

Climate Change and Poverty Reduction

This key sheet is part of a series of awareness raising tools developed by Irish Aid to accompany its Environment Policy for Sustainable Development.



1. Introduction

Climate change is a serious risk to poverty reduction and threatens to undo decades of development efforts.¹

This key sheet is part of a series of awareness raising tools developed by Irish Aid to accompany its Environment Policy for Sustainable Development. Key strategies for implementing the policy are:

- i) mainstreaming, where the environment is recognised as a critical part of sustainable development and is taken into account in all policies, programmes, activities and funding decisions; and
- ii) partnership, where Irish Aid works with national governments, multilateral organisations, international agencies and civil society organisations to contribute to sustainable development.

The first step in environment mainstreaming is to understand how the environment is linked to the development challenge or sector you are responsible for. In this key sheet, we explain why understanding climate change is crucial in the context of poverty reduction, and suggest sources of additional information. More detailed guidelines on mainstreaming environment and climate change will be produced at a later date.

Climate change matters in poverty reduction because:

- > Climate change is a reality and people all over the world will have to understand the potential impacts.
- > Poor communities and least developed countries will be affected most, adding to their burden and hampering efforts to reduce poverty.
- > Climate change could reverse decades of investment in development and make it harder to meet the Millennium Development Goal of halving extreme poverty by 2015.

¹ Foreword to Poverty and Climate Change, signed by the Netherlands, UK, UNDP, Asian Development Bank, OECD, African Development Bank Group, the European Commission, UNEP, Germany and the World Bank.





Internally displaced persons queuing to collect jerry cans at an aid distribution site in the Kalma refugee camp, Nyala, southern Darfur.

2. What is climate change?

Climate change is driven by the increase in greenhouse gases (GHG) — the most abundant of which is carbon dioxide — generated partly by human activity. Our production of GHG has increased dramatically since the start of industrialisation, primarily due to the burning of fossil fuels such as coal, oil and gas. The buildup of gases in the atmosphere traps the sun's heat in what is called the greenhouse effect and causes temperatures to rise.

Changes in land use also have an impact: deforestation, land clearing and agriculture have all led to a rise in carbon dioxide emissions. Natural vegetation, in particular forests, form carbon stores or 'sinks'. As the earth's forests are cleared to provide land for agriculture and trees for fuel, paper and construction materials, carbon stores are lost and more carbon is released into the atmosphere. There is now insurmountable evidence that human activities are changing the climate and that the world is warming (IPCC, 2007).

The Intergovernmental Panel on Climate Change (IPCC), an expert panel of scientists, has warned that if atmospheric concentrations of greenhouse gases double compared to pre-industrial levels, this would likely cause an average warming of 2°C -4.5°C over the period 1990 to 2100 (IPCC 2007). The impacts of these changes in temperature are already evident: glaciers are melting in Switzerland and on Mt Kilimanjaro in Tanzania; drought is becoming ever more common in the Sahel and southern Africa; heat waves are causing deaths in Europe, the frequency and severity of hurricanes and tropical storms is on the increase (Katrina, Rita & Wilma in 2005) and heavy rains and floods continue to threaten parts of the world from Germany to Bangladesh.

▾ IPCC climate change predictions

- > Changes in average climatic conditions – some regions will become wetter and others drier.
- > Changes in climate variability – rainfall will become more erratic meaning a greater likelihood of drought and floods.
- > Changes in the frequency and severity of extreme weather events – this includes tropical storms, hurricanes and tornados
- > Changes in sea level with the average sea level predicted to rise by a minimum of 28-58cm – this increases the risk of flooding, particularly in low-lying areas (IPCC, 2007)

3. How does climate change affect developing countries?

Developing countries will be more seriously affected by climate change than developed countries due to their low adaptive capacity, their reliance on climate sensitive sectors (agriculture, fisheries etc.) and their already high levels of vulnerability. Developing countries have less capacity to adapt to the negative impacts of climate change because they are poor, have limited financial resources and limited skills and technologies. For example, both the Netherlands and Bangladesh are low lying and susceptible to flooding. However, the Netherlands can invest large sums of money in engineering to ensure the safety of its people and industry, while millions of people live on unprotected floodplains in Bangladesh. The same magnitude flood would mean disruption to daily lives in the Netherlands and millions of deaths in Bangladesh.

High levels of dependency on primary activities such as farming, livestock rearing and fishing, means that changes in climate such as drought, floods or strong winds can have detrimental effects on people's livelihoods. Farmers and herders across the Sahel tell of the increasing difficulty of providing for their families as rains dwindle and drought becomes an annual event. Finally, many developing countries are already vulnerable and climate change adds another range of unwelcome problems. Ethiopia has to feed 6-8 million chronically food insecure people every year, even when weather conditions are good. Climate change means more frequent and severe drought and floods, more food shortages and more poverty.

4. The impact of climate change on poverty

Through its impacts on economic growth, livelihood assets and health, climate change increases risk and reduces the likelihood of eradicating poverty. Climate change could seriously limit our capability of achieving the MDGs. Meeting global targets on reducing hunger, providing safe drinking water and reducing the incidence of disease is increasingly difficult in the face of unprecedented climate change (see box).

↘ Climate Change and the MDGs (adapted from Poverty and Climate Change)

MDG	Impacts of Climate Change
Eradicate extreme hunger and poverty - MDG 1	<ul style="list-style-type: none"> > Climate change will reduce economic growth due to adverse impacts on natural resources, infrastructure (roads, buildings, power) and labour productivity due to poor health. > Climate change will alter regional food security – the situation in many already food insecure areas is expected to worsen.
Universal primary education - MDG 2	<ul style="list-style-type: none"> > Indirect effects on education are through loss of livelihood assets and food insecurity which means that children are unable to attend school. > If families are forced to move because of extreme weather events – children may lose their opportunity to go to school.
Promote gender equality and empower women – MDG 3	<ul style="list-style-type: none"> > Climate change is likely to contribute to gender inequality as declining productivity, water scarcity and increased incidence of disease are likely to place additional burdens on women. > Women headed households are already the most vulnerable in local communities. Climate change will make conditions even more difficult due to falling yields, water shortages and health effects.
Health Goals - MDGs 4, 5, 6 - Combat major diseases - Reduce infant mortality - Improve maternal health	<ul style="list-style-type: none"> > Climate change will have direct effects through heat-related deaths (heat waves) > Climate change is predicted to increase the prevalence of some vector borne diseases (Malaria, dengue fever) > Climate change is likely to reduce the quantity and quality of drinking water with knock on effects on human health. Children and the elderly are particularly at risk from water related diseases. > Less water also means less food with malnutrition exacerbating ill health and contributing to child mortality. > Drought, cyclones and floods cause people to move to new areas. This migration increases the risk of HIV.
Ensure environmental sustainability – MDG 7	<ul style="list-style-type: none"> > Climate change threatens every aspect of this goal as natural resources are seriously threatened by changing environmental conditions and environmental degradation is predicted to worsen. > Biodiversity is at risk as environmental conditions change more quickly than plants and animals can adapt.
Development of a Global Partnership for Development – MDG 8	<ul style="list-style-type: none"> > The benefits of investment in development could soon be entirely absorbed by dealing with costs of weather related disasters > Many poor countries depend on tourism, but climate change could destroy the beaches, reefs and coastal infrastructure on which this depends. > Climate change is likely to increasingly impact on gross domestic product, national debt, the state of public finances, and investment in development in poor countries.

5. Possible responses – adaptation and mitigation

A global response is needed to combat the global problem of climate change. Developing countries are not major emitters of greenhouse gases; hence they are not the main cause of the problem. However, they do face the greatest risks. Developed countries on the other hand have created the problem; production and consumption rise on an annual basis, as do emissions of greenhouse gases. These differences in cause and effect require a two-pronged approach to combating climate change.

1. **Mitigation** – this involves reducing greenhouse gas emissions and is primarily the responsibility of countries which produce large amounts of CO₂. (Europe, US, Australia, Brazil, China, India).
2. **Adaptation** – this implies adapting to the impacts of climate change. This is a greater priority for developing countries as they are most vulnerable to the adverse impacts of climate change and have limited capacity to adapt. Developed countries already have many of the resources, skills and technologies required to adapt successfully.

Ireland has ratified the **United Nations Framework Convention on Climate Change (UNFCCC)** and is a Party to the **Kyoto Protocol**. As such it has commitments to reduce greenhouse gases and to provide assistance to those affected by climate change through financial support, access to information and the transfer of environmentally sound technologies.

The UNFCCC recognises that the poorest nations of the world, the Least Developed Countries (LDCs) are most at risk from the negative impacts of climate change. For this reason, LDCs receive support from the UNFCCC to identify their priority adaptation needs in **National Adaptation Plans of Action (NAPA)**². The plans assess current and future vulnerabilities and identify priority actions to minimise the risk associated with climate change. The Convention has a special fund for LDCs called the **Least Developed Countries Fund (LDCF)**, which provides financial assistance for the development and implementation of NAPAs. Ireland, through Irish Aid and the Department of the Environment, has contributed to this fund since its creation. (For more on adaptation, see the Adapting to Climate Change key sheet.)

² To see completed NAPAs consult the UNFCCC website at <http://unfccc.int/adaptation/napas/items/2679.php>

↘ Adaptation to climate change in Mozambique

There are many examples of adaptation in practice in Mozambique's Poverty Reduction Strategy. Since the major floods in 2000, the roads sector has invested in engineering techniques to enable infrastructure to withstand future flooding and in some cases, damaged roads have been completely redesigned or realigned.

The national water resource management strategy is being revised and will address adaptation to the impacts of climate change. The existing national strategy, developed in 1995, makes no reference to drought and flood events. The new strategy will integrate measures to address these events as part of national water management planning.

There is also evidence of *non-financial adaptation* including regional negotiations between Mozambique and its neighbouring countries to agree protocols for water resource management. This includes agreements on dam control, with the specific purpose of minimising future flooding and unnecessary casualties.

↘ How developing countries can work towards adaptation

- > Strengthening forecasting capacity and improving access to climate related information to strengthen planning
- > Promoting the use of drought resistant crops, introducing new farming techniques such as irrigation and diversifying sources of income generation
- > 'Climate-proofing'³ infrastructure such as roads, power lines, sewage systems and buildings to make them more resilient
- > Strengthening community institutions to enable them to act as a social safety nets and to develop new coping mechanisms
- > Strengthening national and local capacity in disaster risk reduction and disaster management
- > Building technical capacity in government to enable the integration of climate change risks into development planning.
- > Developing insurance markets to help households cope with weather risks.

³ Climate-proofing refers to enhancing resilience and reducing the risks posed by climate change, for example, improving the ability of infrastructure to withstand floods and cyclones.

↘ How developing countries can work towards mitigation

- > Developing environmentally sound technologies to provide low carbon alternatives in developing countries
- > Encouraging the private sector to invest in low carbon development and technologies, especially through the use of the Clean Development Mechanism (CDM)⁴
- > Identifying appropriate actions in waste, agriculture and other sectors to enhance efforts to reduce greenhouse gas emissions.
- > Supporting the development of pro-poor sustainable energy plans
- > Strengthening capacity to integrate mitigation activities into national development planning.

- > Support to the International Institute for Environment (IIED) and Development for their work on Climate Change in the Least Developed Countries and Small Island Developing states.
- > Support for CLIM-DEV Africa – an African wide initiative to make better climate information available to inform planning.
- > Support for the World Conservation Union (IUCN) for its work on environment in developing countries. Adapting to the impacts of climate change is a central part of this work.

7. Priority actions to address climate change in the context of development cooperation.

The critical first step in addressing climate change in developing countries is to acknowledge the reality of the threats it poses. We have enough proof now to know that climate change is happening and that action is needed to reduce the negative impacts on the most vulnerable. Priority actions for Irish Aid in addressing climate change include:

- Engage in dialogue with developing country partners and raise the profile of climate change with policy makers and planners.
- Integrate climate change into development planning. This includes CSPs, sector policies, Area Based Programmes and PRSPs.
- Build capacity in Irish Aid and partner governments to plan for climate change and safeguard development from the adverse effects of climate change.
- Implement adaptation activities in line with partner country priorities and plans.
- Continue to participate in the UNFCCC process and to support the participation of developing country governments at climate change negotiations.
- Support research and the analysis of vulnerability in the programme countries so that climate change risks are better understood and integrated into development plans.
- Continue to provide funding to the Global Environment Facility (GEF), UNFCCC and other partners working on climate change in developing countries.
- Implement those parts of the EU Action Plan on Climate Change in the Context of Development Cooperation relevant to the Irish Aid programme.

6. What Irish Aid is doing to combat climate change

Irish Aid became involved in work related to climate change in the lead up to the Irish Presidency of the European Union in 2004, when the Department of the Environment requested Irish Aid assistance with issues relating to Climate Change in Developing Countries. Since then, Irish Aid has been supporting the Department of the Environment in this area and working with EU and developing country colleagues to address climate change in the most vulnerable parts of the world.

Irish Aid was instrumental in developing the **EU Action Plan on Climate Change in the Context of Development Cooperation**, which was approved in November 2004. The Action Plan lays out a menu of activities to assist European development agencies to integrate responses to climate change into their development programmes. Irish Aid is engaged in activities corresponding with the action plan, for example:

- > Support to the Least Developed Countries Group of the UNFCCC to provide technical advice to the Least Developed Countries – particularly on issues related to adaptation.
- > Support to UNITAR's Climate Change Capacity Development programme which builds the capacity of decision makers in developing countries to integrate climate change into development policies and plans.

⁴ For more information and a Clean Development Mechanism Toolkit go to www.cdwatch.org/files/CDMToolkitVO19-02-04.pdf

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This key sheet was produced for Irish Aid by the International Institute for Environment and Development (IIED). IIED is an independent, non-profit research institute. Set up in 1971 and based in London, IIED provides expertise and leadership in researching and achieving sustainable development (see: <http://www.iied.org>).