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Integrating a low-carbon strategy in an international aid and development organisation: the example of *Électriciens sans frontières*

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Non-governmental organisations are no exception to the need to reduce our carbon footprint. In France, around ten of them have taken practical steps in this direction. Claire Desoubry explains the process of embarking on a sustainability approach within *Électriciens sans frontières*.

Climate change caused by human activities[1] affects the frequency and intensity of extreme weather events (droughts, floods, severe storms, etc.). As the disruption continues, each region of the world will experience – in its own way – more extreme weather events, sometimes with multiple consequences. Recent years have shown that this trend is gathering pace. The greater the extent of global warming, the more we will be affected, with the 1.5°C warming limit now looking unrealistic: existing policies (if adhered to) point to a 2.8°C increase by the end of the century.[2]

Although no part of our planet is spared from these extreme events, countries in the Global South are more frequently affected by them. These events have severe consequences which add to and exacerbate existing structural weaknesses and therefore compound a state of permanent and prolonged crisis in which emergency situations become the norm: epidemics, food insecurity, malnutrition, forced displacement. Consequently, more than 100 million Africans will be directly threatened by global warming and its effects by 2030.[3] Climate and environmental crises are damaging ecosystems and causing incalculable damage to human infrastructure. As a result, they are increasing the risks of food insecurity and water shortages, jeopardising the progress made with development programmes.

In light of all this, the aid sector has decided to take action and adapt its practices. Over the past two years, an increasing number of humanitarian and development organisations around the world have pledged to take greater account of climate and environmental challenges in their response to needs. They have done so through the Climate & Environment Charter for Humanitarian Organizations.[4] In December 2020, at the French National Humanitarian Conference, ten non- governmental organisations

[1] IPCC, *AR6 Climate Change 2021: The Physical Science Basis*, August 2021, https://www.ipcc.ch/reports
[2] UNEP, *Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies*, October 2022, https://www.unep.org/emissions-gap-report-2022
[3] *Le Monde* avec *AFP*, « Plus de 100 millions d'Africains menacés par le réchauffement climatique d'ici à 2030, selon l'ONU », 19 octobre 2021, https://www.lemonde.fr/afrique/article/2021/10/19/plus-de-100-millions-d-africains-menaces-par-le-rechauffement-climatique-d-ici-a-2030-selon-l-onu_6099004_3212.html
[4] CICR, *Charte sur le climat et l'environnement pour les organisations humanitaires*, 14 juin 2021, https://www.climate-charter.org/wp-content/uploads/2021/12/ClimateEnvironmnentCharter-FR.pdf

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(NGOs)[5] also adopted a Statement of Commitment on Climate by Humanitarian Organisations.[6] Their aim is to measure and reduce their impact in order to ensure that their activities do as little harm as possible to the environment (greenhouse gas [GHG] emissions, waste and pollution, consumption of scarce natural resources).

A few figures to put greenhouse gas emissions into perspective (2019 data)
⟶ The world as a whole generates **59,100 million tonnes (Mt)** of CO2 equivalent,
⟶ of which **3,600 Mt** of CO2 equivalent for the European Union alone,
⟶ of which **436 Mt** of CO2 equivalent for France.

⟶ An NGO such as *Électriciens sans frontières* generates **860 tonnes (t) of CO2 equivalent.**

⟶ In France, each inhabitant generates **9.9 t of CO2 equivalent:**

there are three main sources: transport (mainly cars), food (meat), housing (depending on the heating system),
this is an average for France as a whole, with half of France's footprint linked for 20% to its population, and considering that half the population is only responsible for 20% of emissions.

Examples of sources of emissions and reduction measures:

- Flight Paris – Antananarivo (Madagascar) = **2.6 t of CO2 equivalent**
- Paris – Dakar (Senegal) **= 1.3 t of CO2 equivalent**
- Meat-based diet (red meat) **= 4.6 t of CO2 equivalent** / Vegetarian diet **= 0.3 t of CO2 equivalent**
- A 300Wp solar panel made in China (Wp stands for "watt-peak", the unit used to measure the maximum power that a solar panel is capable of providing under ideal conditions), **= 321 kg of CO2 equivalent**
- A similar panel made in France **= 185 kg of CO2 equivalent**

For *Électriciens sans frontières*, buying 100% of its solar panels from the supplier with the lowest carbon footprint on the market allows a 63% reduction in emissions associated with its purchases of solar panels, and a 15% reduction in its overall carbon footprint.

The first steps towards a low-carbon strategy

The majority of these NGOs – since joined by others – decided to form a joint working group to examine this issue within the Humanitarian Environment Network (*Réseau Environnement Humanitaire* – REH in French). The aim of this group is to discuss and exchange best practices regarding the integration of climate and environmental challenges in humanitarian aid projects; *Électriciens sans frontières* has been an active member since its creation in 2012.

[5] *Action contre la Faim, Handicap International, Électriciens sans frontières, Croix-Rouge française, Médecins du Monde, Première Urgence Internationale, Oxfam, Secours Islamique France, Solidarités International and CARE.*
[6] Réseau Environnement Humanitaire, *Déclaration d'engagement des organisations humanitaires sur le climat,* décembre 2020, https://www.urd.org/wp-content/uploads/2023/07/DeclarationEngagementONGClimat_2023.pdf

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In order to share costs, a common service provider for all these NGOs, the Technical Reference Center for Air Pollution and Climate Change (CITEPA), was contracted to help launch a low-carbon strategy. After analysing the needs and relevant scope for each NGO, each was able to draw its own conclusions and gain an overview of the most important sources of GHG emissions, the data to be gathered in-house to produce a carbon footprint, and the human and financial resources necessary to do so every year. A preliminary carbon footprint was also calculated for each of these organisations.

Although this initial estimate was not entirely comprehensive (due to a lack of data or estimates of certain data), it clearly highlighted the two main sources of GHG emissions for *Électriciens sans frontières* in 2019 (this was chosen as the reference year, as the years affected by Covid-19 are unrepresentative). The first source (50% of GHG emissions) relates to the items purchased by the organisation to implement its projects (solar panels, batteries, etc.), while the second (40%) relates to air travel.

Examining the challenges in-house

This joint effort coincided with the formalisation of an in-house environmental policy at *Électriciens sans frontières*. The organisation's commitment to these issues is not new as its projects have long been promoting the use of renewable energies rather than polluting fossil fuels with high GHG emissions. Furthermore, it helps other international aid and development organisations adopt renewable energies to power their offices and humanitarian projects throughout the world, thus helping to reduce their own carbon footprint. In 2009, an Open Source Excel tool was developed to generate CO2 footprints for projects and regional delegations (operations), encouraging less carbon-intensive choices.

In order to implement an in-house climate and low-carbon strategy, supported from the very outset by the NGO's management, *Électriciens sans frontières* recruited one person and assigned another employee in a support role (equivalent to 0.7 FTE) for one year within its team of eleven employees. When calculating their carbon footprint, organisations have two options: hire an external service provider or deal with the issue in-house – *Électriciens sans frontières* chose the latter option. Engineers by training, the two people involved took the Bilan Carbone® training course run by the *Association pour la Transition Bas Carbone* (ABC) [Association for Low Carbon Transition].[7] *Électriciens sans frontières* also benefited from the expertise of a volunteer who specialised in carbon footprinting in their professional activities.

The organisation began by assimilating the work carried out by CITEPA, disseminating a synthesis of this work to *Électriciens sans frontières'* governing bodies, employees and volunteers via in-house communication channels. It then set about implementing a low-carbon strategy approach as proposed by ABC. This method consists of five stages: appointing a lead and defining objectives; defining what is to be included in the calculations; gathering and processing data; formulating a set of reduction measures; and consolidating the strategy. The aim of a carbon footprint is to identify sources of GHG emissions so that the real impact of an organisation can be assessed and reduced.

[7] See the association's website: https://abc-transitionbascarbone.fr

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Awareness-raising actions were also introduced to address these challenges: to change an organisation's practices, it is essential that everyone is aware of the importance of the challenges, feels involved and understands the role they can play. Furthermore, as *Électriciens sans frontières* projects are studied, designed and implemented by volunteer experts from a pool of 1,200 members spread over fourteen regional delegations,[8] it was therefore deemed essential to raise their awareness as well as that of headquarters staff and management bodies.

To this end, presentations were given to the organisation's three commissions (project, communication and partnerships, treasury) which bring together the regional volunteer secretariats of the fourteen delegations (forty-two members), as well as to the Governing Council and the Board of Directors. These presentations, each lasting about an hour, clarified the key concepts: why is *Électriciens sans frontières* concerned with climate and carbon challenges? What is a low-carbon strategy? What are the initial results? What are the organisation's immediate ambitions? They also helped identify existing issues or concerns.

Climate Fresk[9] workshops were held remotely with the appropriate tools at each regional secretariat. Climate Fresk facilitators were identified among the volunteers to continue face-to-face workshops at regional delegation level. An interactive webinar was organised for all *Électriciens sans frontières* volunteers; the recording is still available on the organisation's shared platforms. Lastly, a briefing note was written listing the six key points about climate change and the carbon footprint at *Électriciens sans frontières*, to serve as an in-house reference point.

The feedback received shows that there is a need to understand the challenges before a commitment is made. After a constructive presentation of the challenges and the organisation's position, several participants who were initially sceptical about the strategy said that they now had a better understanding of why these carbon or climate issues were being raised. Another major area of concern was how to take action at NGO level, *e.g.* decarbonising projects, influencing equipment suppliers, convincing funding bodies of the relevance of more expensive but less carbon-intensive services.

Calculating 2022 emissions and identifying measures to reduce them

Given the difficulty of gathering data and the lack of allocated resources, calculating a carbon footprint can be time consuming. It is essential for an organisation to have reliable orders of magnitude for the emissions generated by its activity in order to avoid drawing erroneous conclusions. For example, an organisation might underestimate the impact of its waste or the use and end-of-life treatment of its products, thinking that these emissions are negligible (until July 2022, these emission categories were not mandatory under the regulations).[10] There is, however, no need to wait for results that are accurate to the nearest kilogramme of CO2 equivalent to start implementing reduction measures because the carbon footprint is not an end in itself. The real aim is to be able to implement effective reduction measures for an organisation's main sources of emissions.

[8] To find out more about its regional offices in France: https://electriciens-sans-frontieres.org/nos-delegations-regionales-en-france
[9] *Association la Fresque du Climat:* https://fresqueduclimat.org
[10] Ministère de la Transition écologique et de la Cohésion des territoires, *Décret bilan des émissions de gaz à effet de serre (BEGES)*, 11 juillet 2022, https://www.ecologie.gouv.fr/decret-bilan-des-emissions-gaz-effet-serre-beges

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To facilitate data gathering and thus estimate GHG emissions, *Électriciens sans frontières* has developed a simplified tool. It allows the volunteer teams to identify GHG emissions associated with its projects by recording details of the equipment used (type, weight, etc.), the field missions carried out (number of participants, kilometres travelled, etc.), and freight (ports of departure and arrival, tonnage transported, etc.). A further aim is to raise teams' awareness about orders of magnitude and gradually adopt proposals for alternative measures to reduce the associated GHG emissions upstream when a project is being formulated. This tool will be deployed by the end of 2023.

To reduce its emissions, *Électriciens sans frontières* decided to start with the two main sources: procurement and air travel. With regard to procurement, the aim is to identify the equipment mainly responsible for GHG emissions. The most likely avenues at the moment are to approach suppliers which offer less carbon-intensive equipment than that currently used: instead of solar panels produced in Asia with fossil-fuel energy (coal, oil, gas etc.),[11] preference should be given, for example, to panels produced in Europe with more carbon-free energy (solar, hydroelectric, etc.). Other avenues remain to be explored, however, such as recycling and end-of-life issues, or an ever-more effective optimisation of photovoltaic installations.

With regard to air travel, the current situation needs to be studied. Some measures to reduce the number of flights have already been implemented, such as shared travel for missions in the same geographical area. The primary aim, therefore, is to make these existing good practices more widespread. *Électriciens sans frontières* is striving to engage in this exercise rigorously and, in addition to a series of more or less short-term measures, is questioning its current operating model, *e.g.* the possibility of limiting travel for long periods and opening local offices. Questioning how it operates is essential for exploring real solutions. The ecological and social transition required today will not happen unless we change the system in which we live, and NGOs, like all other organisations, must also question the sustainability and relevance of how they themselves operate.

Challenges, limitations and lessons learnt

Climate change, however, is not the only challenge that must be considered. When working in this domain it is not uncommon to neglect other important and fundamentally linked issues such as the availability of water resources or biodiversity. The same applies to social and societal issues in which international aid and development organisations are closely involved.

This is the first challenge: improve our environmental practices whilst preserving the core mission of *Électriciens sans frontières*. The organisation intervenes in areas where others (especially businesses and States) do not go, mainly isolated rural areas to help with local development. Tackling environmental and climate challenges requires major structural changes that call its entire operation into question. Each organisation builds its own approach in response to the challenges it faces, but climate is without doubt the greatest challenge to be faced over the coming decades.

[11] The GHG emissions associated with the purchase of a solar panel are largely due to the energy used in certain energy-intensive manufacturing processes. We also use the term "energy mix" to refer to the various primary energy sources used to meet the needs of a given country or region (examples can be found here: https://www.iea.org/countries).

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Addressing all these issues gives rise to considerable trepidation. In addition to climate concerns, change is a complex challenge for any organisation and for individuals. It is therefore an ambitious task to help employees and volunteers understand and master environmental, climate and societal issues.

One might therefore think that *Électriciens sans frontières* would have chosen to maintain a salaried position devoted to the subject, or to increase the working time initially dedicated to it. This is not the case, however, even though its ambition, largely supported by its governing bodies, is to continue to make progress in this area. To this end, it therefore decided to establish an in-house climate working group, drawing on its dynamic pool of volunteers in accordance with its model, while maintaining salaried support (0.25 FTE). This working group is based around three axes: calculating and estimating emissions (producing in-house carbon footprints, estimating and monitoring reduction measures); awareness raising (to continue ensuring that members of the organisation fully understand the challenges and reduction measures); and an action plan (studying, costing and monitoring reduction measures or potential structural changes for the organisation's future). Even though *Électriciens sans frontières* wants to develop rapidly, its current resources and operating model do not actually allow it to adopt a radically different approach from that described above.

It will not be able to act alone. For example, it needs actors in the photovoltaic sector to offer carbon-free products, which will become the norm rather than a marginal offering. It must continue to work with other NGO stakeholders in the networks it is a member of to pool resources, needs, ideas and solutions. It needs new resources and the support of its funding bodies so that it can take account of these lower-carbon alternatives, which are often more expensive or time-consuming. Given that it obviously cannot change the world on its own, it is also relying on governments, businesses and citizens to act against global warming, either through mitigation or adaptation.

Électriciens sans frontières hopes to use this experience to share, in a transparent manner, its strategy for integrating climate challenges into its activities, the path it is following, the difficulties it has encountered and its determination to continue on this long and complex journey.

Translated from the French by Derek Scoins

Biography

Claire Desoubry • Claire led the implementation of the low-carbon strategy at *Électriciens sans frontières*. A graduate engineer of the *Institut Mines Télécom (IMT) Mines Alès* and the University of Technology Sydney, Claire specialises in environmental and climate issues.
