of improved stoves or funding a reforestation campaign).

Feedback

Several organisations within the Humanitarian Environment Network have already carried out assessments of their greenhouse gas emissions. They have chosen a variety of options: Action Contre la Faim, for example, carried out a *Bilan Carbone*, Médecins sans Frontières Suisse calculated its emissions as part of a broader assessment of its environmental impact, while Groupe URD used a methodology developed by *Groupe Energies Renouvelables, Environnement et Solidarités* (GERES). A number of lessons can be drawn from these experiences:

- First of all, it is important to understand that carrying out and interpreting an assessment requires good understanding of the humanitarian sector and the organisation, notably its flows of accounting and financial data. If external consultants are chosen, it is important to ensure that they have a minimum of knowledge in these fields, so that the study is not too drawn out, the approach can be re-used in subsequent assessments and the results can be put to use.

- Whether or not an external consultant is entrusted with the assessment, it is recommended that someone is chosen within the organisation to be in charge of coordinating activities, communicating to stakeholders about assessment progress and needs, and general awareness-raising within the organisation. During the assessment, this person should mobilize contact persons in the different departments of the organisation in order to collect data. At the end of the assessment, along with other members of the organisation, they should coordinate the prioritization and validation of actions to reduce emissions and how these are monitored over time.

- In order to simplify the assessment, the definition of the scope can target positions where there is genuine room for manoeuvre in the organisation. For example, emergencies for which it would be comparatively very difficult to cut emissions can be excluded. The impossibility of obtaining certain data can also make it necessary to modify the scope during the course of the assessment. In such cases, the final action plan should include a revised measuring and reporting system for the organisation in preparation for the following assessment.

- When an assessment is carried out, this should be promoted to raise awareness among partner organisations. It is essential to plan at least two phases of communication: at the beginning (explaining why an assessment is being carried out, what the objective is and the methodology used) and at the end (thanking the different contributors, presenting the results and launching the action plan).

- The regular updating³ of the assessment should be prepared from the beginning of the data collection: the point of evaluating emissions is to monitor how these change and the impact of efforts to reduce them over a period of several years. Subsequent assessments will be made easier if the experience gained during the initial assessment is carefully managed and shared.

- Finally, interpreting the results can only be done in the light of the scope and the hypotheses established at the beginning of the assessment: figures can vary considerably depending on the methodology. The lack of precision of certain data can also distort the analysis conclusions. As a consequence, it is not easy to compare organizations. It is particularly the change in results over time that is informative as it allows the impact of actions taken to reduce emissions to be measured. However, for this comparison to be relevant in operational contexts which change a great deal, indicators need to be defined which relate the emission figures to a quantity of work (number of staff, budget, number of beneficiaries, number of missions, etc.). Indeed, a drop in activity will necessarily lead to a reduction in emissions, without meaning that the organisation is more virtuous (and vice-versa).

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Indeed, existing methods are either inappropriate (data which is difficult to access and is not very reliable, major differences in terms of activities, etc.) or are incomplete (absence of certain emission factors, no exploitable ratios, etc.) which leads each organisation to define its own calculation rules. The assessments carried out in this way require the investment of a great deal of time and competencies.

In conclusion, the network calls for the creation of a sector-based guide to carrying out assessments of greenhouse gas emissions in humanitarian organisations.

This article is based on the minutes of a meeting of the Environment & Humanitaire network which took place on 24 May 2013.

Text written by the members of the Humanitarian Environment Network

¹ In other terms, the energy that a ton of methane sends back to the earth in 100 years is the same as the energy that 23 tonnes of carbon dioxide sends back.

² The term *Bilan Carbone* is often used generically to describe an assessment of greenhouse gas emissions, but it is actually a trademark owned by the Association Bilan Carbone which can only be used under certain conditions.

³ For example, the assessment of greenhouse gas emissions which is obligatory for organizations with more than 500 staff needs to be updated at least every 3 years.