



**REPORT SUMMARY:
IMPACTS OF CLIMATE
CHANGE ON THE RIGHT
TO FOOD**

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INTRODUCTION

Climate change, sustainable resource management and food security are now widely considered to be among the most complex, interdependent and urgent global policy challenges. The world's scientific community predicts that average temperatures will rise by 2° to 4°C by the end of the century, posing multiple threats to agricultural production. Moreover, climate change is undermining the right to food, with disproportionate impacts on those who have contributed least to global warming and are most vulnerable to its harmful effects. Urgent action must be taken to prevent climate change from intensifying, to mitigate greenhouse gas emissions and to adapt to its unavoidable effects.

UN CLIMATE CHANGE REGIME & RIGHT TO FOOD

The United Nations Framework Convention on Climate Change, the main international treaty governing the global climate change regime, and its implementing mechanism, the Kyoto Protocol, outline the main objectives, principles and guidelines for industrialized and developing States to combat the detrimental effects of climate change. The United Nations Framework Convention requires States to adopt national and regional programmes and policies to mitigate and adapt to climate change (art. 4 (1) (b)) and calls on them to take precautionary measures to anticipate, prevent or minimize its causes (art. 3 (3)). It recognizes that climate change is fundamentally an intergenerational problem and refers to the protection of future generations (art. 3 (1)). Articles 3 and 4 recognize the specific needs of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change.

Nevertheless, the mitigation and adaptation policies implemented under the United Nations Framework Convention do not take into account their effects on vulnerable populations, who are the most food insecure.

As early as 1999, in its general comment No. 12, the Committee on Economic, Social and Cultural Rights acknowledged that “even where a State faces severe resource constraints, whether caused by a process of economic adjustment, economic recession, climatic conditions or other factors, measures should be undertaken to ensure that the right to adequate food is especially fulfilled for vulnerable population groups and individuals.” States must, therefore, avoid policies and actions that undermine people’s ability to produce their own food or to access food for themselves and their families. adopt “strategies to combat global climate change that do not negatively affect the right to adequate food and freedom from hunger, but rather promote sustainable agriculture ”

CLIMATE CHANGE IMPACTS ON THE RIGHT TO FOOD

A. Availability

With rising temperatures and increased frequency of extreme weather events, the negative impact of climate change on crop, livestock, fisheries and aquaculture productivity on food availability will have significant global reach. Although tolerance of different crops to changes in temperature and water availability may vary considerably, climate change is expected to have mostly negative implications for crop yields and will “more likely than not” depress them by more than 5 per cent beyond 2050. Water scarcity and more frequent droughts are also expected in arid regions. If urgent additional climate change mitigation efforts are not initiated, heavy rainfall and resulting flooding could destroy entire crops as well as food stores and may affect agricultural land.

B. Accessibility

Changes in food production and quality affect market prices and, in turn, price increases affect accessibility to food, especially for the poor. Socially vulnerable groups may have to alter their diet, substituting less nutritious and lower-quality food items and, as a result, diminishing dietary diversity owing to dependence on a few staple foods. Sharp price increases for all major crops can be expected as a result of climate change accompanied by population growth, changing diets and increasing demand for non-food crops.

C. Adequacy

Over time, climate change is set to reduce food quality, decrease water availability and aggravate the prevalence of infectious vector-borne diseases and chronic intestinal infections, while food storage will also become problematic owing to warmer weather. Moreover, childhood undernutrition and stunting will increase, provoking a rise in nutrition-related deaths in children in developing countries. Climate change exacerbates undernutrition and undermines efforts to reduce poverty and resilience particularly in sub-Saharan Africa.

D. Sustainability

Sustainability is defined in connection with the notion of adequate food or food security, implying that food will be accessible for both present and future generations. Food sustainability and security are also dependent on an adequate diet, clean water, sanitation and health care, to reach a state of nutritional well-being where all physiological needs are met. The IPCC predicts that droughts will intensify in the twenty-first century, owing to reduced precipitation and/or increased evapotranspiration. Water is crucial to food security, as it is necessary for food production, preparation and processing, as well as the absorption of nutrients within the human body

POPULATIONS MOST AFFECTED

A. Affected Regions

The IPCC has expressed with high confidence that, despite regional variabilities, climate change is likely to have an overall negative effect on yields of major cereal crops across Africa. Climate change is expected to interact with non-climate drivers and stressors to exacerbate vulnerability of agricultural systems on the continent, particularly in semi-arid areas. In Southern Africa, it is estimated that yields from rain-fed agriculture could decrease by up to 50 per cent between 2000 and 2020 (A/HRC/16/49).

The Middle East and North Africa is expected to be the region most affected by climate change after sub-Saharan Africa. The impact of climate change makes it very difficult to combat hunger, especially in regions that are already under serious threat from both climate change and food shortage.

The IPCC further notes that in Central America, north-east Brazil and parts of the Andean region, increases in temperature and decreases in rainfall could lower productivity by 2030, aggravating food security among the poorest members of society.

B. Vulnerable populations

Understanding the specific impacts of climate change on food security is challenging because vulnerabilities are unevenly spread across the world and depend ultimately on the ability of communities to manage risks and develop resilience. Moreover, climate change is undermining the right to food, having disproportionate impacts on those who have contributed least to global warming.

Smallholder farmers constitute a significant portion of the world's population. While these farmers are responsible for growing over 70 per cent of the world's food and are critical to global food security. Yet, they are also estimated to represent half of the hungry. Unless small-scale farmers are given the appropriate support and technology to confront climate change, the negative impact on food production and increase in world hunger will be devastating.

As farm labourers, vendors and unpaid care workers, women are responsible for food preparation and production in many countries and regions around the world and play a vital role in food security and nutrition. Nevertheless, women and girls continue to be disproportionately affected by climate change, poverty and malnutrition.

Indigenous peoples are already among the world's most vulnerable and marginalized communities in many parts of the world owing to discriminatory policies. There is considerable concern that the impacts of climate change may overstrain indigenous and traditional peoples' capacity to cope and adapt (A/HRC/29/19).

IMPACT OF AGRICULTURE ON CLIMATE CHANGE

The food system as a whole is a significant contributor of greenhouse gas emissions. Crop and livestock agriculture currently account for about 15 per cent of global emissions. Direct greenhouse gas emissions from agriculture include methane (CH₄) emissions from flooded rice fields and livestock, nitrous oxide (N₂O) emissions from the use of organic and inorganic nitrogen fertilizers and carbon dioxide (CO₂) emissions from loss of soil and organic carbon in croplands as a result of agricultural practices and in pastures as a result of increased grazing intensity.

The world's current consumption pattern of meat and dairy products is a major driver of climate change and climate change can only be effectively addressed if demand for these products is reduced. Projections indicate that most climate-related changes are associated with animal deaths.

Additional negative consequences of agriculture include loss of biodiversity, soil degradation and depletion of ground and surface water (agriculture consumes 60-70 per cent of freshwater resources globally). Desertification and soil degradation are also major threats to food security.

ADVERSE IMPACT OF MITIGATION POLICIES ON RIGHT TO FOOD

Climate change mitigation refers to efforts to reduce or prevent greenhouse gases. Mitigation measures may be problematic when they rely on resources that are currently devoted to food production and have a negative impact on the right to food. One of the most significant examples of this is the production of biofuel as a method of reducing greenhouse gas emissions.

First-generation biofuels are of particular concern, as they are responsible for developing "food v. fuel conflicts". While the shift towards second-generation biofuels is an improvement, it does not necessarily solve the problem. Other examples of reallocation of resources for the benefit of clean energy at the expense of food security are cleaning coal and constructing dams for the generation of hydroelectric power. Cleaning coal requires large amounts of water that could otherwise be used for irrigating arable land, while the construction of dams for hydroelectricity may affect water supply for agricultural activities downstream and also flood land that could otherwise be used for food production

Climate change mitigation strategies that aim to reduce emissions from land use may also have a negative impact on food production methods. The clean development mechanism established to fund carbon reduction projects in developing countries has generated approx.

\$215 billion for developing countries. Yet the mechanism has been criticized for failing to ensure human rights protections and to prevent the approval of projects that have negative human rights impacts, including on food security, owing to a lack of a rigorous impact assessment procedure for prospective projects.

AGROECOLOGY: ALTERNATIVE TO INDUSTRIAL AGRICULTURE

It is important that adaptation policies focus on ensuring the right to food for both present and future generations through sustainable agricultural practices. This implies moving away from industrialized agricultural practices. Agroecology is an ecological approach that integrates agricultural development with relevant ecosystems. It focuses on maintaining productive agriculture that sustains yields and optimizes the use of local resources while minimizing the negative environmental and socioeconomic impacts of modern technologies. Recycling nutrients and energy rather than augmenting nutrients with external inputs, integrating crops and livestock and improving interactions and productivity throughout the agricultural system rather than focusing on individual species are also important components of agroecology.

Agroecology is particularly beneficial and well suited to the needs of poor rural communities, as it is relatively labour intensive, most effectively practised on small plots of land and relies on locally produced inputs, thereby reducing dependence on access to external inputs and on subsidies. It is also of particular benefit to vulnerable groups such as smallholder farmers, women and indigenous peoples, owing to their reliance on local inputs and practices

Despite the availability of widely endorsed good practices, many Governments, development agencies, donors and policymakers are still focusing on large-scale, high-input solutions that marginalize small-scale farmers because of existing political biases, trade rules and policies that limit the ability of Governments to support smallholder farmers and agroecological practices through investment, research funding and legal solutions to land tenure.

Food security involves much more than just food production. However, agribusiness investment is increasingly being seen as the only way to address hunger and poverty in a time of climate change. Within this context, “climate-smart agriculture” was introduced as a series of adaptation policies that sustainably increase productivity and resilience, while reducing greenhouse gas emissions and enhancing the achievement of national food security and development goals. These claims are questioned by several non-governmental and peasant organizations on basis of the absence of criteria to assess sustainability; the absence of a right to food concept; a limited conception of resilience; the misplaced focus on climate change mitigation; and the failure to recognize the historical responsibility of the developed countries for producing greenhouse gas emissions.

RECOMMENDATIONS

The Special Rapporteur recommends that:

(a) Parties to the United Nations Framework Convention on Climate Change respect, protect, promote and fulfil human rights in all climate change-related actions and ensure that human rights language is included in the climate agreement to be reached in Paris;

(b) Policy coherence at the international level be ensured by fostering cooperation between the parties to the United Nations Framework Convention on Climate Change and other international treaties relevant to climate change and food security, while providing a human rights approach in the entire agenda to promote climate justice and the right to food;

(c) Public policies that promote subsidies and production targets resulting in artificial increases in the demand for biofuel production be reviewed in light of their negative impact on the right to food and questionable impact on emission reduction;

(d) A separate category of “climate refugees” be recognized in international law and the necessary legal adjustments made to avoid further human catastrophe;

(e) A human rights impact assessment be carried out before mitigation and adaptation projects are authorized and public participation therein facilitated;

(f) Prior “zoning” exercises be undertaken to ensure that land used for food production is not threatened;

(g) Alternative energy and mitigation policies, including biofuel and biomass mandates, be scaled back to eliminate perverse incentives and that strict sustainability criteria be applied for both first- and second-generation biofuels;

(h) Alternative energy and other non-food production agriculture that requires the acquisition of large tracts of land be regulated and local communities protected against asymmetrical negotiations with multinational companies while extraterritorial implementation of human rights is put in place;

(i) The pivotal roles in food production of smallholder farmers, women and indigenous and local communities be recognized and protected and their acute vulnerability to climate change acknowledged;

(j) Knowledge and information as well as technology transfer and appropriate training in relation to changing climatic conditions be prioritized and available to smallholder farmers, women and indigenous communities;

(k) Social protection measures be prioritized as a means of eliminating hunger and avoiding food insecurity in a time of climate change;

(l) Scientific research institutions and Governments greatly increase financial allocations to agroecology so as to demonstrate that it can feed the world without destroying the environment and at the same time reduce the adverse impact of climate change;

(m) Governments evaluate their agricultural and trade policies to avoid price volatility and financial vulnerabilities in a time of climate change;

(n) The adaption of culturally appropriate diets that rely less on resource-intensive food be promoted by civil society and Governments as a means of reducing excessive consumption and eliminating food waste.