



**Global
Forum**
on Food Security
and Nutrition

HLPE Consultation on Climate Change and Food Security

Summary of discussion no. 71
From 14 June to 7 July 2011



Global Forum on Food Security and Nutrition

About the Document

This document summarizes the results of an online discussion held on the Global Forum on Food Security and Nutrition <http://km.fao.org/fsn>

Please refer to the complete proceedings document which can be found online at:
http://typo3.fao.org/fileadmin/user_upload/fsn/docs/HLPE/Proceedings_HLPE_Climate_Change.doc

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I. Background

The Steering Committee of the High Level Panel of Experts on Food Security and Nutrition (HLPE) opened an online consultation on Climate Change and Food Security, following the HLPE mandate to conduct a study on the same topic in order to inform the Committee on World Food Security (CFS). Forum members were invited to comment on the proposed scope of the study, which includes assessing impacts of climate change on food security and nutrition, identifying vulnerable groups, developing adaptation and mitigation strategies and building recommendations for policies (to read the proposed scope of the HLPE study, click on the following link: http://typo3.fao.org/fileadmin/user_upload/fsn/docs/HLPE/Proposed_scope_of_the_HLPE_study_on_climate_change.pdf)

The online consultation took place from the 14th of June to the 7th of July and attracted 130 contributions from 49 countries.

The following summary is aimed at providing readers with a general overview of the consultation. For a complete record, please refer to the proceedings document http://typo3.fao.org/fileadmin/user_upload/fsn/docs/HLPE/Proceedings_HLPE_Climate_Change.doc , in which a list of the contributors and of the references provided during the discussion is available.

The list of all references shared by participants is also available:

http://typo3.fao.org/fileadmin/user_upload/fsn/docs/HLPE/References_shared_by_participants.pdf

II. General issues relating to the scope

Most of the participants believed the scope to be comprehensive and appropriate, and generally agreed with its outline.

Some called for an inclusion in the scope of all drivers related to climate change, such as social, economic and political ones, whilst others suggested keeping the focus on climate change and food security and nutrition issues. Many participants agreed that the scope was too broad and needed refocusing to a narrower set of issues, as many have already been explored; this would call for consideration of on-going conventions and negotiations. Comments referred to the scope's vagueness about the objectives of the study, the spatial and temporal scales of action and the methods needed. A considerable number of participants called for the use of a Right to Food framework as a key tool of assessment, as well as an analytical framework with an appropriate set of indicators. The idea of food security and nutrition being considered together was explored, as was that of nutrition security informing the scope. The need to analyse synergies and trade-offs between adaptation and mitigation options was acknowledged by many, as well as the need for the section on adaptation to have highest priority. Finally, it was suggested that the study should be informed by ongoing activities which could provide useful lessons.

Furthermore, the study should emphasise the role of women, the role of technology and its transfer, and the need for animal welfare.

III. Elements omitted

Section 1: Assessing the direct and indirect impacts of climate change on food security and nutrition

In order to assess the impacts of climate change on food security and nutrition, it is essential to develop analytical frameworks in line with the tools available in each country. It is also important to take into account synergistic effects of multiple stresses that are linked to climate change. Some participants suggested looking at all sectors involved in the production of food, including aquaculture, minor crops and wild foods and many called for the inclusion of the assessment of impacts on urban populations. Furthermore, the focus should be placed on the impacts on micro-climates, in order to refrain from generalizing climate change consequences, and worst-case scenarios should be a crucial part of the assessment.

The assessment of direct and indirect impacts of climate change on food security should especially focus on those variables that are more likely to impact the latter, such as water provision and temperature-soil moisture interactions. Assessment of impacts on plants and crops, livestock production systems and breeding programmes are crucial in understanding the extent of the damage to food security. It is equally essential to study the effect on biodiversity, in particular agro-biodiversity, in order to make efforts towards preserving the "agricultural gene pool". Impacts on the livelihoods of farmers and livestock keepers will also need to be assessed. Another important issue identified is that of migration due to climate change and how this will affect (and already does) agricultural production and social dynamics.

From a nutrition perspective, some participants stressed the importance of assessing climate change impacts on food quality and levels of micro-nutrients in foods (especially if staple). Bio-fortification and gen-technology were identified as possible solutions. A further issue brought up was that of the impact of climate change on the human body's requirements, and the possibility of needing to change nutrient recommendations and guidelines.

Uncertainties related to the assessment of climate change impacts on food security and nutrition were linked to the inability of data to take into account all necessary drivers, therefore not properly correlating climate change to food security. Technical uncertainties included unreliable rainfall predictions, the relative inefficiency of producing animal products, the acidification of resources and El Nino effect. Participants also identified the need for the Panel to address the question of how to deal with uncertainties, evaluating possible routes of action and tools needed.

Section 2: Identifying vulnerable regions and populations

Regions with the highest rates of undernourishment and those whose access to food (as well as its production and availability) is or could be potentially compromised were identified as vulnerable, as were population groups such as landless rural families, refugees, food-insecure smallholder farmers and those involved in migration trends. Population livelihoods and ecosystem conditions in drylands should also be treated as a priority. Furthermore, an overlay of the analysis of vulnerable regions with that of vulnerable populations would be useful in achieving a meaningful sense of "climate-risk hot spots". It is essential for the study to explore whether the identified vulnerable countries possess the tools to deal with climate change effects and, if not, how developed countries and international agencies may help.

Section 3: Adaptation to climate change

Adaptation should be considered a learning process, in which the strategies that prove to be the most effective are implemented. In this context, traditional knowledge is considered to be extremely valuable. The need to distinguish between short-term and long-term measures was made explicit, as was the need to explore whether there may be any trade-offs or synergies between the two. Many identified agro-ecological approaches as adaptation possibilities. These approaches include agro-forestry, plant breeding and biotechnology to produce high-yielding low-input plants, the utilization of highly resistant local livestock, downsizing herds, changing feed strategies and changing livestock composition in relation to feed availability or market demand. Furthermore, the preservation of genetic resources may help all sectors of food production to adapt. Non-agricultural solutions were also identified, such as the contribution of the forestry sector and demand management through lifestyle changes (e.g. a reduction in meat consumption). In the development of adaptation strategies, useful tools but also the enhancements of adaptation capacity were thought as crucial. Adaptation may also mean shifts in livelihoods, which need to be taken into account. Children, women and vulnerable populations discussed in Section 2 are groups entitled to priority adaptation actions.

Uncertainty about climate change impacts makes it hard to generate reliable benefit estimates for adaptation strategies, so it may be useful to look at additional actions and costs that the latter may require. Investment for strategies should include the role of international governance, micro-finance, private sectors and consumers. The cost-benefit analysis should also look at the potential costs of not adapting.

Although the importance of the private sector was recognized, many called for greater consideration of the role of the public sector, as well as that of small producers. The possibility of potential areas of conflict arising was identified, although the ultimate decision-making power was thought as residing in the government's hands.

A comprehensive and dynamic policy approach should be community-based, and involve farmers and youth. The former could be assessed for their adaptation efforts as motivational involvement. Agricultural and non-agricultural adaptation actions also need to be nutrition-sensitive.

Section 4: Climate Change Mitigation

In order to assess the contribution of agriculture to climate change, it is essential to review emissions from all stages of food production and include large-scale aggregates as well as smallholders contributions.

Mitigating options which involve agriculture are best if country-led, with each nation dealing with climate change mitigation in the most suitable way. Local strategies are to be valued and taken into account, as farmers have extensive knowledge on the matter. Solutions proposed were high-yielding low-input plants (via plant breeding or bio-technology), the use of local livestock, urban agriculture, more ecological farming systems, control management of plant and animal pests and diseases and the conservation of non-arable land through afforestation or simple regeneration.

Mitigation options should include not only agricultural options, but also non-agriculture ones, such as those linked to the wood and mining industries, with specific consideration of the role of forests as carbon sinks. Formulating nutritional guidelines to mitigate climate change impacts may also be beneficial. Finally, it is important to develop strategies on short, medium and long term and actions should prioritise the most threatened.

Section 5: Recommendations for policies and actions

Although some participants stressed the need for actions to be prioritised, others expressed the concern that some policy recommendations may be ahead of the analysis and it may be best to keep them open for now. Funded and non-funded studies should be used to feed into policies and the latter are best clustered into national, regional and international levels, with coordination at all levels; consideration of the role that the CFS should play in such coordination is essential. Some identified a country-led approach with international support and sharing of information and technology as the way forward, with the need for an analysis of the culture of different populations and their responsiveness to the new scenario. Many called for a greater role for farmers in the decision-making and as the receivers of information and technology. Policies should address all areas that affect and are affected by adaptation and mitigation actions, such as political and social stability and urban-rural linkages. A nutrition-sensitive approach in the context of sustainable development may also be useful. Practical advice included the creation of an apex controlling advisory system to provide climate forewarning signals to farmers, the implementation of climate-resilient and climate-smart urbanization strategies, the practice of food diversification, sustainable land and soil management (especially in the dryland areas) and the increase of public awareness through campaigns and education programmes.