Practical guide

Environmentally-sustainable practices: A guide for field teams

West Africa Desk
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HANDICAP INTERNATIONAL

Author

Grégoire RIVIERE

Contents

Introduction

Why this practical guide?

The aim of this guide is to present a number of environmentally-sustainable practices that can be implemented by Handicap International programmes/missions to reduce the environmental impact of their activities:
- Limit and reduce the environmental impact of programmes/missions;
- Contribute to a more sustainable environment, fully respect the "do no harm" principle;
- Continue environmental mainstreaming work and initiatives already underway at Handicap International.

Who is this practical guide for?

The guide is for the attention of all Handicap International programmes/missions, across all geographical regions, sectors of activity and programme contexts.

How is this practical guide organised?

The guide is divided into three parts:
- The **"Principles and benchmarks"** section presents the background and context, both within Handicap International and externally, that have given rise to its publication;
- The **"Practical guide"** section presents a number of best practices and is organised into five themes:
    1. Commitment and mobilisation
    2. Initial impact assessment
    3. Resource use
    4. Sustainable procurement
    5. Sustainable waste management
- Lastly, the **"Toolkit"** section presents tools and support materials that can be helpful in the environmental improvement process.

How to use this practical guide?

Based on this guide, each programme/mission is invited to establish its own context-based objectives. The guide does not present an exhaustive list of best practices. It is a tool to help programmes/missions focus on environmental protection and climate change mitigation and in that capacity, welcomes input from the field and shared local experiences. It will be updated regularly.

Principles and benchmarks

Climate change

The **United Nations Framework Convention on Climate Change** defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods"[1].

The effects of climate change are already being observed in many regions of the world, and are irreversible in the long term. They present a major risk to poverty reduction and threaten to undo several decades of development work. According to the Intergovernmental Panel on Climate Change (IPCC), human activities are altering our climate system. Over the past century, the earth's surface temperatures have risen and various associated impacts on physical and biological systems are increasingly being observed. Climate change will bring about gradual changes, such as rising sea levels, shifts in climatic zones and changes in precipitation patterns. Climate change is also likely to increase the frequency and magnitude of extreme weather events such as droughts, floods, and storms.

While climate change is a global phenomenon, **its negative impacts are felt more severely by poor people and poor countries**. The most marginalised populations are particularly vulnerable because of their high dependence on natural resources and their limited capacity to cope with the consequences. Climate change is therefore superimposed on existing vulnerabilities. It further reduces access to drinking water, negatively affects the health of the poor and poses a real threat to food security in many countries in Asia, Africa and Latin America. In some areas where livelihood choices are very limited, decreasing crop yields threaten to cause periods of chronic malnutrition. The El Niño phenomenon is one example of how the climate variations experienced today are already having devastating effects on vulnerable countries and populations (depletion of fishing zones, droughts, floods, storms, etc.).

People with disabilities are also directly affected by the effects of climate change in several respects. Firstly, they are particularly vulnerable in a natural disaster. People with disabilities often lack the technical and financial resources to put climate change adaptation strategies into effect. In many cases, they also find it difficult to travel long distances which is a major factor when so many people are being displaced by climate change. Natural disasters also increase the risks of disabling situations occurring. Furthermore, climate change is partly responsible for the rise and a new geographical distribution of disabling disease. Lastly, population flows from rural to urban areas (compounded by climate change) are contributing to very rapid urbanisation, which often sees many people living in extremely

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[1] United Nations Framework Convention on Climate Change; Article 1
http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf

precarious conditions. The link between such living conditions and disability is an established one. Other causes of disability are exacerbated by the effects of climate change: malnutrition, traffic accidents, pollution, hypertension, emotional difficulties, "low intensity" conflicts, etc.

Given the observations outlined above, various stakeholders should be taking steps to implement **climate change mitigation and adaptation measures.** This includes the entire international community, but also international development and emergency organisations like Handicap International. Sustainable development is today an essential challenge, and one that Handicap International must rise to.

The organisation therefore has a responsibility to consider the consequences of its actions in order to limit the negative impact these may have on the environment and on the livelihoods of its beneficiaries.

Environmental mainstreaming

As an international civil society organisation, Handicap International is witness to a changing world and an actor of social change and as such, the organisation has already acknowledged the importance of climate change in its most recent Federal Strategy. Handicap International is aware of the devastating consequences of climate change in certain regions of the world, and by implementing inclusive disaster risk reduction programmes, the organisation is working to facilitate adaptation. This work will reduce the numbers of victims and limit the impacts of violent weather events, particularly for the most vulnerable populations, including people with a disability. But Handicap International can go further. By mainstreaming practices to reduce the organisation's carbon footprint, it can also contribute to mitigating the effects of climate change. Environmental mainstreaming is today a concrete application of the "think global, act local" principle.

When Handicap International takes into account the environmental impact of its actions, the organisation is fully respecting the humanitarian principle it has committed to: "*do no harm*". The organisation has a responsibility to take its environmental impact into account to prevent its actions having negative consequences and to anticipate any medium to long-term consequences, thereby improving the quality of the aid delivered.

The most effective way to reduce the impact of climate change on the living conditions of the most vulnerable is to integrate risk reduction and adaptation measures into programme planning[2]. This is essential to achieving the Millennium Development Goals (MDGs) and particularly the first, fundamental goal which is to reduce extreme poverty by half. It is also essential for the organisation to contribute to objective 13 of the Sustainable Development Goals (SDGs): "Take urgent action to combat climate change and its impacts".

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[2] See the Technical Resources Division's "Inclusive disaster risk reduction: Building resilience for all" policy paper.

Climate change adaptation must go hand in hand with mitigation, in other words actions to limit the concentrations of greenhouse gases (GHGs) in the atmosphere.

In the 2016-2025 Federal Strategy, Handicap International reiterates that "the acceleration of climate change is affecting the most vulnerable populations first and foremost, and is challenging our capacity to cope with the consequences".

As well as the obligations that fall to Handicap International in its capacity as a humanitarian and development actor, it is important to consider the expectations of the organisation's supporters: protecting the environment and limiting the effects of climate change are now among the common values that constitute public opinion. Institutional donors today also expect NGOs to adopt responsible behaviours with regards to environmental protection and are applying increasingly demanding environmental conditions to their support.

Integrating environment into the project cycle

While the next part of the practical guide presents a number of environmentally-sustainable practices to reduce and limit the environmental impacts of Handicap International programmes and missions, it is also important to take the environment into account at the project level. To do this, environmental issues must be integrated into the project cycle. This requires:

- Continuous reflection: asking key questions at each stage of the project cycle (needs assessment, planning, launch, implementation, closing, monitoring and evaluation).
- A cross-cutting approach that targets every sector of activity (operations, logistics, communication, technical support, etc.).
- An approach that aims to implement best practices, rather than costly technologies.

The diagram below presents key considerations for the effective integration of environmental issues into each stage of the Handicap International project cycle.
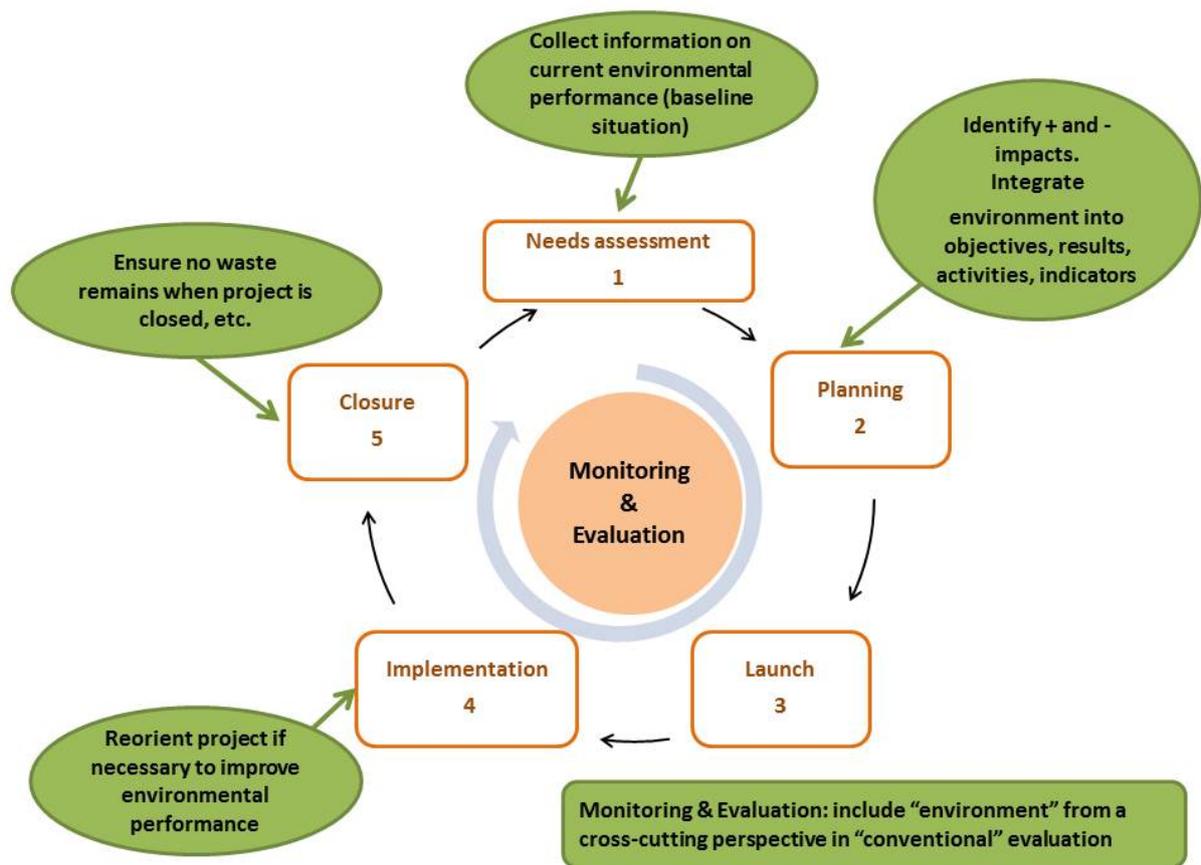
Lastly, integrating environment into a project ensures that the criteria and key words from the Handicap International Project Quality Framework[3] are respected. For example, the "change" criteria (Effects, Impact, Mitigation), sustainability or the key phrase, "do no harm".

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[3] http://www.hiproweb.org/uploads/tx_hidrtdocs/PosterQualityFrameworkHI.pdf

Practical guide

Commitment and mobilisation

Taking the environmental impact of programme/mission activities into account means defining new practices. This can be as simple as modifying a few simple gestures or a more thorough reorganisation of work practices.

For environmental improvement to be effective and efficient, its implementation must be accompanied by a reflection on change management. This is necessary to avert risks, remove potential obstacles and give sense to the actions of individuals in order that they contribute to the project.

The way environmental improvement will be integrated into each programme/mission will vary according to its size, the context, the way it is organised and a number of other characteristics.

Defining the changes

Implementing environmental improvement requires making changes to current practices. For this reason, it must be adapted to the procedures in place in the programme/mission. It is important to engage a period of strategic reflection (conduct an initial assessment; identify the environmental issues raised by the programme/mission; identify existing tools and methodologies, etc.) in order to identify the scope of the action required and set out exactly what will need to change in the mission/programme's organisation, processes, skills required, management, tools and support from staff.

There are a number of different methods for accompanying change, and notably the AIATAC method, a Handicap International resource that structures change within an organisation. The method is most often used to help organisations become more inclusive, but it can also be useful in environmental improvement.

The method involves a number of steps. Firstly, an assessment is conducted to evaluate the current situation. Information, awareness-raising, training and advocacy follow to establish a vision and action plan and overcome obstacles. Lastly, coaching helps to implement the change and establish it firmly within the organisation. It is also necessary, however, to focus on understanding the concepts of change and resistance to change to fully grasp what will be required of the programmes/missions.

Giving the implementation the time it needs

Change is often difficult to implement within an organisation. Given the inherent difficulties associated with changing individual behaviours, implementing environmental improvement will inevitably take time. It is important for those that support the initiative to remain patient and motivated. A good way to do this is to identify, from the outset, a number of visible actions that can be achieved fairly quickly. This demonstrates that progress is being made and promotes the benefits, helping to mobilise the most reticent staff.

Identifying and removing obstacles

Attempts to change current practices are often met with various forms of resistance (making light of the problem, opposing the solution, criticising the methods employed, etc.) The implementation of environmentally-sustainable practices can be confronted by a host of more or less serious obstacles of different kinds. It can cast doubt on current practices and be accompanied by fear or concerns over the organisational or technical aspects of the process. It is important to identify these obstacles before taking action, and to offer concrete solutions to the problems highlighted to have the best chance of winning acceptance.

Possible obstacles	
Internal obstacles	Lack of vision with respect to the strategy and objectives
	Diffused responsibility; the need to clarify the roles and responsibilities of each individual (expected contribution)
	Lack of time
	Lack of motivation
	Ignorance, feeling of powerlessness, of incompetency
	Changes to familiar routines; the feeling of losing control
	Insufficient representation in the programme/mission's priorities
	Implementation difficulties (conflicting priorities, lack of tools, unclear framework)
	Lack of knowledge or skills in environmental issues
	Insufficient sharing of experience on best practice
External obstacles	Incompatible national legislation and policies
	Little/no environmental awareness among suppliers, incompatible local markets
	Non-existence of waste collection and recycling industries

Motivating/mobilising teams

Winning the support of each and every individual is vital, because many of the quick-win solutions to improving environmental performance are the result of changes to staff behaviour and daily routines. Staff acceptance and buy-in is therefore indispensable. To fully engage people, it is important to highlight actions that produce results, to ask for their input and to include them as much as possible. Inclusion is vital to improving efficiency and environmental performance as the staff will drive change, not only through their behaviour but also through the skills and ideas they can bring to the process. Lastly, it is important to win support at the management level to be able to implement change more quickly.

Involving staff at every stage

It is essential to involve the staff from every service of a programme/mission at every stage of the environmental improvement process. It encourages staff implication, develops a high level of support and gives legitimacy to the process. Involving the different teams is also a way to ensure that the process is pertinent and feasible. Involving all the staff in the process also dispels the idea that environmental performance is only important to a few people within the organisation.

Appointing an environment adviser and putting together a green team

If the activities implemented are to be sustained, it is important to appoint or identify a team member or group of individuals as environment adviser(s) who will spearhead the initiative.

The environment adviser can launch the first steps in the environmental improvement process: the initial needs assessment, action plan, training programme, etc. He/she should involve as many people as possible in the process, and create momentum to bring all the teams on board. He/she should ensure that any reticent staff members take part in environment-themed group working sessions. This will gradually open them up to the process.

Creating a green team is an effective way to promote the development of environmentally-sustainable practices. A green team is a group of employees that work to implement environmentally-responsible practices and ensure they are followed. The team can take different forms, carry out a multitude of activities and either be responsible for executing every step of the environmental improvement process (needs assessment, planning, implementation, etc.) or concentrate on certain steps only. It can also have a role in communication and promotion, in innovating or devising new environmentally-responsible practices, in identifying new needs to be addressed and in research. The green team can be an official entity with meetings, agendas and objectives, or it can be made up of volunteers who coordinate environmental improvement alongside their official functions. Creating a green team is a way to mobilise and raise awareness among staff in order to create a more dynamic approach to integrating environment in programmes/missions.

Implementing training/awareness-raising activities

For environmental improvement to be effective and sustainable, staff must have knowledge of environmental issues. It is therefore important to assess knowledge levels, and then to implement the necessary training and awareness-raising activities. Staff will have more knowledge on the issues, and the programme/mission will be able to work more effectively towards reducing its environmental impact. Training staff also helps to improve the programme/mission's impact analysis, and to involve every service in the initiative. Raising awareness and training teams when implementing environmental improvement and communicating the different objectives and stages of the process gives each individual a clear, shared vision of the changes to be implemented, and of the way they will be implemented in the particular programme/mission.

Communicating throughout the process/Communicating success

It is important to communicate throughout the environmental improvement process so that staff feel involved and can measure progress.
Environmental improvement must be accompanied by a review of, and capitalisation on, the results achieved in order to sustain motivation, firmly establish changes and encourage continuous improvement.

Examples of best practice

Inform/Raise awareness
Conduct an internal survey to measure staff knowledge and awareness
Demonstrate the limitations of the current situation
Explain the new challenges
Run awareness-raising campaigns (posters, leaflets, etc.)
Raise awareness through group sessions, theme days or periodical meetings
Put together an exhibition with displays, videos, presentations, questionnaires, etc.
Organise film screenings, debates, etc.
Bring in outside experts to talk to staff (local NGOs, ministry or decentralised government organisations)

Train
Resources available on HI LEARN'GO: http://hilearngo.handicap-international.org/
Various MOOC (massive open on-line course), e.g. that proposed by CARE "Climate change: Impacts and solutions for vulnerable populations": http://lp.360learning.com/thinkovery-care-mooc-changement-climatique/en/#
URD - Trainer's Guide "Integrating the Environment into Humanitarian Action and Early Recovery": http://www.urd.org/Environment-training-toolkit

Federate
Involve employees in working groups, particularly employees with an interest in and the capacity to drive environmental improvement
Meet with staff and talk to them at work. Discuss ideas to improve efficiency and environmental performance
Develop questionnaires to evaluate the staff's knowledge on environmental issues and to involve them, asking for their ideas and suggestions
Share experiences

Communicate
Set out the programme/mission's strategy, commitments (or objectives), and the scope/members of staff concerned
Disseminate an internal newsletter (paper or electronic), memos, posters, etc.
Update strategy documents and induction packs
Give all new employees written information on the programme/mission's environmental strategy
Detail what will change and what will not
Present the figures, the tools, the resources and the means available
A few examples of performance that are easy to measure and communicate: • Monitor electricity consumption and track evolution in a monitoring chart • Display weekly or monthly increases or decreases in number of photocopies next to the photocopier • Display increases or decreases in use of plastic cups next to the coffee machine • Note the drop in the number of times Handicap International cars are washed, and transform it into litres or m^3: "this month, Handicap International has saved X litres of water"

• Communicate on the number of suppliers that demonstrate good environmental performance: "this year, we are working with X sustainable suppliers compared with Y last year"
Encourage experience sharing and dialogue between the different programmes/missions via an exchange platform

Maintain the programme/mission's focus and engagement

Publish articles on the actions implemented
Create one or several communication channels entirely dedicated to the environment (notice boards, email bulletins, Intranet site etc.)
Use the internal organisation (meetings at all levels) to integrate dialogue on environmental improvement
Create an "environment" section on the programme/mission's Intranet
Welcome suggestions to improve environmental performance, for example by putting in place an "ideas box"
Organise competitions, breakfast information sessions, etc.
Create tools: values charter, code of conduct, environmental performance benchmarks
Create a presentation document that presents the stakeholders, their roles, the resources available and the roles and responsibilities of each

Communicate results

Identify all the environmentally-sustainable practices and measures implemented
Highlight all the positive results achieved: electricity and water savings, reduced and optimised vehicle use, paper purchase savings thanks to double-sided photocopies, etc.
The following tools can be used for this communication: • Information campaigns: posters, internal mailing, flyers, round tables, etc.   • Competitions that reward best environmentally-sustainable practices

Initial Environmental Impact Assessment

The first step in reducing a programme/mission's environmental impact is to measure current energy use and waste production, and assess the environmental performance of service providers and suppliers (garages, office supplies, etc.). A starting point is therefore established, from which objectives can be set for improvement and progress measured.

The initial assessment stage helps to obtain an overall view, to have an idea of the needs and to prioritise future activities.

A number of tools to conduct an environmental assessment are available on line. Certain non-profit organisations, like the GERES for example, also provide a CO_2 emissions calculator for humanitarian programmes/missions.

There is an in-house environmental impact calculator (OMEE in French) on SkillWeb (password requested).

Environmental Impact Calculator (OMEE)

The environmental impact calculator, created by Handicap International in 2015, can be used to assess the environmental impact of different activities, thereby allowing teams to identify ways to improve environmental performance. The tool has been tested on two programmes under the West Africa Desk (Mali, Western Cape), which have included the results of the assessment in their multi-annual operational framework. Once the key data had been collected, an action plan was drawn up and short, medium and long-term objectives set.

The calculator provides an initial assessment of the environmental impact of Handicap International's presence. This assessment then serves as a baseline, which is required to be able to go on and define a policy, objectives, targets and activities.

The calculator is broken down into several sections which quantify the use of electricity, water, gas and paper. It also looks at transport. The "Resource use overview" tab monitors the programme/mission's performance in terms of resource efficiency. The French "Bilan Carbone®" methodology developed by the French Agency for Environment and Energy Management (ADEME in French) is used to quantify the data collected. The methodology calculates the level of greenhouse gas (GHG) emissions generated by all the physical processes required by a programme/mission.

Data collected can be used in management and decision-making, to better manage flows and implement quantifiable objectives.

The assessment provides a baseline which can be used to launch an action plan to reduce GHG emissions and waste. The results obtained reveal the short-term and long-term opportunities to lower a programme/mission's environmental impact.

The OMEE environmental impact analysis is quantitative. As a result, the initial assessment can be completed by a more qualitative study, for example a series of interviews targeting the activities with the greatest environmental impact. Circulating these questionnaires to staff will also give an idea of the level of knowledge among the staff and each person's motivation, as well as the resources available for the best possible implementation of future activities.

Once the environmental impact has been established using these tools, practical measures can be defined according to the needs and shortfalls identified. The main sources of GHG emissions and waste production that can be tackled are:

- Water use;
- Electricity use;
- Paper use;
- Fuel use;
- Procurement;
- Waste management.

Water management

Water use

Fresh water represents just under 3% of all the water on the planet, and only 1% is available for human use. It is today a rare, threatened and finite resource. With population growth (and therefore greater needs in water) and pollution, there is increasingly worrying pressure on fresh water resources. In its 2015 annual water development report, the United Nations recalls that it is vital that we quickly and "radically" change the way we use and share water. Experts from the World Water Assessment Programme are warning that at today's rhythm, "the world is expected to face a global water deficit of 40%" by 2030.

Today, 748 million people across the world do not have access to drinking water. In urban areas which are expanding rapidly, the number of people without access to water rose from 111 million to 149 million between 1990 and 2012. Sub-Saharan Africa is particularly badly affected by the shortage. Women and children are the worst affected as they are responsible for collecting water. In rural areas, they still spend between two and four hours a day on average collecting water. Overall, 36% of the African population does not have an accessible water point.

Ensuring a sufficient supply of good quality water is one of the major challenges of the 21st century, because human activity is having irreversible consequences on the water cycle and on ecosystems. The main sources of water pollution are domestic effluents (badly managed sanitation, household cleaning and laundry products, etc.), agricultural effluents (pesticides, fertilisers, etc.) or other toxic effluents (chemical waste, insecticides, pharmaceutical products, etc.).

Preserving water quality is therefore vitally important. There are two ways to protect water resources: by limiting wasteful use and by limiting the use of products that impact on water quality or impede its treatment. Good water management is vital to satisfy the needs of all.

The importance of the initial assessment

A programme/mission uses a large quantity of water in its everyday activities. The different uses and any potential threats to quality and quantity must therefore be analysed to promote the best and most sustainable way to manage it. It is important to begin by asking a number of questions and measuring and monitoring water use.

Some important questions to ask regarding water use
- Do you know how much water you consume on an annual basis?
- Do you have water meters where the most water is used (toilet blocks, etc.)?
- Have you carried out an assessment of your water network (water efficiency, leaks etc.)?
- Do you have an up-to-date diagram of your water network?
- Do you encourage staff to save water?

Example of questions to ask regarding wastewater discharges
- Do you know which detergents are used to clean the offices and their impact on the environment?
- Are cleaning staff aware of the consequences of using certain detergents?
- Are staff aware of the rules on discharging unauthorised solid waste or contaminated wastewater into water systems (bleach, paint, solvents, acids and bases, etc.)?
- Are rainwater and wastewater separated?

The assessment will provide information on water use at the site and on the condition of the internal distribution network, while also identifying staff behaviours in their daily use of water. It will also identify potentially harmful discharges that could be prevented.

It is relatively easy to reduce water use with limited investment and by introducing a few simple measures. Often, these measures are not technical. Common sense and a few organisational changes can save water at no additional cost.

Examples of best practice

Measure and monitor water use
Measure water use taking regular meter readings to give a true picture of the situation (affluent and effluent). The easiest way is to start by collecting data (water bills, meter readings, etc.)
Make a list of the different meters in place and install new ones if necessary to be able to act quickly if water is being wasted
An effective way to monitor water use is to use simple indicators, for example numbers of m^3 of water used per employee or per building

Conserve water
Maintain equipment regularly (joints, taps, flushing systems, showers, etc.); a preventative maintenance plan is the best tool for limiting water wastage
Do not leave taps dripping and report any leaks to technical services
Check that taps are properly turned off
Monitor water networks and conduct regular campaigns to identify leaks To check for leaks, read the water meter at the end of a working day and again, just before the building is used again (the next morning for example). The readings should be almost identical; if there is a significant difference, there is a leak! Leaks run 24 hours a day 7 days a week. A single worn valve in a toilet bowl wastes up to 200 litres of water per day. That is 73,300 litres per year
The volume of water used each time a toilet is flushed can be limited by installing a dual flush system, or by placing a brick or full water bottle in the tank to reduce the volume
Install electronic sensor taps (for showers and sinks) or taps with a low flow nozzle
Install spray taps or tap aerators to reduce flow to 3 litres/minute
Install thermostatic mixer valves rather than separate hot and cold heads: they maintain water at the desired temperature and generate savings of between 20% and 30% on hot water, while also improving comfort
Use less water for washing floors: clean first without water and/or scrub floors before washing Favour smooth surfaces which are easier to clean
Use less water for washing vehicles and if possible, use rainwater
Keep use of water jets to a strict minimum, and if possible, install a medium-pressure nozzle
Regulate water flow: the mains water supply is usually operated at 3bar and sanitary fixtures are designed to operate at this pressure If the pressure is above 3bar, install a pressure-reducing valve on the incoming mains The average flow of water from a tap is 12 litres per minute. Only 15 minutes a day at this

flow are required to waste the daily amount of water required by an individual to shower, drink, cook and wash up

Where possible, optimise the distribution and use of hot water by keeping the distance between the production and use of hot water to a minimum and insulating pipes (thickness: 20mm or more)

Preserve water quality

Replace certain cleaning products with more biodegradable ones (particularly phosphorus-based detergents)

Do not dispose of harmful products, paints, etc. down sinks or toilets

Use ecological cleaning products to limit the use of harmful products

Monitor water quality

Collect harmful liquid waste and send it for special treatment

Recycle water

Review water use and study the possibilities for recovering water (closed circuit water or rainwater harvesting)

Install rainwater harvesting systems on gutters for watering gardens and recycle as grey water (toilets, vehicle washing, floor washing)

Install rainwater collection tanks or barrels and supply toilets for example, via a dedicated plumbing circuit. Do not forget to protect water collection systems to prevent mosquitoes breeding.

If possible, only treat water that will be used for cooking and drinking

Involve staff and promote good behaviours

Communicate and raise awareness among staff on the importance of conserving water. Make them aware of the daily water saving practices they can adopt with practical advice. Distribute leaflets, display reminders in strategic locations (toilets, near taps, etc.)

It is also important to raise awareness among staff on how to use less water, and on the procedures for reporting a problem to technical services

Electricity use

Today, energy consumption is one of the largest environmental concerns raised by human activity. It is increasing rapidly and having a major impact on our environment. There are two main consequences: a depletion of the primary sources of energy used today and atmospheric pollution, which is enhancing the greenhouse effect and causing climate change.

The use of electricity raises some serious questions. While it is necessary, it remains one of the main causes of a programme/mission's greenhouse gas (GHG) emissions. For example, the assessment conducted by the Western Cape programme revealed that energy was the programme's fourth largest source of emissions, representing 14% of GHGs or 9.43 tonnes of carbon equivalent.

Major energy end-uses in a programme/mission are lighting, space heating, space cooling, electrical appliances and IT equipment.

Use of Information and Communication Technologies (ICT") is also growing. These practices, which improve communication and information sharing, go some way to reducing vehicle use, printing and other GHG-emitting activities. However, their life cycle analysis shows that they have their own environmental impacts: electricity use, waste production, etc.

Better energy management is therefore necessary to reduce a programme/mission's environmental impact, but also to reduce energy costs which are significant.

The best strategy is **consume less, consume efficiently and consume differently**.

🗎 Memo

Consume less: Consuming less means identifying opportunities to save resources, and taking measures to limit waste. These are often low-cost measures. Consuming less also means rationalising energy use according to building occupation. It also means increasing building energy efficiency which calls for more elaborate measures (thermal insulation, renovation of the office's electricity installation, investment in solar electricity, improving the building envelope, etc.)

Consume efficiently: This means improving the energy efficiency of the equipment used, for example replacing lights and bulbs, office equipment or heating and air conditioning systems with higher performance models.

Consume differently: This means sourcing electricity where possible from renewable energy sources, for example a heat pump, or a solar thermal or photovoltaic installation. These must be designed according to the type of building and the local setting.

In all cases, a base-line study of a programme/mission's energy consumption should be carried out in order to identify potential savings and the type of measures that could be

considered. Lastly, it is important to remember that improving a programme/mission's energy management will only be successful if awareness is improved among the occupants of a site, and if they are involved in the efforts made. It is therefore important to ask the right questions before initiating environmental improvement measures.

> **Memo: Some useful questions**
>
> - Do you know how much energy you consume annually and how much it costs?
> - Do you monitor energy consumption at the major end-uses (heating, air conditioning, ventilation, lighting, hot water, IT)?
> - When purchasing equipment, do you take into account its energy efficiency?
> - Have you set targets for reducing your annual consumption?

Even the simplest initial assessment will provide information on energy use at the site and on electrical maintenance. It will also identify behaviours which impact energy consumption, and inform a strategy to raise awareness among staff on energy efficiency.

The next step is to implement a variety of measures. Adopting a few simple energy-saving practices is all it takes. Reducing energy consumption does not necessarily mean implementing major changes. Budgets are often limited, but a few simple measures are enough to consume less and consume more efficiently. These measures can be implemented at every level: procurement, use and disposal.

Examples of best practice

General and building energy consumption
Improve awareness among staff on ways to save energy, promote best practice
Carry out a complete energy audit on buildings
Improve the insulation of buildings to capitalise on their thermal mass
Gradually replace poorly insulated windows for double glazed ones.
Reduce energy used by electronic and IT equipment
Do not leave chargers plugged in when they are not being used
Set computers and other equipment to go to sleep mode to reduce their consumption between two periods of use

Gradually replace cathode ray tube monitors for flat screens
Plug computers and printers into multi-socket extension plugs with an off switch.
Reduce the number of individual printers preferring shared printers and optimise the use of IT equipment in general
Check office equipment energy use before purchasing
Replace faulty equipment
Prefer energy efficient models when purchasing equipment
Turn off modem/router at night. More and more of these devices are left on 24 hours a day

Reduce the consumption of computers specifically
Be selective when using the sleep mode: a computer on standby still consumes between 20% and 40% of its normal energy use. It is better to shut it down when possible!
Plug computers into multi-socket extension plugs with an off switch. Most computers continue using electricity even when they are switched off
Unplug mobile phones as soon as their batteries are charged
Lower screen brightness: as well as reducing the amount of energy used, it is also more comfortable on the eyes!
Steer clear of screen savers with 3D graphics: while they may be designed to prolong the computer's life, they use the same amount of energy, if not more, than the active mode. Screen savers should not be confused with the energy-saving mode, which saves considerable amounts of energy when the computer is on standby!

Reduce energy use used when emailing and surfing the internet	
Simplify web searches	Save regularly-consulted sites under favourites
	Enter the URL of a site directly, rather than passing systematically via a search engine
	Use precise key works and narrow requests when conducting web searches. This reduces the workload placed on search engine servers

Reduce time spent reading on-screen	Reduce time spent reading on-screen (produce documents that are easy and fast to read, slide-based presentations with little text, etc.)
Manage email better	Limit the number of recipients when emailing
	Limit the number of attachments and their weight (compressed files, low resolution PDFs, send a hypertext link instead of attaching document)
	Delete unnecessary attachments when replying to an email
	Find alternative solutions when a mail is very heavy
	Manage inboxes, only archiving necessary emails and only while they are necessary!
	Delete all spam immediately; if possible, install anti-spam software on computers or on the network's email system

Reduce electricity used for lighting

Prefer natural light when possible. Try, for example, to arrange desks perpendicular to windows to optimise natural light
Replace traditional bulbs with energy-efficient ones
Eliminate halogen lamps, including low voltage ones, which are more expensive and energy consuming
Install motion sensors, time switches, light sensors, etc.
Switch off lights in empty rooms and when absent
Programme office lights to switch off automatically at night and on weekends, install a time switch
In large rooms, install individual banks of lights to avoid lighting part of the room unnecessarily
Try not to use meeting rooms without windows
Prefer light colours for ceilings, walls and furniture

Reduce electricity used for heating and air conditioning
Heat less: lowering the temperature from 20°C to 19°C, for example, will make an energy saving of 7% on heating
Set radiator valves based on outside temperatures and sunshine and not necessarily all at the same setting: south facing offices with lots of glass will be heated by the sun, even in winter
Perform regular maintenance on heating systems
Replace faulty or inefficient heating equipment
Fit radiators with thermostatic valves
Keep air cool to reduce the need for air conditioning: ventilate when it is cool outside, close doors, blinds and windows when it is warm outside
Use ceiling or portable fans to keep air conditioning to a minimum, particularly between seasons
Set air conditioners, if they are really necessary, to 4°C below the outside temperature: too great a difference between inside and outside temperatures can cause thermal shock
To be efficient, air conditioning systems should be used with all the windows closed!
Thermal comfort will be better if workstations are not placed right next to windows and exterior walls. In winter, these are uncomfortably cold and in summer, uncomfortably hot
Install thermostats in all the rooms
Fit boilers with programmers (economy mode for night time and weekends)
Install blinds and screens for offices with too much sunshine
Ventilate buildings at night time to cool them down
Consume differently
Use renewable energies (solar, wind, biomass, etc.)
Install a solar water heater
Supply electricity with solar panels

Paper use

Reducing the amount of paper consumed is often one of the first measures implemented to improve environmental performance... and with good reason! A total of nearly 300 million tonnes of paper are consumed worldwide each year. That is more than 10 tonnes per second. Paper is the most commonly used office supply.

Paradoxically, IT developments have seen a rise in paper use, particularly with the development of individual printing. Over the last 20 years, paper consumption has rise by 126% worldwide.

The paper we use is made from cellulose fibres which come either directly from wood or from recovered paper. When paper contains at least 50% of fibres sourced from recovered paper, it is called "recycled" paper. The average content of recovered fibres in paper used in offices (for printing/writing) is between 8% and 12% while in newspaper, it is nearly 95%. There is plenty of room for improvement!

The environmental impacts of paper use

Like all products, every stage in the life cycle of paper (extraction of raw materials, processing, manufacture, distribution, use and waste management) has environmental consequences.

Paper use comes at a cost to the environment: the 300 million tonnes of paper produced each year contribute to the destruction of nearly 60,000 km^2 of forest. That represents nearly 40% of deforestation worldwide. The paper industry therefore has a major impact on the environment, and is thought to contribute to the 600 million tonnes of carbon dioxide (CO_2) emitted each year worldwide. The products used to whiten paper and its processing can also pollute water and soils.

The large quantities of paper sent to landfill or incinerated (with household waste for example) are harmful to the environment and soils, and emit large quantities of CO_2. These methods of waste disposal are still far more common than recycling.

Programmes/missions should therefore ensure they are using paper responsibly, beginning with the initial purchase, in its use in the office and right through its management as waste. Paper should be used efficiently and wasteful behaviours and habits wormed out.

It is therefore important to review paper use and ask the right questions to understand current practice.

There are a number of simple measures that can be implemented to reduce paper consumption. The first is to choose suppliers carefully. Secondly, practical measures can be adopted to reduce the amount of paper used in the office. Lastly, as paper waste is inevitable, efforts must be made to recycle as effectively as possible.

Examples of best practice

Optimise paper use
Use electronic communications where possible (internet and electronic documents)
If possible, use electronic versions of invoices and other administrative documents rather than paper ones. This is called dematerialisation and it makes a real difference to the environment. Although IT servers do consume a lot of energy, dematerialisation is an effective measure to reduce paper use
Format documents so they are easy to read on-screen, to reduce the need to print them out.
Reduce the number of pages printed by eliminating unnecessary spaces or largely empty pages, and condensing text (while not making it illegible)
Carefully assess the number of copies required. For a meeting for example, only print the number of copies required for the exact number of participants
Do not print everything. Emails, entire working documents, digital presentations etc. Select instead the part that is absolutely necessary, or that needs to be read while away from the screen, etc.

Print as few copies as possible of large reports
Use reusable envelopes for internal mail
Use posters, labels etc. to remind staff regularly to use separation and recycling systems
Selecting and configuring printers
Use laser printers rather than inkjet when possible NB: Inkjet printers use between 5 and 10 watts of power when printing and almost no warm-up time is needed. Laser printers however do need warm-up time and use between 200 and 300 watts of power when printing. This wattage is however more adapted to large print volumes.
Use machines with advanced options (double-sided printing, choice of print quality, etc.) when possible
Use re-fillable cartridges or toners when possible to reduce their impact on the environment.
Purchase a multifunction machine (printer/scanner/photocopier)
Purchase badge-operated printers. These require confirmation when the user is in front of the machine
Connect all computers to one printer
Reduce the number of printers available: people print less if they have to walk to a centralised printer!
Set automatic print settings to grayscale and draft quality
Set automatic print settings to double-sided
Use the "print two pages to one sheet" option
Explain to staff that the "print preview" option makes reading documents on-screen easier, and can reduce numbers of unnecessary printouts.
Train staff to use printers and photocopiers efficiently
Choosing your paper
Purchase recycled paper

Adjust order volumes to real needs

Define the grammage required for each type of paper. For example, envelopes and paper for everyday use can be of a lower grammage ($80g/m^2$ rather than $90g/m^2$). The higher the grammage, the more energy and materials are required for manufacturing. Conversely, the lower the grammage, the less it costs to send.

Brightness is another important element to take into account. Optical brightening agents which absorb ultraviolet light and emit it back as visible blue light are used to enhance the whitening effect of the paper. These chemicals however, which are slow to biodegrade, remain as pollutants in the environment.

Look for environmental standards and labels which ensure that the environmental impact has been kept to a minimum during manufacturing, without affecting the quality of the product:

- Level of recycled content
- Certification that the paper originates from sustainably-managed forests, and which encourage maintaining an ecological and economical balance in forest management, as well as a socio-cultural one.
- Certification giving information on the whitening processes

To also take into account the environmental impact of transport, consider locally-produced paper after a review of the supplier's comprehensive carbon footprint. Labels can also give guarantees as to geographical origin.

Sorting and collecting paper

Work with staff to devise a system for separating paper waste until it is collected (by a service provider, etc.)

Implement an individual system: every desk has a paper-only bin, and staff members are responsible for emptying their paper into the collective bin regularly

Implement a collective system: paper-only bins are available in each office/open space/floor/department/team, and in heavily-frequented areas (near the toilets, the coffee machine, the printers, etc.)

Transport

Vehicles emit atmospheric pollutants which are harmful to human health and to the environment. The transport sector is one of the main sources of pollution worldwide. Transport-related GHG emissions represent more than 30% of total emissions and these emissions have been rising continuously for 30 years.

The consequences of transport-related pollution on climate are even more serious if indirect GHG emissions are included: emissions from the production of fuel (oil extraction, refining and transport to the pump, etc.), the construction of transport infrastructure (motorways, airports, etc.), the manufacture and maintenance of vehicles and their disposal.

Memo: The pollutants

Primary pollutants: When fuel is burned in a motor vehicle, emissions are produced. The most common emissions are:

- Nitrogen oxides (NOx),
- Carbon monoxide (CO),
- Volatile organic compounds (VOCs),
- Lead particles (Pb),
- Sulphur oxides (SOx),
- Carbon dioxide (CO_2).

Secondary pollutants: Some atmospheric pollutants are not emitted directly, but are formed later by reactions with other emissions in the air. These so-called secondary pollutants include:

- Nitrogen oxides (NOx),
- Volatile organic compounds (VOCs) which form tropospheric (ground-level) ozone (O_3),
- Sulphur oxide (SOx) emissions, which form acid rain,
- NOx, SOx and VOC, which form very small particles.

All these pollutants, except for carbon dioxide (CO_2), can seriously affect human health. Some have acute effects on health, while others provoke chronic effects after long periods of exposure.

Increasing concentrations of carbon dioxide (CO_2) in the atmosphere and atmospheric pollution are also having serious consequences on the environment. These include the formation of ground-level ozone, acidification and eutrophication and climate change.

So, **transport has a number of negative consequences**:
- On health (atmospheric pollution),
- On the environment (climate change, greenhouse effect, high levels of emissions of pollutants and greenhouse gases, etc.),
- Noise pollution: traffic is the main source of noise pollution in cities,
- Potential accidents.

Programmes/missions have an important role to play in optimising travel and encouraging a carefully considered use of vehicles across their geographical area. Travel is a major source of a programme/mission's GHG emissions.

Take, for example, the Western Africa programme[4] which, using the OMEE environmental impact calculator, measured travel as representing 83.72% of the programme's GHG emissions.
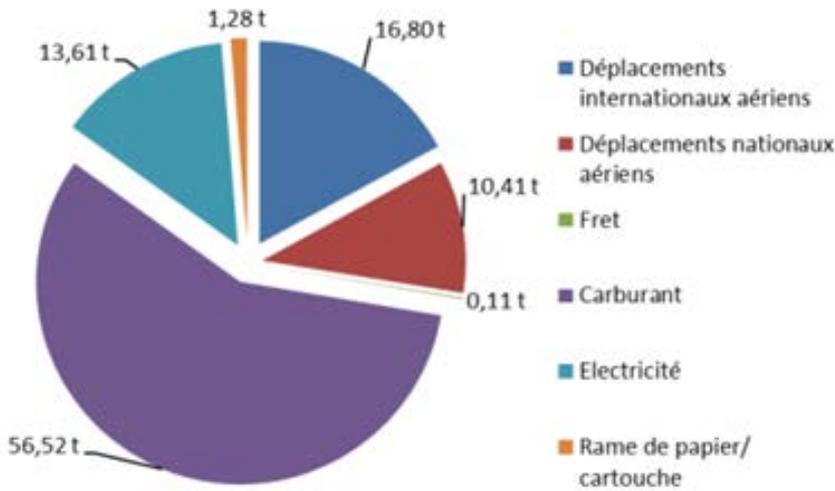
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[4] Senegal, Cape Verde, Bissau Guinea, Guinea, the Gambia.

The Cambodia programme used the methodology proposed by the NGO GERES. The results gave travel as 82.34% of the programme's GHG emissions.
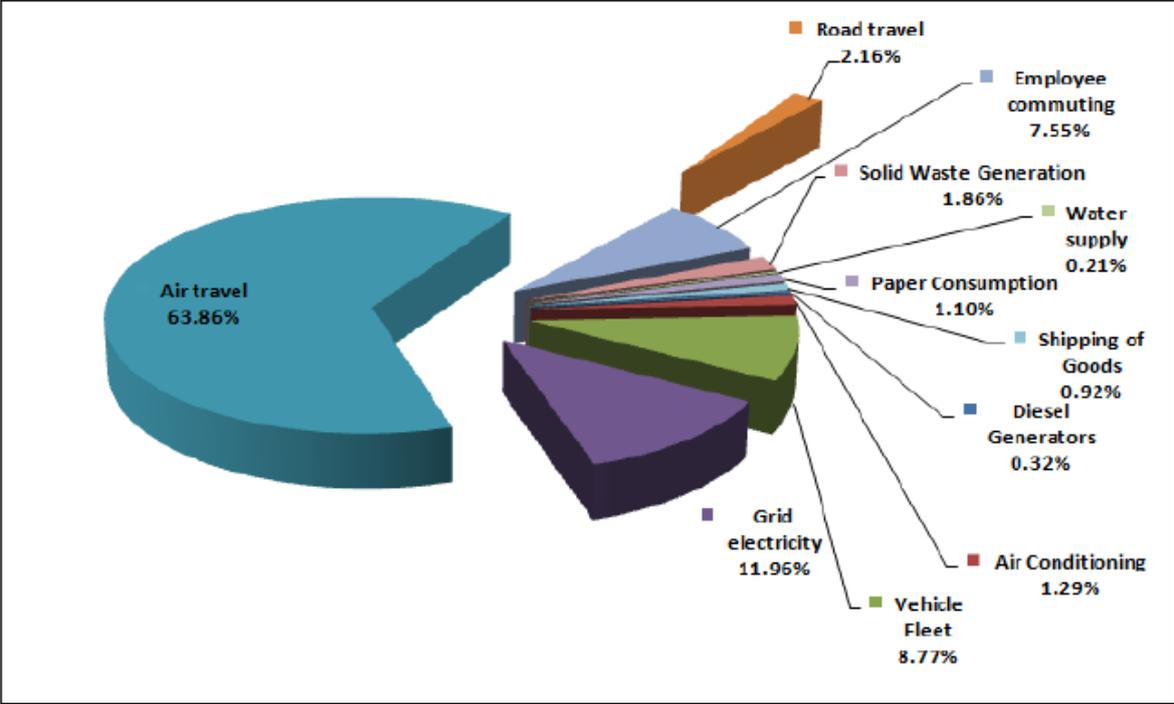
While environmental protection must not become an obstacle to operations, it must be considered as one of the major considerations when taking decisions about travel.

Many measures can be implemented, and although some require significant investment, most simply require changing behaviours and adopting good habits.

It is important, first of all, to have an overall understanding of the vehicle fleet and a global vision of the programme/mission's vehicle use, in order to decide on measures to reduce the environmental impacts of transport. This requires both an initial assessment and regular monitoring.

Adapting driving methods and fuel management will:

- Reduce greenhouse gas (GHG) emissions,
- Reduce fuel consumption,
- Improve the quality of life of staff (stress, noise, etc.),
- Have a positive impact on the environment in general,
- Lower costs.

Examples of best practice

Vehicle selection and maintenance
Put together a "cleaner" vehicle fleet: choose fuel efficient vehicles, etc.
Adapt the vehicle fleet to needs. For example, do not purchase 4x4 vehicles only, if one or more will be used exclusively in town or on good roads
Include the "CO_2 emission" criteria when purchasing vehicles
Consider hiring vehicles rather than purchasing them (particularly if they are not used very often)
Monitor vehicle fuel consumption (fuel cards, tracking software, etc.), and ensure that vehicle maintenance is conducted regularly and to a good standard
Monitor vehicle maintenance (tyre pressure, filters, oil changes, air conditioning, etc.), establish a maintenance checklist
Monitor vehicle emissions (level of pollution)

Optimise/limit vehicle use
Always question whether it is really necessary to travel, considering all the alternatives: email, telephone, telephone conference, video conference, etc.
Prefer video/audio conferences, purchasing the necessary equipment (software, microphones, etc.)
If possible, encourage remote working
Travel to work (when possible) on foot, using public transport or sharing vehicles with colleagues
Find staff accommodation that is close to the office
For longer journeys, prefer public transport (bus, train) to private vehicles or air travel
Prefer direct flights avoiding stopovers
For deliveries and dispatches (related to purchasing): • Group and optimize orders • Choose a greener transport company

Provide a suitable storage area to reduce the number of deliveries required
Purchase locally when possible to limit transport
Systematically inform visitors travelling to programmes/missions (from headquarters, training courses, etc.) of public transport that can be used to reach the site
Consider the environmental impacts of transport when organising events (seminars, training courses, etc.) in the programme/mission

Adopt eco-driving

Train teams to adopt responsible and environmentally-sustainable driving techniques, and to drive more safely. This requires a simple change in attitude based on a good understanding of the vehicle and good driving skills. Eco-driving uses less fuel, reduces accident numbers and lessens the environmental impact.

How?	The principles of eco-driving are: - Accelerate firmly but not violently - Stabilise speed quickly - Maintain a constant speed - Drive smoothly - Anticipate situations - Maintain enough distance from the vehicle in front - Respect speed limits - Check tyre pressures - Optimise vehicle use - Use air conditioning sparingly - open the window instead - Turn off the engine when stationary for long periods (more than two minutes)
Eco-driving skills	- Pulling away: when moving off, aim to reach a constant speed rapidly without accelerating too hard - Changing gear: shift up as early as possible, remain in the highest gear possible to keep engine speed to a minimum - Accelerating: directly increases fuel flow so avoid accelerating violently - Slowing down and braking: use engine braking as much as

	possible; greater use of the foot brake means greater use of the accelerator
Optimise vehicle use	Optimising vehicle use means exploiting its potential, and completing the checks to ensure it is running well: • Vehicle maintenance: water and oil levels, tyre pressure, roadworthiness test • Load: ensure the load is equally distributed and well attached • Speed controller and regulator: useful for eco-driving and for managing fuel consumption
Reduce fuel consumption	• The rev counter: enables the driver to instantly gauge motor speed. He/she should remain in the green band and only move up to the next band if absolutely necessary • Air conditioning: is important for vehicle comfort but should be used sparingly as it slightly increases fuel consumption; consider opening a window!
Adapt driving techniques to the driving environment	• Driving in town: when driving in urban traffic, many energy-consuming gear changes are required. Try to minimise their effects to reduce fuel consumption. Maintain a good distance from the vehicle in front, anticipate situations and drive at a constant speed. • Driving on roads/motorways: there are two basic principles; maintaining a good distance from the vehicle in front and driving smoothly. It is also important to choose the right moment to join traffic to avoid accelerating heavily.

Sustainable Procurement

Sustainable procurement is a concept that has developed within the framework sustainable development. "Sustainable development is development that responds to the needs of today without compromising the ability of future generations to meet their own needs"[5]. Sustainable development attempts to consider the environmental and social, as well as the economic aspects, of the long-term development challenges.

Sustainable development is achieved when the social, environmental and economic dimensions converge.

Sustainable procurement is the application of the principles of sustainable development to procurement. A sustainable purchase is one that, for the same result exactly and across its entire life cycle (manufacture, transport, use, end-of-life), has less of an impact on the environment and on health.

The term green procurement is used when the focus is on the environmental dimension specifically. Green procurement is the main focus of this guide.

Green procurement means including environmental criteria in the procurement of products and services, in accordance with real needs, while aiming for an efficient use of these products and services.

A programme/mission's procurement includes the purchasing of goods (office supplies, furniture, energy, IT equipment, vehicles, etc.) and services. A programme/mission should consider the environmental impacts of its procurement policy. Given the volume and range of products and services purchased in a programme/mission, the inclusion of environmental criteria in the procurement process can make a significant difference to its environmental impact and have knock-on effects locally.

It is important to consider the entire life cycle of a product, which means taking into account the environmental impacts of every stage of its life. Life cycle assessments, which look at these impacts, can be used to compare different products.

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[5] Brundtland Commission, 1987
http://www.diplomatie.gouv.fr/fr/sites/odyssee-developpement-durable/files/5/rapport_brundtland.pdf

Questions to ask before making a purchase

- What raw materials, materials and components were used to make the product?

- Are they renewable, toxic, harmful, polluting, etc.?

- Is their extraction dangerous? Does it pollute/produce a lot of waste/consume a lot of water/energy?

- How is the product manufactured? Does the manufacturing process pollute? Does it consume energy/water, etc.?

- At end-of-life, will the product be destroyed, recycled, recovered, remanufactured, etc.?

- Is the manufacturing plant well managed?

- How are transport and logistics organised?

- What packaging is used?

- What materials are used in the packaging?

- How will the product be recycled if it is potentially harmful to the environment?

Questions to ask after making a purchase

- Is the product robust?

- Is it used efficiently by staff?

- When necessary, does it come with a maintenance contract?

- Can it be repaired easily?

This list, which is far from exhaustive, gives an idea of the product life cycle approach. Of course, the environmental criteria should be weighted against other more traditional criteria (quality/cost/delivery time); they can be considered as complementary.

Adopt a sustainable procurement policy

Adopting a sustainable procurement policy has a number of benefits:

- Financial savings (drop in volumes purchased, drop in energy consumption, longer product lifetimes, etc.)

- Lesser environmental impacts and volumes of harmful waste

- General improvement in overall product quality

- Readiness for developments in environmental legislation

- Improved image of the organisation

- Coherence between the programme/mission's activities and its commitments to the "do no harm" principle
- Fostering innovation.

Before developing and implementing a sustainable procurement policy, a number of questions should be asked about the environmental quality of products/services and procurement management generally.

📋 **Questions to ask before formulating and implementing a sustainable procurement policy**

- Are you aware of the environmental performance of the products and services you purchase and use?
- Are environmental considerations currently included in calls for tender and contracts?
- Are the staff involved in procurement aware and trained on these issues?
- Do the staff that assess purchases apply criteria other than purchase price?
- How often are products purchased and delivered?
- Is transport taken into consideration when choosing suppliers?
- When a product or service is to be purchased, do you systematically consider packaging and end-of-life (removal, recovery, etc.)?
- Have you compared the environmental impacts of purchasing goods to that of purchasing services?

Examples of best practice

General procurement practices
Understand the different labels and standards recognising environmental quality
When possible, purchase environmentally-certified products
Put together a catalogue containing a selection of "green" items
Include the idea of whole-life cost in financial selection criteria (initial investment + costs incurred throughout an asset's lifetime).

Gather information on whether there is a local market for environmentally sustainable products and services before preparing technical specifications
Where possible, purchase products that meet the conditions imposed by an official environmental label or equivalent
Where possible, purchase products that will last, are rechargeable or supplied in bulk
Include environmental considerations in procurement-related decisions
Adopt a "sustainable procurement" charter to ensure environmental criteria are systematically taken into consideration
Product characteristics
Invest in products that will last: the most robust materials possible, materials that can be repaired, products that can be repaired, recharged, dismantled, re-used, recycled
Think about the origin of the materials (renewable resources, recycled materials, etc.) and product end-of-life (are the materials used recovered and reused by the supplier?)
Prefer products that will last
Think quality rather than quantity
Read data sheets to see if materials contain elements that are toxic or harmful to the environment
Avoid using products that produce large amounts of waste
Optimise the number of electronic devices purchased and share them between staff (printers for example) rather than allocating one to each person
Assess whether engaging a service provider might be more sustainable than investing in certain assets yourself
Take note of robust models and brands to ensure products last
Take into account environmental impacts throughout product life cycle
When available, use the results of life cycle assessments (LCAs) to compare products
Prefer equipment that consumes little energy, including grey energy (the energy required to produce and dispose of a product)

Prefer non-toxic and recyclable products, even if there is no LCA or grey energy evaluation, to limit air pollution during disposal
When possible, ask suppliers to recover end-of-life products to manage recovery, recycling or disposal.
Limit transport/Choose least polluting modes of transport
Regularly check and manage stocks to ensure purchase requests are grouped together
Avoid transporting people and goods using new technologies where possible (e.g. telephone meetings, etc.)
Prefer local service providers to limit transport
Group orders together as much as possible to optimise delivery vehicle fill rates
Choose suppliers with the lowest transport emissions
Reduce packaging and prefer recycled and/or recyclable packaging
Purchase products with less packaging when possible
Purchase products with reusable packaging
Choose packaging made from recycled and/or recyclable materials (cardboard, paper, etc.); avoid plastic, PVC, etc. where possible.
Avoid composite packaging that is difficult to recycle (for example, card/paper coated with bubble wrap)
Request that packing volumes and weights and packaging be optimised

Sustainable Waste Management

Every day, human activity produces around 10 million tonnes of waste (excluding agriculture and construction), which represents a total production of around 4 billion tonnes of waste each year globally. Emissions related to waste management (collection and processing) represent around 3% of greenhouse gases worldwide[6]. Consequently, it is Handicap International's responsibility as an NGO to adopt good waste management practices in order to limit the organisation's environmental impact.

What is waste?

Waste can be defined as any substance or object which the holder discards or intends or is required to discard. There are several types of waste.

Biodegradable waste	**Biodegradable waste or biowaste** is organic waste originating from plants, animals or bacteria, which can be broken down over time by micro organisms.	Garden waste, food waste, etc.
Inert waste	**Inert waste** is waste that does not decompose, does not burn, and has no physical, chemical or biological reaction that may harm the environment; it is not biodegradable, and does not break down when in contact with other materials	Concrete, brick, roof tiles, ceramics, floor tiles, roads, bridges, excavated trenches, etc.
Recyclable waste	**Recyclable waste** is waste that can be transformed into secondary primary materials that can be used to manufacture other products	Glass, packaging (clean), paper, etc.
Hazardous waste	**Hazardous waste** includes materials presenting one or more of the following characteristics: explosive, combustive, inflammable, irritant, harmful, toxic, carcinogenic, infectious, corrosive, mutagen. There are three main sorts:	**Dispersed hazardous waste:** • **solids:** contaminated non-hazardous waste, used batteries, paint residues, etc.

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[6] Key climate figures: France and the world, MEDDE [French ministry for ecology], 2015
http://www.statistiques.developpement-durable.gouv.fr/publications/p/2369/1072/chiffres-cles-climat-france-monde-edition-2016.html

	• Dispersed hazardous waste • Industrial hazardous waste • Waste electrical and electronic equipment (WEEE)	• **liquids:** washing liquids, detergents, bleach, aerosols, motor oil, brake fluid, coolant, solvents, inks, etc.
		Industrial hazardous waste: • **Organic waste:** solvents, hydrocarbons, sludge, etc. • **Inorganic liquid or semi-liquid waste:** surface-treatment baths, acids, etc. • **Inorganic solid waste**: ash, clinker, etc.
		WEEE: mobile phones, televisions, computers and household appliances
Residual waste	**Residual waste** means waste which is not fit for prevention, re-use or recycling and needs to be sent for energy recovery or disposal.	

Preliminary steps

Before looking to reorganise waste management, it is important to gather all the information on the regulation, techniques and local infrastructure and services for waste removal and disposal. It is therefore crucial to be aware of:
- Landfill sites,
- Regulations in force,

- Removal and disposal methods (storage, collection, recovery, etc.) for each category of waste,
- Local opportunities and limitations in waste management.

Questions to ask to identify different sources of waste

- What type of waste does the programme/mission produce? Hazardous or non-hazardous waste, recyclable waste, etc.?
- How much is produced? When is it produced?
- What are the challenges and opportunities (characteristics of the site, local regulation, level of knowledge, etc.)?

To review the waste produced by the programmes/mission, it is important to:

- Involve several services: purchasing, general services, etc.,
- Estimate the volume and weight of the waste evacuated from the site,
- Make an estimate based on purchases: it is sometimes necessary to estimate quantities of waste produced based on resource use (paper, boxes, toners, etc.) The first source of information then is invoices for office supplies (paper, ink cartridges,etc.) and contracts with service providers.

Waste management

Waste management includes the production and processing of waste:

- Waste production depends on the selection and sourcing of products, their use and recovery.
- Waste processing includes the separation, collection, transport, processing and/or storage, recycling and energy recovery, etc. of waste.

It is therefore necessary to adopt a comprehensive approach to waste management. This means respecting **the 4Rs: Reduce, Reuse, Recycle, Rethink.**

The 4Rs constitute a waste management strategy that aims to:

- **Reduce:** Reduce the number of end-of-life products, produce less waste, purchase less and avoid products that come with unnecessary packaging.
- **Reuse:** Re-use products to give them a second life, either in the same or a different capacity.
- **Recycle:** Any operation to collect or process waste in which the raw materials are introduced into a new manufacturing cycle.
- **Rethink:** Adopt a totally different approach to waste, to move towards the concept of a perfectly efficient system.

Adopting this approach to waste management will reduce the quantity of waste that cannot be reused or recycled. End-of-life products that cannot be reused or recycled are called residual waste.

A programme/mission produces a variety of different types of waste: paper, packaging, waste electrical and electronic equipment (WEEE), some of which fall into the hazardous waste category (energy efficient light bulbs, fluorescent tubes, IT equipment, telephones, etc.), hazardous waste (toners, batteries, accumulators, etc.) and other non-hazardous waste (office supplies, disposable plastic cups, office furniture, furniture from expatriate housing, etc.).

Examples of best practice

Implement a waste separation system
Organise internal waste storage
Group together waste destined for the same processing stream
Adapt internal storage capacities to the quantities of waste produced
Equip all storage zones with waste retention
Avoid contamination
For waste which can be recycled in another country (communication and IT equipment for example), establish a protocol: for example, use headquarter staff visits to the field to reserve 3kg to 5kg in visitors' luggage. On their return to the headquarters, staff can transfer products to the logistics teams who can send them for recycling in the headquarters country
Map the recycling facilities in the mission/programme country
Establish partnerships with local recycling industries (companies and collectors)
Store and organise the return of non-recyclable waste
Work with other NGOs in the same geographical area to pool collection systems for recyclable waste or hazardous waste management (urban networks)

Train staff
Organise information meetings
Put up notice boards, display information posters around the office and label segregated waste containers
Equip staff working on waste management with the necessary protective clothing

Prohibited practices
- Dumping waste illegally
- Burning waste in the open air or in wood-fuelled boilers/furnaces
- Disposing of hazardous waste in the sewage system
- Mixing waste of different types
- Sending raw waste to landfill, unless it is residual waste

Types of waste that should not be mixed
- Undiluted oils/soluble oils/solvents
- Inorganic waste/organic waste
- Cyanide waste with any other waste
- Any hazardous waste with non-hazardous waste

Toolkit

Tools for conducting an environmental impact assessment

- Handicap International - **Environmental Impact Calculator (OMEE)**
  http://www.hiproweb.org/en/home/sectors-of-activity/disaster-risk-management/docs/liste.html?tx_hidrtdocs_pi1%5BuidDoc%5D=1560&cHash=ffbd5e87a2
  (password requested)

- GERES (Group for the Environment, Renewable Energy and Solidarity) **- Tool for calculating the carbon footprint of humanitarian programmes**
  http://www.geres.eu/en/

- UNEP. **Environmental Impact Assessment Open Educational Resource**
  http://eia.unu.edu/index.html

Other tools recommended by Handicap International

- Handicap International, Logistics Unit Development Division (DAD) – **"Good logistics-related questions to ask and good cost budgeting"**

- **Recycling facilities mapping:**
  Excel document:
  https://goo.gl/yHDRfh
  Map:
  https://goo.gl/hXSbJK

Useful websites

- **Green Recovery & Reconstruction: Training Toolkit for Humanitarian Aid (GRRT)**
  http://envirodm.org/green-recovery

- **Greening the blue**
  http://www.greeningtheblue.org/

- **The Humanitarian Environment Network**
  http://www.urd.org/The-Humanitarian-Environment

- **Humanitarian Action and the Environment** - OCHA
  http://www.ifrc.org/PageFiles/95755/B.f.01.%20Humanitarian%20action%20and%20the%20environement_OCHA.pdf

- **The environment in the quality COMPASS - by criterion (In French)** - URD
  http://www.urd.org/IMG/pdf/UAH2009_Environnement_CQ_phase.pdf

- **Group for the Environment, Renewable Energy and Solidarity (GERES)**
  http://www.geres.eu/en/

- **ADEME, French environment and energy management agency**
  http://www.ademe.fr/en

- **Topic Briefing: An Introduction to Environmental Assessment.** USAID – 2005
  http://www.encapafrica.org/EGSSAA/EGSSAA-Pt4Ch00-EIA-Topic-Briefing-%2817Jan05%29.pdf

- **UNDP Climate Change Country Profiles**
  http://www.geog.ox.ac.uk/research/climate/projects/undp-cp/

**Environmentally-sustainable practices:
A guide for field teams**

This guide aims to present a collection of best environmentally-sustainable practices to limit the environmental impact of Handicap International's programmes/missions.

It is made up of five parts:

1. Commitment and mobilisation
2. Initial impact assessment
3. Resource use
4. Sustainable procurement
5. Sustainable waste management.

HANDICAP INTERNATIONAL