# FAO’s responses to the Questionnaire disseminated in relation to Human Rights Council resolution 50/9 on human rights and climate change

*5 December 2022*

**1. Please describe through concrete examples and stories how climate change is affecting the full realization of the right to adequate food in your country.**

* Climate change has cascading impacts on agriculture, food security and nutrition - from physical impacts on agro-ecosystems that impact production, to impacts on livelihoods and food security in its four dimensions of availability, accessibility, utilization and stability. This cascade of impacts, acting on a series of vulnerabilities that affect food security and nutrition[[1]](#footnote-1) threatens the realization of the right to adequate food.
* Climate change undermines efforts to reduce poverty. Small island developing states (SIDS) and land locked developing countries (LLDCs), least developed countries (LDCs) and lower-income countries are among the most affected, as well as most vulnerable populations, including Indigenous Peoples, women and marginalized groups.

# **Climate change impacts on food availability**

* Climate change is expected to have mostly negative implications on food production. It will “more likely than not” depress yields by more than 5 percent beyond 2050. An increase of just 1°C in temperature can have devastating impacts on crop yields and the ability to maintain current levels of agricultural production.[[2]](#footnote-2) The effects of climate change on production of fruits and vegetables are less well studied than for stable crops but are likely to be important because of the impacts of climate change on pollinators.
* Climate change will also impact land and water resources, while already 34 percent of agricultural land is degraded.[[3]](#footnote-3) It further aggravates erosion and loss of soil organic carbon, with increased risks of desertification and long term effects on the populations capacity to grow its own food, land conversion and deforestation, and natural resources related conflicts.
* Expected sea level rise will affect food availability in the coastal areas and river deltas that are home to 60 percent of the world’s population.[[4]](#footnote-4) Inundation of coastal agricultural lands will lead to increased groundwater salinization, affecting the quantity and quality of agricultural production.[[5]](#footnote-5)

# **Climate change impacts on food access**

* Climate change, leading to reduction and instability of food production, added to increasing global demand driven by population growth and diet changes, is expected to contribute to price increases and volatility for major crops, limiting accessibility to food, particularly for low income net food importing countries and for the poor. Many vulnerable groups that already rely heavily on a few staple foods for their diets will be at further risk of not having a diversified, balanced and healthy diet.
* Extreme events are projected to reduce food availability and quality, impact food prices especially affecting vulnerable groups, including low-income urban consumers, wage laborers, and low-income rural households who are net food buyers. Furthermore, climate-induced disasters can create obstacles to food distribution and access, making it difficult to deploy adequate humanitarian responses to emergencies. The FAO publication [The Impact of Disasters and Crisis on Agriculture and Food Security (2021)](https://www.fao.org/3/cb3673en/cb3673en.pdf) fosters a better understanding of how agriculture is affected by disasters.

# **Climate change impacts on food adequacy and utilization**

* Climate change will have a substantial negative impact on food availability, safety and possibly on nutritional quality in general, decreasing the availability of foods rich in many essential nutrients. Increased droughts and rising emissions may reduce the nutrient content of staple food crops with detrimental effects on nutrition. Studies point to potential changes in the nutritional quality of some foods (e.g. reduced concentration in proteins and in some vitamins and minerals), due to elevated CO2, particularly for flour from major cereals and cassava. Heavy rainfall may also lead to lower quality of crops owing to fungal infections. Climate change can have a variety of impacts on the quality of drinking water, which is key to the good absorption of nutrients.[[6]](#footnote-6)
* Over time, climate change is set to 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 wasting, and stunting may increase due to combined effects of poor nutrition and infection, provoking a rise in nutrition-related deaths in children particularly in low-income countries.
* Good nutrition depends on many factors including an adequate diet, clean water, sanitation and health care, to reach a state of nutritional well-being, where all physiological needs are met. Most if not all of these factors will be severily impacted by climate change, particularly for the most vulnerable populations.
* The right to adequate food will be particularly compromised in areas most impacted by climate change. These areas are often already affected by land degradation and water scarcity, and will be even more dependent on food imports, impacting the most vulnerable groups, including Indigenous Peoples, women and marginalized rural and urban groups.

**2. Please share a summary of any relevant data that captures how climate change adversely affects the full realization of the right to food, taking into account discrimination, including multiple and intersecting forms of discrimination.**

* An estimated 720-821 million people are currently undernourished, 151 million children under five are stunted, 613 million women and girls aged 15-49 suffer from anemia, caused by iron deficiency among others, and 2 billion adults are overweight or obese.[[7]](#footnote-7)
* Climate change will slow down progress towards ensuring the access to safe, nutritious and sufficient food for all, including the right to adequate food. The Special Rapporteur on the right to food has indicated that climate change poses a serious threat to the enjoyment of this right and threatens all aspects of food security, with 600 million additional people potentially vulnerable to malnutrition by 2080.[[8]](#footnote-8)
* Climate change puts agrifood systems at risk, which currently feed and nourish the world population and support the livelihoods of over 1 billion people.[[9]](#footnote-9) Statistics demonstrate that agriculture in low- and lower-middle-income countries has absorbed 82 percent of all damage and loss caused by drought between 2008-2018.[[10]](#footnote-10)
* Climate change causes disproportionate impacts on those that are most vulnerable and who have least contributed to global warming. Sudden losses in food production and access to food compounded by decreased diet diversity increase malnutrition in many communities, especially Indigenous Peoples, small-scale food producers and low-income households, with children, elderly people and pregnant women particularly impacted.[[11]](#footnote-11)
* In terms of geographic disbalance, global figures demonstrate the disproportionate economic burden borne by the most vulnerable countries. Climate change threatens the ability of entire regions to feed themselves. Between 2008-2018, production loss caused by climate change amounted to USD 30 billion for Africa (both sub-Saharan and North Africa), and slightly lower for Latin America and the Caribbean at USD 29 billion. The loss across the Caribbean SIDS amounted to USD 8.7 billion alone. For the same period, Asia experienced crop and livestock production loss valued at a notable USD 49 billion, with Southeast Asia and Southern Asia surpassing all other sub-regions at USD 20.7 and USD 25 billion respectively. The total estimated loss for the Pacific SIDS across Oceania was lower in absolute terms at USD 108 million for the 2008-2018 period.[[12]](#footnote-12) The FAO’s publication on [Improving food security for vulnerable communities in Small Island Developing States through improved anticipation and management of climate risks](https://www.fao.org/3/cb6907en/cb6907en.pdf) showcases how to ensure sustainable and resilient domestic food production and food security and nutrition for the most vulnerable communities, including women and young people.
* In mountainous regions of developing countries, food insecurity is aggravated by social isolation, environmental degradation, exposure to the risk of disasters and climate change, and limited access to basic services. This is especially true in rural areas. The 2020 FAO study on the vulnerability of mountain peoples to food insecurity adds further evidence of these occurrences and shows that under some circumstances, these occurrences are increasing.[[13]](#footnote-13)
* As shown In *The State of the World’s Land and Water Resources for Food and Agriculture 2021 – Systems at breaking point[[14]](#footnote-14)* climate change will make the realization of the right to food even more difficult for small food producers in areas already experiencing land degradation and water scarcity, with increasing risks of desertification.
* Small food producers are also the ones that have lower capacities to access the knowledge, technical and financial support needed to make the investments necessary for their own adaptation to climate change contributing to the realization of the right to food of themselves and their communities.

**3. Please describe any specific measure, including public policies, legislation, practices or strategies that your Government has undertaken, in compliance with applicable international human rights law, to promote an approach to climate change mitigation and adaptation, as well as loss and damage, that ensures the full and effective enjoyment of the right to food. Please also note and identify any relevant mechanisms for ensuring accountability for these commitments including their means of implementation.**

* FAO has developed a new [Strategy on Climate Change 2022-2031](https://www.fao.org/3/cc2274en/cc2274en.pdf) with the ambition to make agrifood systems a central part of the global climate solution, and our planet a better place to live, ensuring food security and a more equitable future for all. It highlights FAO’s vision for agrifood systems that are sustainable, inclusive, resilient and adaptive to climate change and its impacts and contribute to low-emission economies while providing sufficient, safe and nutritious foods for healthy diets, as well as other agricultural products and services, for present and future generations, leaving no one behind.
* The strategy puts an emphasis on the most vulnerable countries and populations. It is guided by a set of principles that will contribute to promote the realization of the right to food. It puts farmers, livestock keepers, fishers, aquaculturists and forest-dependent people at the centre, in particular small-scale producers, Indigenous Peoples, women, youth, local and marginalized communities, and people in vulnerable situations. Empowering people and supporting local-level climate action, targeting and engaging the rural and urban populations who manage much of the world’s ecosystems and who are most at risk of climate change impacts, such as SIDS and coastal communities, needs to be at the frontline of FAO’s climate work. The strategy promotes planning and implementation of gender transformative, youth-engaging, participatory and socially inclusive climate action, including strengthening of knowledge, technologies, practices and efforts of local communities and Indigenous Peoples in responding to climate change. Moreover, FAO emphasizes ensuring equal opportunities and sharing of benefits of climate action, engagement of women, youth and Indigenous Peoples in climate debates and providing support to countries to reduce social exclusion, including through legal, regulatory and institutional frameworks.
* FAO supports Member States to both mitigate and adapt to climate change through a wide range of research-based and practical [programmes and](https://www.fao.org/climate-change/programmes-and-projects/en/) policy measures that are inclusive of vulnerable and marginalized persons and communities, frequently the most affected by climate change.[[15]](#footnote-15) The latest example of FAO’s work on rights-based policy is the brief on [Impact of COVID-19 on the human right to adequate food in the Pacific Region](https://www.fao.org/3/cc1963en/cc1963en.pdf) produced in 2022.

**4. Please describe any mechanisms and tools that are in place to measure and monitor the impacts of climate change on the full realization of the right to food.**

* The right to foodrepresents a key focus of the human rights-based approach (HRBA) advocated for by FAO[[16]](#footnote-16) that is needed to tackle inequality and protect individuals and groups living in poverty or are vulnerable and marginalized, including youth, Indigenous Peoples, women, older people, people with disabilities, migrants and refugees, and ethnic or other minorities.[[17]](#footnote-17)
* In its response to the UN Secretary General’s Call to Action for Human Rights, FAO stressed its commitment to human rights and highlighted the importance of the right to food for the achievement of the 2030 Agenda.
* The FAO’s mandate includes ensuring the freedom from hunger, which directly impacts and relates to the right to food. As part of One UN, FAO is committed to applying the HRBA in the Strategic Framework 2022-2031 aimed to achieve inclusive, resilient, and sustainable agrifood systems. The FAO Strategic Framework aims to “support the 2030 Agenda through the transformation to MORE efficient, inclusive, resilient and sustainable agrifood systems for better production, better nutrition, a better environment and a better life, leaving no one behind.” The *Better Environment* priority is strongly connected to the right to food element of sustainability, intended both in terms of securing food for present and future generations, but also for preserving biodiversity.
* FAO supports its member countries by implementing the [Voluntary guidelines to support the progressive realization of the right to adequate food in the context of national food security](https://www.fao.org/right-to-food/guidelines/en/) (Right to Food Guidelines adopted by the FAO Council in 2004), which provide guidance on ways to implement the right to adequate food across 19 different policy areas for action.
* The Right to Food Guidelines is a policy tool endorsed by the Committee of World Food Security (CFS). These guidelines steered the programme of work of the reformed CFS and spearheaded the development of other CFS policy tools. These include: (1) the Voluntary guidelines on responsible governance of tenure of land, fisheries and forests in the context of national food security; (2) the Principles of responsible investment in agriculture and food systems; (3) the Voluntary guidelines for securing sustainable small-scale fisheries in the context of food security and poverty eradication; (4) the CFS Framework for action in protracted crises; and (5) the Voluntary guidelines on food systems and nutrition. FAO develops methods and instruments to assist each stakeholder group in the implementation of the Right to Food Guidelines.
* FAO promotes the Self-evaluation and Holistic Assessment of Climate Resilience of Farmers and Pastoralists ([SHARP](https://www.fao.org/in-action/sharp/en/)) to monitor and evaluate their resilience and adaptive capacities, covering socio-economic, environmental and agronomic aspects of farming systems and households, including through a household dietary diversity index.
* To ensure that climate risks are fully identified and addressed, and to meet the requirements of FAO’s Environmental and Social Management Guidelines, the Climate Risk Toolbox ([CRTB](https://www.fao.org/3/cb2669en/cb2669en.pdf)) will be soon launched. It is an open-access resource, hosted on the Hand-in-Hand Initiative Geospatial platform, which identifies baseline and future climate-related hazards in the chosen area, as well as the physical and human exposure, socio-economic vulnerability, and adaptive capacity of the targeted population, resulting in the final calculation of climate risk.
* FAO produces evidence-based knowledge material on how climate change affects groups in vulnerable situations (such as youth, Indigenous Peoples or small scale food producers) in order to support the formulation of measures on adaptation and resilience to climate change. One example is the publication on [Actions of Indigenous youth in local food systems during times of adversity](https://www.fao.org/documents/card/en/c/cb6895en).

**5. Please identify and share examples of promising practices and challenges in the promotion, protection, and fulfilment of the full realization of the right to food in the context of the adverse effects of climate change.**

* The right to food is a legal obligation anchored in international law. In order to fulfill this obligation, many States and international organizations have led concrete actions to influence policies and laws for the realization of the right to food.
* The extreme poor, who often live in the most risk exposed areas, are less equipped to protect themselves against climatic hazards and to recover quickly from shocks. FAO is supporting the development of risk informed social protection systems which are able to mitigate the negative impacts of climate related shocks, support poor farmers to transition to more sustainable practices, while promoting the investment on prevention and early action via social protection.
* The negative impact of climate change on people’s livelihoods is only set to increase unless drastic steps are taken to change agrifood systems in a sustainable manner. This is why FAO is promoting the transformation of agrifood systems to be more resilient and inclusive and to better contribute to the promotion of the full realization of the right to food.
* A summary of FAO-led efforts is provided in the [Compendium of community and indigenous strategies for climate change adaptation (fao.org)](https://www.fao.org/3/ca5532en/ca5532en.pdf).

**6. Please include examples and promising practices and challenges that highlight international and multilateral cooperation and approaches that promote the full realization of the right to food.**

* FAO conducts global and regional analyses of Nationally Determined Contribution (NDCs) to provide an overview of priorities and support needs in the agriculture and land use sectors for climate change adaptation and resilience.[[18]](#footnote-18) These analyses also take stock of priorities and measures at the regional and sub-regional levels, reflecting trends on food security and nutrition, and human rights relevant to adaptation.
* FAO supports countries to strengthen the inclusivity of their climate actions and investments through technical and capacity support to policy and programme design and implementation. The key avenues for achieving this include, among others:
	+ Formulation and implementation of Green Climate Fund and Global Environment Facility programmes that facilitate the achievement of NDC objectives;
	+ Operationalization of adaptive social protection systems that promote inclusive disaster management and uptake of climate-resilient agriculture by the poorest and most vulnerable; and
	+ Implementation of coordinated interventions aimed at increasing efficiency by aligning inclusive disaster risk reduction, social protection programmes and knowledge strengthening.
* The Koronivia Joint Work on Agriculture (KJWA) established by the 23rd Conference of Parties to the United Nations Convention on Climate Change (UNFCCC) - COP 2, integrated, among other topics “Socioeconomic and food security dimensions of climate change in the agricultural sector”. FAO provided information and technical support to the KJWA.
* COP 27, held in Sharm El Sheikh in 2022, adopted a decision on the "Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security". This four-year joint work includes implementation of the outcomes of the Koronivia joint work on agriculture and previous activities addressing issues related to agriculture, as well as future topics, recognizing that solutions are context-specific and take into account national circumstances. Among its objectives figure ““Promoting a holistic approach to addressing issues related to agriculture and food security, taking into consideration regional, national and local circumstances, in order to deliver a range of multiple benefits, where applicable, such as adaptation, adaptation co-benefits and mitigation, recognizing that adaptation is a priority for vulnerable groups, including women, Indigenous Peoples and small-scale farmers”. This marks further recognition of the importance of food security and of considering differentiated approaches for most vulnerable groups opening further opportunities to promote the full realization of the right to food.
* FAO plays a key role in strengthening adaptation planning and implementation processes in agriculture and land use by supporting the formulation and implementation of sectoral components in National Adaptation Plans (NAPs) and NDCs. These processes constitute an opportunity to identify and promote solutions that address issues of injustice through a rights-based approach. FAO aims to create the foundation for just and inclusive NAP and NDC implementation and future enhancement while responding to the Secretary-General’s Call to Action on Human Rights.
* Option for agriculture mitigation with positive impacts on food security and environmental protection (thus contributing to adaptation) include management practices that increase soil organic carbon storage and improve nitrogen and water use efficiency. With good design, these practices can result in the double win of emission mitigation and enhanced food security, with increased income and enhanced environmental protection. A policy shift is necessary to respond to the challenges posed by climate change beyond mitigation and adaptation to respect peoples’ human rights, including the right to food, while sustaining the Earth’s renewable resources.

**7. Please provide any additional information you believe would be useful to support climate action that promotes the full realization of the right to food.**

* FAO promotes the need for a holistic food systems’ approach. Special attention should be dedicated to integrating the concerns relating to human rights and justice in natural resources management, disaster risk management, addressing market disruptions, small holders’ livelihoods and governance mechanisms in all agriculture policies.
* Obstacles preventing some groups from benefitting equally from innovative interventions can consist, for example, in weak financial resources, (digital) illiteracy or social exclusion and discrimination. Unless the root causes of poverty, vulnerability, and marginalization are addressed, innovation, technology and digitalization efforts risk bypassing the needs of the most vulnerable, thereby aggravating their exclusion and comparative disadvantage. Therefore, risk management should include an assessment of the potentials and risks associated with the innovation, technology, and digitalization for those living in poverty or vulnerable, excluded and in marginalized situations.
* FAO concurs with the recommendations of the report on the [impacts of climate change on the human rights of people in vulnerable situations](https://documents-dds-ny.un.org/doc/UNDOC/GEN/G22/336/00/PDF/G2233600.pdf?OpenElement), where the UN Secretary General offers the following guidance as part of his recommendations:
	+ Take immediate, ambitious and rights-based climate action, including by adopting and implementing inclusive rights-based national climate action plans, aligned with the objectives of the Paris Agreement and the UNFCCC to protect human health and welfare from the adverse effects of climate change.
	+ Respect human rights in the context of climate change and address the adverse human rights impacts that they have caused or contributed to, including those resulting from climate change.
	+ Ensure that people in vulnerable situations can access information about climate change and climate action, effectively participate in climate-related decision-making and implementation and access justice when climate-related harms occur.
	+ Promote the inclusion of persons in vulnerable situations in environment and climate movements.
1. FAO. 2015. [*Climate change and food security: risks and responses*](https://www.fao.org/3/i5188e/i5188e.pdf). [↑](#footnote-ref-1)
2. IPCC. 2022. [*Climate change 2022: Impacts, Adaptation and Vulnerability*. Insights for inclusive rural transformation and gender equality](https://www.ipcc.ch/report/ar6/wg2/). [↑](#footnote-ref-2)
3. FAO. 2021. *The State of the World’s Land and Water Resources for Food and Agriculture – Systems at breaking point. Synthesis report 2021. R*ome. Available at [<https://doi.org/10.4060/cb7654en>](https://doi.org/10.4060/cb7654en). [↑](#footnote-ref-3)
4. UNDP Human Development Report 2014. *Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*. New York, 2014. [↑](#footnote-ref-4)
5. P. Krishna Krishnamurthy, Kirsty Lewis and Richard J. Choularton, *Climate impacts on food security and nutrition: a review of existing knowledge*, World Food Programme and Met Office Hadley Centre, 2012. [↑](#footnote-ref-5)
6. FAO. 2015. *Climate change and food security: risks and responses.* Available at <https://www.fao.org/3/i5188e/i5188e.pdf>. [↑](#footnote-ref-6)
7. FAO. 2021. *In Brief to The State of Food and Agriculture 2021. Making agrifood systems more resilient to shocks and stresses*. Rome, FAO. [↑](#footnote-ref-7)
8. UN. 2015. Seventieth session of the General Assembly. *The interim report of the Special Rapporteur on the right to food, Hilal Elver, submitted in accordance with Assembly resolution 69/177*. [↑](#footnote-ref-8)
9. IPCC. 2019. *Climate Change and Land*: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. [↑](#footnote-ref-9)
10. FAO. 2021. [*The impact of disasters and crises on agriculture and food security*](https://www.fao.org/3/cb3673en/cb3673en.pdf). [↑](#footnote-ref-10)
11. On all these issues good background can also be found in the Climate Smart Agrifulture sourcebook available at [Climate Smart Agriculture Sourcebook | Food and Agriculture Organization of the United Nations (fao.org)](https://www.fao.org/climate-smart-agriculture-sourcebook/en/) [↑](#footnote-ref-11)
12. FAO. 2021. [*The impact of disasters and crises on agriculture and food security*](https://www.fao.org/3/cb3673en/cb3673en.pdf). [↑](#footnote-ref-12)
13. Romeo, R., Grita, F., and Russo, L. 2020. [*Vulnerability of mountain peoples to food insecurity: updated data and analysis of drivers*](https://www.fao.org/3/cb2409en/cb2409en.pdf). Rome, FAO and UNCCD. [↑](#footnote-ref-13)
14. FAO. 2022. The State of the World’s Land and Water Resources for Food and Agriculture – Systems at breaking point. Main report. Rome. https://doi.org/10.4060/cb9910en [↑](#footnote-ref-14)
15. For more information, see <https://www.fao.org/climate-change/programmes-and-projects/en/><https://www.fao.org/sustainable-development-goals/en/>. [↑](#footnote-ref-15)
16. In its response to the UN Secretary General’s [Call to Action](https://www.un.org/en/content/action-for-human-rights/index.shtml) for Human Rights (CAHR) to underpin all UN work, FAO stressed its commitment to human rights-based approach and highlighted the importance of promoting the right to food for the achievement of the 2030 Agenda. The FAO Corporate Response to the CAHR was submitted in mid-2020. [↑](#footnote-ref-16)
17. UNGA, 2021. *The Right to Food. Interim report of the Special Rapporteur on the Right to Food, Michael Fakhri*. A/76/237. 27 July 2021. [↑](#footnote-ref-17)
18. For more information see <https://www.fao.org/climate-change/our-work/what-we-do/ndcs/research-tools/en/>. [↑](#footnote-ref-18)