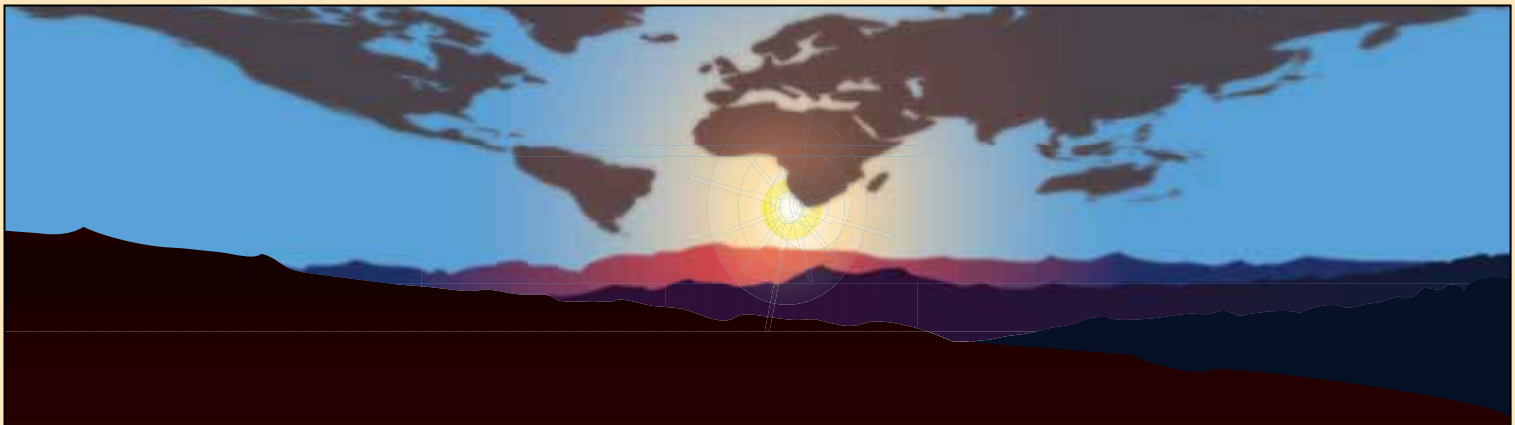
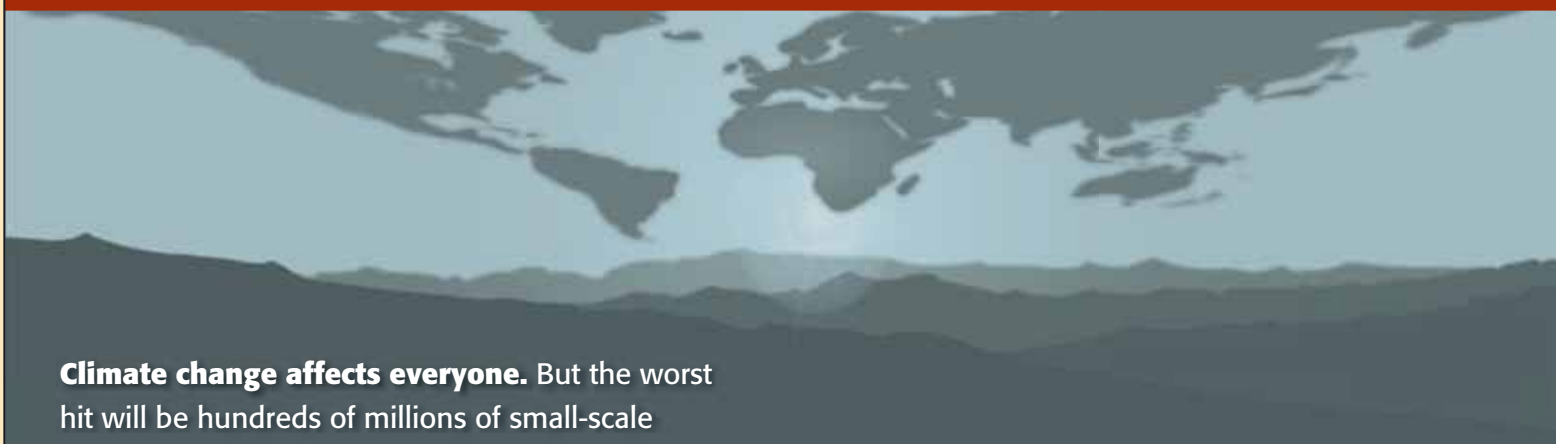


Climate change, energy and food

A conference about new challenges

Rome 3–5 June 2008

WHY A CONFERENCE IS BEING HELD NOW



Climate change affects everyone. But the worst hit will be hundreds of millions of small-scale farmers, fishers and forest-dependent people who are already vulnerable and food insecure. By affecting the availability of land, water and biodiversity, and the price of food, the rising demand for biofuels produced from food crops also has an impact on the poor.

In order to put agriculture, forestry, fisheries and food security on the international climate change agenda, the Food and Agriculture Organization of the United Nations, in cooperation with the Consultative Group on International Agricultural Research, the International Fund for Agricultural Development and the World Food Programme, is organizing a high-level conference from 3 to 5 June 2008 in Rome, Italy to bring together world leaders, policy makers and experts from many disciplines.

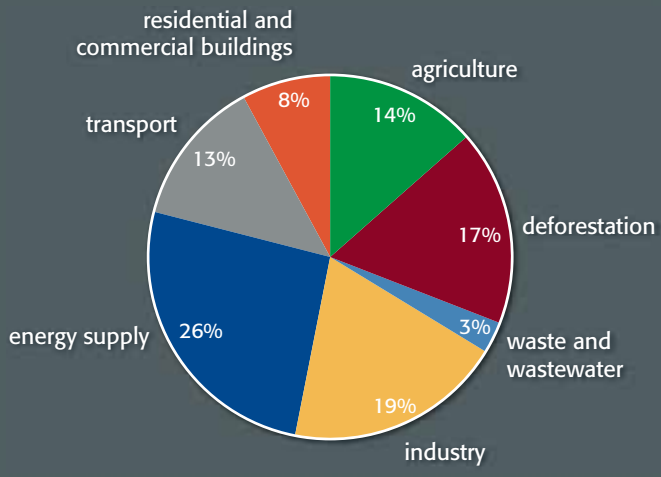
It is hoped that this major conference will mark the start of enhanced international efforts to link climate change, bioenergy and food security, aimed at strengthening existing development networks and partnerships and contributing to efforts both to save the environment and defeat global hunger.

Food security under stress

Climate change and bioenergy not only affect food production. They can influence the whole food supply chain and all four dimensions of food security, namely:

- availability of food from both domestic production and imports;
- access to resources, for producing or buying food;
- stability of food supply, both ecological and macroeconomic;
- utilization of food, including consumer preferences and safety of water and food.

Agriculture and deforestation contribute significantly to greenhouse gas emissions



Greenhouse gas emissions by sector
(Source: Intergovernmental Panel on Climate Change 2007)

Climate change, energy and food:

Agriculture, forestry and fisheries are central to the climate change and bioenergy debates. They cause climate change but are also important agents of mitigation and adaptation. The use of biofuels as a solution to reduce carbon emissions and to become more independent from fossil fuels has crucial implications for food security as well as for current and future land use. Climate change combined with the rising demand for biofuels produced from food crops reduce the availability of land, water and biodiversity for food production and affect food prices. Synergies and trade-offs must be examined with a view to ensure both food security and environmental protection.

Many of the world's small-scale farmers work marginal land in the tropics, which is most vulnerable to climate change phenomena such as more frequent and more intense drought. They are the people who can least withstand a drop in income from their modest fields and are least equipped to adapt to changing conditions. Climate change will affect the suitability of land for different types of crops, livestock, fish and pasture. It will also have an impact on the health and productivity of forests, the incidence of pests and diseases, biodiversity and ecosystems. Some farms will be wiped out due to increased aridity, groundwater depletion, salinisation and the rise in sea level.

Bioenergy offers opportunities and risks. It can contribute to rural income, supply rural households with electricity and heat, and mitigate climate change – by substituting fossil fuels and related CO_2 emissions in the atmosphere. However, if biofuels are produced unsustainably, their contribution to mitigating climate change is negative. Rising demand for liquid biofuels is driving up commodity and food prices. This is bad news for poor consumers, but an opportunity for those who can grow and market crops for biofuels. Food and energy crops are now competing for land, water and other resources in many parts of the world. Policy makers have the difficult task of calculating how best to respond to the new opportunities, while making sure people can continue to grow or buy adequate food.

Agriculture and deforestation account for over 30 percent of global greenhouse gas emissions. But well-managed agriculture and forestry can contribute significantly to reducing emissions through reduction of deforestation, better control of wildfires, improved nutrition for ruminant livestock such as cattle, more efficient management of livestock waste, improved pasture management, organic agriculture, agro-forestry systems and the sustainable production of bioenergy for heat and power. However, food security should not be compromised.

the issues that won't go away

Agriculture consumes 70 percent of global water withdrawals. Climate change will increase water scarcity and demand for irrigation in many parts of the tropics. Higher energy prices will increase the cost of pumping water. Agriculture will have to increase water storage and water productivity, producing "more crop per drop". Countries urgently need to adopt better agricultural practices, to improve soil fertility and reduce land degradation.

Fishing and aquaculture are threatened by climate change, of concern to 42 million fishers and hundreds of millions of occasional workers in fisheries. Some fish resources will become less abundant while important species may move to other areas where they are less available to the fishers. Aquaculture will become less productive. Communities living in coastal areas and small islands will be exposed to more frequent cyclones and floods or may even be displaced by rising sea levels.

Around 13 million hectares of forests are being lost annually. Reducing forest degradation and deforestation helps to protect water and soil resources as well as biodiversity and it contributes to the reduction of greenhouse gas emissions.

Plants, livestock and fish will be exposed to more frequent and more intense outbreaks of pests and diseases. Changing temperatures, humidity or salinity will mean pests and diseases will spread to new geographical areas, posing new risks for food security, food safety and human health.

In 2007, extreme weather events, in particular floods, affected 197 million people, most of them in developing countries. Extreme weather events and associated disasters are occurring more frequently as a result of climate change, and their impact on food supply can be severe. Disaster risk management can help reduce the impact, including through risk-assessment and -reduction measures, early warning systems and improved preparedness.

High-Level Conference on World Food Security and the Challenges of Climate Change and Bioenergy

Location:
FAO headquarters, Rome, Italy
Dates: 3-5 June 2008
The conference will be attended by heads of state and government, and ministers of agriculture, forestry, fisheries, livestock, water, energy and environment.

Expected outcomes:

- a better understanding of the nexus between food security, climate change and bioenergy;
- agreement on steps to be taken towards climate-responsive food security policies and programmes;
- agreement on steps to be taken towards sustainable bioenergy policies and programmes, taking into account food security and rural development.

Pre-conference meetings:
In order to provide up-to-date information to the conference, a series of expert meetings are being held in Rome between February and April 2008 on:

- biodiversity for food and agriculture;
- bioenergy policy, markets and trade, and food security;
- global perspectives on fuel and food security;
- climate change, water and food security;
- climate-related transboundary pests and diseases;
- climate change and disaster risk management;
- climate change adaptation and mitigation;
- climate change and fisheries and aquaculture.

In addition, consultations with civil society organizations and the private sector are being organized.

Organizers:

Food and Agriculture Organization of the United Nations in cooperation with the Consultative Group on International Agricultural Research, the International Fund for Agricultural Development and the World Food Programme.

Sponsors:

Supported by the governments of Italy, Norway, Spain and Sweden.




FAO's role

FAO has extensive experience with the development, collection and promotion of best practices in agriculture, forestry and fisheries, which are crucial for climate change adaptation and mitigation. FAO provides global geospatial data, analytical tools and models, crop yield forecasting and impact monitoring and information on risks related to climate variability and change as well as bioenergy.

FAO has a long-standing mandate from its member countries on the promotion of energy from wood and agro-biomass within its overarching mandate of promoting food security. FAO works closely with governments, rural communities, research institutions, international agencies and other bodies. The Organization provides a neutral forum for international negotiations and technical discussions on climate change and bioenergy related to agriculture, forestry, fisheries and overall food security.

For more information, contact:

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CLIMATE CHANGE, BIOENERGY AND FOOD SECURITY

Three United Nations agencies – FAO, IFAD and WFP – work on different aspects of world food and hunger problems. This graphic symbolizes the agencies' partnership in working towards food security in the face of climate change and the growing demand for bioenergy.

www.fao.org/foodclimate