Sida

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Sida's view on Climate Change and Development

A Favourable Climate for Development

Cover photo:
Planting trees in Turkana, Kenya
PHOTO: TRYGVE BØLSTAD/Bildbyrå PHOENIX

Global Environmental Efforts Benefit the Poor

A rise in global average temperature leads to higher sea levels, longer droughts and greater risk of hurricanes. The poorest people in the least developed countries are the hardest hit.

This is why Sida works on climate change issues. The main priority is to strengthen the capacity of poor people to adjust to the negative effects of climate change. But Sida is also involved in action to prevent and minimise emissions of greenhouse gases (GHG).

NOTHING NEW UNDER THE SUN

Climate change is nothing new in the history of our planet. Ice ages have been succeeded by warmer periods, which drastically modified living conditions for animal and plant life that existed then. There is, for example, a theory that the dinosaurs died out because of dramatic changes in the climate.

The climate change taking place now is unique because it is caused by humanity. This also means that humanity has an opportunity to affect and alter what is happening so that present-day species are not made extinct because of factors such as higher temperatures, violent storms and warmer oceans.

The world's average temperature is rising, and as a result the global climate is also changing. More transportation over longer distances and the extraction of energy from fossil fuels such as coal and oil have led to increased emissions of carbon dioxide (CO2) and other GHGs.

These emissions have increased in industrialised and developing countries alike, both overall and per capita. The most far-reaching consequence is the release of more GHGs into the atmosphere. The sheet that prevents the sun's energy from leaving the atmosphere is becoming denser, causing the earth's average temperature to rise. This phenomenon, which is usually called global warming, in turn causes climate change.

The consequences are manifold. Heat waves are becoming more frequent and intense. The water cycle is accelerating, with heavier precipitation and flooding as a result. Atmospheric winds are affected, which can bring about more powerful hurricanes and cyclones. At the same time water temperatures are rising, and the polar ice caps and other permanent ice sheets are melting. All of this is causing sea levels to rise, and the effects can already be measured. In addition, higher sea temperatures combined with increased precipitation and polar ice melt is altering the course of ocean currents, such as the Gulf Stream.

PHOTO: HELDUR NETOCNY/PHOENIX

An industrial plant in Chelyabrisk in the Ural region of Russia. Emissions from heavy industry and transport consist of greenhouse gases that contribute to climate change.

Changes have various effects

How we perceive the changes largely depends on which part of the world we inhabit. For low-lying countries a rising sea level means that valuable farmland and communities in the coastal areas are being inundated. Many island nations in Oceania may partially disappear when the sea level rises. More severe storms and flooding may devastate large areas and longer dry periods will make cultivation even harder in areas that are already wrestling with irrigation problems and droughts.

Use of energy from fossil fuels is very unevenly distributed. A quarter of the world's population – mostly in the industrialised countries – uses three-quarters of its energy. At the same time, nearly half of the people in the world do not even have access to energy that can facilitate cooking and supply lighting and heat. The same uneven distri-

FOTO: MAGNUS ROSSHAGEN

The inhabitants of Nicaragua's capital, Managua, attempt to salvage building materials after the devastation caused by Hurricane Mitch in late October 1998.

bution characterises access to public transport and privately owned vehicles.

This means that the industrialised world's populations are primarily responsible for global warming. Therefore, the rich countries have to assume the responsibility for helping poorer countries cope with the altered conditions that result from climate change.

Poorest suffer most

The effects of climate change afflict the poor developing countries most, and to the greatest degree. The situation is worst for people with the least resources of all. Poor people depend more than others on natural resources and agriculture for their survival. This means that their livelihood is directly affected by how the climate changes. Simultaneously, many of them are forced to use natural resources in a way that damages the environment. For example, they may cut down forests in order to get more cropland. This leads to increased erosion and reduces the forested areas that absorb CO2.

Resource scarcity also often forces poor people to settle in areas and homes that cannot withstand the extreme weather conditions caused by climate change.

A changed climate also affects access to clean water. Drinking water is rendered unpotable by the intrusion of seawater into low-lying areas. Parts of the world suffer from drought. Elsewhere, rainfall becomes so heavy that instead of infiltrating into the groundwater, the run-off quickly flows into rivers and lakes.

Extreme weather conditions also impede poor nations' efforts to create better living conditions for their inhabitants. When infrastructure and homes are repeatedly destroyed by floods and storms, a country's development is impeded. At worst, disasters occur, with severe human suffering as a result. One example is Hurricane Mitch, which struck Central America in autumn 1998, killing tens of thousands of people and making more than a million homeless.

POVERTY AND CLIMATE CHANGE

Poor people are often more dependent on natural resources and agriculture for their survival. But with small margins, environmentally sound farming is difficult. The poor cannot afford to add nutrients to the soil or leave land lie fallow to recover.

When harvests diminish, poor farmers are forced either to burn forests to enlarge their cropland or to grow crops on hillsides, causing severe erosion. This, in turn, makes them far more vulnerable to the effects of climate change.

When precipitation increases, there is a risk that heavy rains will not soak into the soil but rather wash away the vital topsoil. As a result, farmers are forced to overwork the soil even more to gain sufficient harvests.

PHOTO: HELDUR NETOCNY/PHOENIX

A Tanzanian woman farms on the slopes of Kilimanjaro on state-owned land. Farmers are allowed to cultivate the soil for three-year periods, after which Italian stone pines (Pinus pinea) are planted.

THE NATURAL GREENHOUSE EFFECT

The greenhouse effect is an essential prerequisite for the existence of life on our planet. Carbon dioxide (CO2), methane, water vapour and other greenhouse gases (GHGs), which have been present in the atmosphere for millions of years, form a sheet that prevents most of the sun's energy from being reflected back and escaping the earth's atmosphere. Without this sheet, the average temperature of the earth's surface would be 20°C lower than today, making the earth uninhabitable by human beings and other species.

Millions of tons of CO2 circulate annually in an environmental cycle between the atmosphere, oceans and earth's vegetation in a complex and well-balanced system. Before the 19th century, the concentration of CO2 in this cycle never rose or fell by more than 10%.

Industrialisation in the 19th century led to increased combustion of fossil fuels, and atmospheric concentration of GHGs has been rising dramatically since then. CO2 also is released into the atmosphere when forests are cut. Researchers have determined that the concentration of CO2 in the atmosphere is rising at a rate of more than 10% every 20 years.

The amount of methane in the atmosphere also has increased since the 19th century. The primary cause is agriculture, with its large-scale rice plantations and raising of livestock. Smoke from refuse incineration and leaks from coal mines and natural gas facilities also play a part.

Other GHGs that enhance the greenhouse effect include nitrous oxide (N2O) and fluorinated gases ("freons").

Together, these GHGs intensify what is a natural and life-sustaining process. They form an even thicker sheet that traps more solar energy in the atmosphere. This increases temperatures – with rapid climate change as a result.

The goal: poverty reduction

Sida's overarching goal is poverty reduction – that is, to assist in creating the potential for poor people to improve their living conditions. Since climate change is in itself a factor that has greatest impact on the poor and that creates new poverty, it is necessary to work toward reducing the risks faced by the poor and making them less vulnerable to the effects of climate change. In addition, Sida has a role to play in minimising the emission of GHGs in developing countries as well.

Raised living standards bring improved nutrition, clothing, housing and, in the long term, better health and education. They also are accompanied by increased consumption and energy use. Working for economic growth can therefore create a conflict between the twin objectives of combating poverty and reducing GHG emissions. In terms of equity and development, questioning poor countries' right to growth and the concomitant improvement in the lives of the poor is ruled out. The industrialised countries' populations have a responsibility to help bring about more sustainable use of global resources by changing their consumption patterns. But developing countries, too, must seek sustainable energy alternatives for the future.

Importance of thinking long-term

In its climate efforts, Sida's main priority is to help strengthen the capacity of poor people to cope with the altered conditions that result from climate change, both short-term and long-term.

How catastrophes caused by floods and drought can be prevented is a key issue. There is a risk that ill-advised short-term measures can cause more harm than good. One example is the building of barriers to keep saline water from intruding into freshwater reserves. When heavy rainfall occurs, these barriers can make flooding worse because the run-off lacks an outlet.

Sida's climate change work also includes efforts to reduce the emissions of GHGs into the atmosphere. Consequently, Sida works with partner countries to facilitate investments in technology that is sustainable from both environmental and economic perspectives. Energy that is produced without adding to the concentration of CO2 in the atmosphere can generate growth and prosperity without increased emissions of GHGs.

Sida's climate change efforts

Sida's strategy is to integrate knowledge and understanding of the effect the climate change has on poverty reduction and growth into all international development cooperation. This calls for a comprehensive approach and cooperation among the various parties, both national and international, and among different areas of expertise.

Sida's cooperation with a country or an organisation is based on a coopera-

tion strategy that describes what is to be done and what results are to be achieved through cooperation.

Before formulating a cooperation strategy, an analysis is made of the environmental and climate change aspects of poverty in the country. The purpose is to increase understanding of how climate change affects the country's potential for development and to serve as a basis for the focus of development cooperation. Climate change work can be carried out on various levels in the society and concerns many different strategically important sectors within development cooperation such as water, agriculture, health, peace and security, energy and social planning. Sida's goal with the climate change work – to ameliorate and pre-empt the harmful effects of climate change – will be incorporated in all cooperation strategies.

This means that Sida, in its entirety, is responsible for integrating climate change considerations into all its contributions.

Sida's climate change efforts are now included in the Environmental Management System, in which Sida's departments identify new activities in the environment and climate change area that are to be carried out during the coming years. Under Sida's rules, all initiatives are to conduct an environmental assessment before a decision on financing. Included in the environmental impact assessment are risk and vulnerability factors as a result of climate change.

Promoting climate-saving choices

In many of Sida's partner countries a large portion of the population depends on agriculture, fishing and other natural resource use for survival. A changed climate also changes their circumstances. When weather conditions change, farmers can no longer rely on their knowledge of when seeding and harvesting should take place in order to benefit from rainy periods and irrigation systems.

Fishing also may be affected when sea temperatures fluctuate, ocean currents change course and wetlands diminish. The earning capacity of local fishermen is thereby endangered.

New methods must be developed to enable people to adapt to the new climate. The issue of food security, a secure supply of food for people's survival, is crucial – locally, nationally and globally.

Another crucial development issue is access to energy. It is important, therefore, to disseminate knowledge about sustainable technology and energy and to develop regulations that encourage individuals and companies to use energy more efficiently and make use of renewable energy sources. Eastern Europe, for example, needs support for investments that make district-heating plants more efficient. Conversion from fossil fuels to solar energy, wind power, bioenergy and hydropower is encouraged. Factoring in the costs of environmental degradation into energy prices is another tool.

A vibrant business sector and entrepreneur-friendly climate are other key factors for poor countries' economic growth and development. But businesses need access to sustainable technology. Sida's aim is to support programmes that, in practical ways, show companies how environmental improvements can reduce production costs. Aided by an environmentally aware economic policy, the partner countries can also use investments and taxes to promote sustainable growth.

Knowledge at all levels

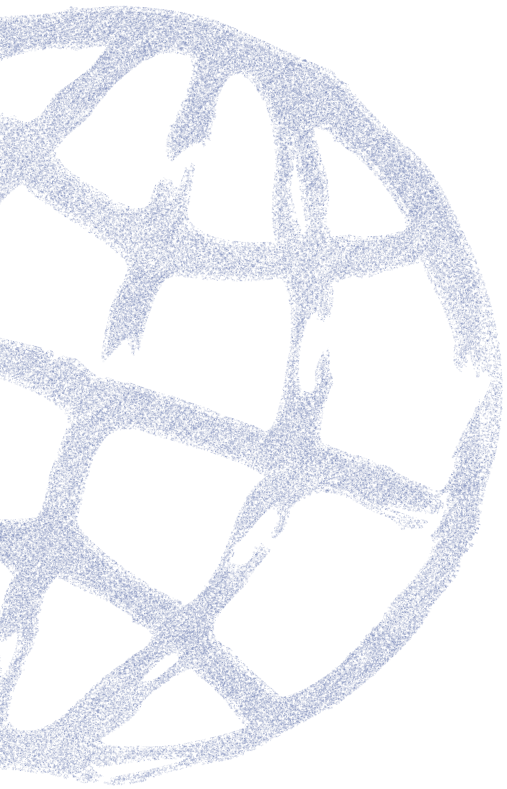
Climate change causes redistribution of the earth's water resources. There is an urgent need to know what form this will take, and Sida's partner countries must consider these aspects at every level when decisions on water resources are made.

Today, the areas probably hardest hit by these effects already suffer from a lack of clean water, and poverty is widespread. Since the poor are especially vulnerable to the repercussions of a shortage of potable water, strategies are needed that enable them to adjust to climate change conditions in the short term, without negative long-term repercussions. Wetlands and hydropower reservoirs, for example, give off methane, a greenhouse gas, which contributes to climate change.

Ill-health is a major problem for most developing countries. Diarrhoea and malnutrition are exacerbated by drought and a lack of clean water.

PHOTO: JEAN-LÉO DUGAST/PHOENIX

Traffic congestion in Bangkok, Thailand. Effective urban planning is one way of reducing emissions from petrol-powered vehicles.



Insect-borne diseases, such as malaria and dengue fever, are also expected to become more widespread. Sida is therefore working to expand knowledge about climate changes in the partner countries so that they can themselves act to reduce the adverse effects of a changed climate.

Global problem – global responsibility

Climate change is, above all, a consequence of lifestyle and development in the industrialised countries. But its harmful impact is most apparent in the developing countries. Climate change is a global problem that does not stop at national borders.

The great majority of the world's nations have therefore jointly resolved to work for the reduction of greenhouse gases. Sweden plays an active part in these international efforts, and Sida is aided by internationally negotiated conventions and tools.

In 1979, at the First World Climate Conference, climate change was defined as a serious problem. Thereafter, the UN Environmental Program (UNEP) and international meteorology and research organisations established a programme focusing on climate issues. Various international conferences then paved the way for the resolution stating that the world's nations should assume joint responsibility for the climate issue. In 1992 the UN member states signed the UN Framework Convention on Climate Change in Rio de Janeiro, Brazil.

Industrialised countries must lead the way

The overall objective is to ensure that atmospheric GHG concentrations are reduced to a level at which climate change ceases. Every Party (signatory) to the Climate Change Convention has pledged to strive for this objective. The Kyoto Protocol makes the industrialised countries responsible for taking the lead in cutting emissions.

The Convention is based on the precautionary and polluter-pays principles. The former means that if an activity is suspected of causing serious or irreparable damage, countermeasures must be taken, even if the causal connections are not scientifically proven.

Kyoto Protocol specifies objectives

The Climate Change Convention contains no precise targets or time limits. But the Kyoto Protocol, signed in 1997, includes explicit commitments on how much 38 industrialised nations are to reduce GHG emissions. This is an initial step in specifying how the objectives are to be fulfilled.

Altogether, by 2012, these countries' emissions are to be reduced by 5.2% in comparison to the levels recorded in 1990. The Kyoto Protocol entered into force in February 2005.

The Kyoto Protocol has since evolved through additional negotiations. But efforts to bring about a new joint commitment have engendered international opposition. The U.S.,

INTERNATIONAL TOOLS

The Kyoto Protocol primarily concerns the industrialised countries' commitments to reduce their GHG emissions. But it also reminds us that the developing countries are entitled to develop, and that the industrialised nations have a responsibility to transfer environmental knowledge and resources to the developing countries.

Mechanisms that contribute to fulfilment of the Climate Change Convention's objectives have also been devised. These are all based on the premise that efforts to reduce GHG emissions should function like a market in which those who release GHGs pay and those who invest in measures to reduce emissions are rewarded.

Emissions Trading:
Trading in GHG emission allowances ('emissions trading') means that nations which do not emit as much as their allocated emission quotas allow them to can sell their surpluses to nations that risk exceeding theirs. This trading regime is an economic control mechanism for reducing emissions that can bring about a transfer of money from rich to poor countries. The system applies to all Parties to the Kyoto Protocol, including Eastern European countries.

Clean development mechanism:
Countries that have committed to reducing their own GHG emissions can invest in projects that reduce GHG emissions in developing countries or help to promote sequestration of CO2, through reforestation, for example. The country making the investment is then credited with the emission reduction that the project is estimated to contribute, allowing it to increase its own emissions by the corresponding amount.

The main objective of the Clean Development Mechanism is to promote sustainable development and growth – that is, development that takes the environment into account. As a result of this mechanism, companies in industrialised countries may gain experience investing in developing countries, which may in turn yield more investments.

Joint implementation:
One industrialised country can invest in another's emission-reducing measures. The reduction is then translated into an emission quota that is divided equally between the two countries.

Climate Change Funds:
Under the Climate Change Convention, various funds have been set up to help finance initiatives to combat climate change:

- The Global Environment Facility (GEF).
- The Special Climate Change Fund, which finances initiatives involving transfer of technology in such sectors as energy, transport, industry and agriculture. It also helps countries dependent on income from fossil-fuel production or export to seek and develop other earning opportunities.
- The Least Developed Countries Fund finances programmes and measures in the least developed countries.
- The Kyoto Protocol Adaptation Fund supports measures to facilitate developing countries' adaptation to climate change.

FOTO: ERIC MILLER/PHOENIX

Developing alternative energy sources that are renewable and do not produce emissions that have a harmful impact on the climate is a priority task. On their way to school, these children in the South African province of Kwazulu Natal pass solar panels that produce household electricity.

which alone accounts for more than 35% of the industrialised countries' emissions, has decided to withdraw from the Protocol. The climate change agreement, which will come into effect when the Kyoto Protocol expires in 2012, must be agreed upon by December 2009, during the Climate Change Convention's Conference of the Parties in Copenhagen. Sweden will then be holding the Presidency of the EU and is likely to play an important role in bringing the negotiations to a successful attainment.

Cooperation and knowledge

To achieve results in climate efforts, coordination – everyone pulling in the same direction – is essential. Research on climate change and sustainable technology are equally important. In addition, cooperation among Sida, other government agencies (such as the Swedish Energy Agency and the Swedish Environmental Protection Agency) and Swedish researchers is a key precondition for augmenting knowledge about climate change.

To promote investments in partner countries, Sida is disseminating knowledge of the market mechanisms created by the Kyoto Protocol. They serve as specific projects for reducing emissions of GHGs and contributing to sustainable development. In so doing, Sida can also strengthen public agencies in these countries. This provides opportunities for them to properly negotiate with investors about how projects are to be designed and to utilise knowledge of environmentally sound technology, which is the purpose of the investments.

Focus on adaptation and sustainable growth

There are many reasons for integrating climate issues in Sweden's international development cooperation. To achieve the goal of eradicating poverty, poor people's incomes must grow. But if increased growth involves increased emissions of C02, which cause climate change, the situation worsens for those who depend on agriculture, clean water and health to improve their lives.

Consequently, Sida's main task in climate change work is to strengthen the capacity of poor people to adapt to climate change that already has occurred and is occurring.

ENVIRONMENTAL AWARENESS AND GROWTH

Growth is essential if the incomes of poor people are to increase. But economic growth that stems from environmental degradation due to industrialisation, felled forests and overfished lakes is unsustainable. It threatens human subsistence in the long term, and ill-health and conflicts over natural resources that remain can make poverty worse.

Sustainable development means economic growth that does not take place at the expense of the natural resources on which human beings depend for survival or of natural resources that are necessary for future development.

REFERENCES

Read more about Sida's view on climate change and development at www.sida.se.

A change in the earth's climate also affects human living conditions. A rise in average global temperatures causes the polar ice caps to melt, sea levels to rise and cultivable land to be submerged. Violent storms rage, flooding whole villages. The least developed countries, and especially their poorest inhabitants, suffer most.

The Swedish government has directed Sida to work on three strategic priorities, one of which is the environment and climate change. The government also has appointed a special commission whose mandate includes drawing up proposals on the role of climate change issues in development cooperation. This publication presents Sida's view on efforts to integrate climate change issues into development cooperation in anticipation of results from the commission's work.

Sida's main task with respect to climate change is strengthening the capacity of poor people to adjust to climate change that already has occurred and is continuing to occur. Another key task is to promote actions to reduce emissions of greenhouse gases, which contribute to global warming. Sida also provides catastrophe and humanitarian assistance for people afflicted by extreme weather events.

Halving world poverty by 2015 is one of the greatest challenges of our time, requiring cooperation and perseverance. The partner countries are responsible for their own development. Sida provides resources and develops knowledge and expertise, making the world a richer place.

Sida

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