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### Annual report of the United Nations High Commissioner for Human Rights and reports of the Office of the High Commissioner and the Secretary-General

Promotion and protection of all human rights, civil,  
political, economic, social and cultural rights,  
including the right to development

## Measures for minimizing the adverse impact of climate change on the full realization of the right to food

### Report of the United Nations High Commissioner for Human Rights\*

#### *Summary*

In the present report, submitted pursuant to Human Rights Council resolution 50/9, the United Nations High Commissioner for Human Rights identifies measures for minimizing the adverse impact of climate change on the full realization of the right to food. The High Commissioner focuses on socioeconomic systems, presenting five pathways that illustrate how human rights-grounded measures can minimize the adverse impact of climate change on the full realization of the right to food and how a transformation of food systems can, at the same time, help mitigate climate change.

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## I. Introduction

1. In its resolution 50/9, the Human Rights Council requested the United Nations High Commissioner for Human Rights to present a report to the Human Rights Council at its fifty-fifth session identifying the necessary measures for minimizing the adverse impact of climate change on the full realization of the right to food, taking into account the panel discussion and the interactive dialogue held at the fifty-third session of the Council. The present report builds on the 2023 report of the Secretary-General on the adverse impact of climate change on the full realization of the right to food mandated in the same resolution.<sup>1</sup>

2. At present, there is capacity to feed the world. However, as a result of climate change, poverty, inequality, conflict and uneven distribution of resources, among other factors, global hunger and malnutrition are rising, and Sustainable Development Goal 2, on ending hunger, remains far from reach. In 2023, more than 333 million people were facing acute levels of food insecurity.<sup>2</sup> This represents an increase of almost 200 million people compared with levels before the coronavirus disease (COVID-19) pandemic. It is projected that almost 600 million people will suffer from food insecurity in 2030.<sup>3</sup> Climate change is one of the leading causes of the unprecedented rise in global hunger.<sup>4</sup> Sudden and slow-onset events, such as heatwaves, salinization, sea-level rise, flooding and droughts, are increasingly having an impact on food systems worldwide.<sup>5</sup> The outcome of the first global stocktake under the Paris Agreement, adopted by the Conference of the Parties to the United Nations Framework Convention on Climate Change at its twenty-eighth session, in 2023, includes the recognition of the fundamental priority of safeguarding food security and ending hunger and the particular vulnerabilities of food production systems to the adverse impacts of climate change.<sup>6</sup> The interconnectedness of food insecurity and climate change underscores the interdependence of the right to food and the right to a clean, healthy and sustainable environment.

3. In the present report, the High Commissioner explores the ways in which socioeconomic systems intersect with climate change and food insecurity and presents five pathways that illustrate how human rights-grounded measures can minimize the adverse impact of climate change on the full realization of the right to food and how a transformation of food systems can, at the same time, help mitigate climate change.

## II. Overview

4. The 2023 report of the Secretary-General, as well as the subsequent panel discussion and interactive dialogue, highlighted how a wide range of factors intersect with the adverse effects of climate change to contribute to violations of the right to food.<sup>7</sup> In the present report, the High Commissioner focuses specifically on socioeconomic aspects and outlines measures and policies to address those violations through the lens of the human rights economy. The latter centres people and the planet in all economic, social and environmental policies, plans

<sup>1</sup> A/HRC/53/47.

<sup>2</sup> World Food Programme (WFP), “A global food crisis”, available at <https://www.wfp.org/global-hunger-crisis>.

<sup>3</sup> Food and Agriculture Organization of the United Nations (FAO), International Fund for Agricultural Development (IFAD), United Nations Children’s Fund (UNICEF), WFP and World Health Organization (WHO), *The State of Food Security and Nutrition in the World 2023: Urbanization, Agrifood Systems Transformation and Healthy Diets across the Rural-Urban Continuum* (Rome, FAO, 2023), p. vii.

<sup>4</sup> Ibid.

<sup>5</sup> See A/HRC/53/47.

<sup>6</sup> See FCCC/PA/CMA/2023/L.17 (2023).

<sup>7</sup> A/HRC/53/47. See also the panel discussion on the adverse impacts of climate change on human rights on the theme “Adverse impact of climate change on the full realization of the right to food”, available at <https://webtv.un.org/en/asset/k1v/k1vwxqyct>; and the interactive dialogue on the report of the Secretary-General on climate change and the right to food, part 1 (available at <https://webtv.un.org/en/asset/k1c/k1c1z53f8a>) and part 2 (available at <https://webtv.un.org/en/asset/k1s/k1spzpihu3>).

and programmes and seeks to ensure that development, economic, industrial and trade policies, investment decisions, consumer protection and choices, as well as business operations, products and services, are firmly guided by human rights norms and standards, including the rights to food and a healthy environment. The human rights economy seeks to eliminate discrimination and reduce inequalities – both current and historic – by investing in human rights and dismantling structural barriers to equality at both the country and international levels.

5. Combined with adverse climate impacts, a narrow focus on economic growth and profit maximization that disregards sustainability, access, affordability and availability of food can lead to heightened food insecurity.<sup>8</sup> The upholding of the interrelated rights to food and a healthy environment, both domestically and internationally, should be a cornerstone of economic policies. To prevent food insecurity, holistic measures for minimizing the adverse impact of climate change on the right to food should serve to systemically adapt food systems to climate change, address loss and damage related to the impacts of climate change on food security and safeguard against negative human rights impacts of climate measures. Food systems should respect, protect and fulfil the rights to food and to a healthy environment. At the same time, climate change mitigation, including through the reduction of the carbon footprint of food systems, must be a priority.

6. In its resolution 50/9, the Human Rights Council calls, among other things, for States to enhance international cooperation and assistance, including financing, for climate change mitigation and adaptation measures to assist developing countries. It urges States to strengthen and implement policies aimed at enhancing international cooperation to realize the right to food for all, consistent with efforts to combat climate change, and to pursue the right to development, including by addressing inequalities in food distribution and access and employing equitable, predictable, transparent and human rights enhancing forms of food systems governance. Meanwhile, in the outcome of the first global stocktake under the Paris Agreement, the Conference of the Parties urges parties and invites non-party stakeholders to increase ambition and enhance adaptation action and support towards, *inter alia*, attaining climate-resilient food and agricultural production and supply and distribution of food, as well as increasing sustainable and regenerative production and equitable access to adequate food and nutrition for all.

7. The International Covenant on Economic, Social and Cultural Rights, in turn, requires States to take steps, individually and through international assistance and cooperation, especially economic and technical, to the maximum of their available resources, with a view to achieving progressively the full realization of the rights recognized in the Covenant, including the right to food (art. 2). It further requires States to take appropriate steps to ensure the realization of the right to food and to ensure equitable distribution of world food supplies in relation to need (art. 11). Overall, climate- and food-related policy and finance should be guided by relevant human rights obligations and international law, including the principles of solidarity, climate justice, equity, polluter pays and common but differentiated responsibilities and respective capabilities, considering historical responsibilities.

8. Despite the existence of obligations regarding human rights and climate change, global emissions, including from food systems, continue to rise. Inadequate mitigation results in increasingly frequent sudden and slow-onset events. As a result of insufficient adaptation and limits on adaptation, these events are increasingly inflicting loss and damage on people in vulnerable situations, especially in developing countries, severely affecting their human rights, including their rights to food and nutrition.<sup>9</sup> Agrifood systems and the communities that support and depend on them are on the frontlines of loss and damage associated with climate change. Agriculture is the sector countries most frequently describe as impacted by loss and damage in nationally determined contributions.<sup>10</sup> Between 2008 and 2018, approximately \$108.5 billion was lost as a result of declines in crop and livestock production

<sup>8</sup> See Sarah Saadoun and Lena Simet, “Reimagine global food systems to prevent hunger and protect rights”, Human Rights Watch, 20 May 2022.

<sup>9</sup> See Human Rights Council resolution 50/9.

<sup>10</sup> FAO, Loss and Damage *in* Agrifood Systems: Addressing Gaps and Challenges (Rome, 2023), p. x.

in least developed countries and low and middle-income countries following disasters.<sup>11</sup> Climate change funding levels have not kept up with the increased need for financing. The climate adaptation finance gap is estimated to be 10 to 18 times as great as current international adaptation finance flows.<sup>12</sup>

### III. Measures for minimizing the adverse impact of climate change on the full realization of the right to food

9. Against this backdrop, the need for States to step up measures to meet their human rights obligations becomes ever more apparent. To ensure that human rights, including the right to food, can be realized, States must urgently ensure that human rights are fully integrated throughout their economic systems and socioeconomic policies. The present section provides an overview of concrete measures that can be taken to address the adverse impact of climate change on food security and the contributions of food systems to climate change, including: (a) advancing equitable, rights-based climate change mitigation measures with respect to food systems; (b) promoting universal social protection systems to strengthen resilience to fulfil the right to food in the context of climate impacts; (c) addressing the roles and responsibilities of businesses with respect to climate impacts on the full and effective enjoyment of the right to food; (d) mobilizing financing and promoting economic and trade policies to fulfil the right to food in the context of climate change; and (e) advancing clean, healthy and sustainable environments and equitable land-related policies to safeguard the right to food.

#### A. Advancing equitable, rights-based climate change mitigation measures with respect to food systems

10. At present, industrial food systems and spiralling climate change are adversely reinforcing each other in a vicious cycle driven by unsustainable policies.<sup>13</sup> Food systems produce roughly a third of global greenhouse gas emissions.<sup>14</sup> States have obligations to mitigate all sources of greenhouse gas emissions, including through food systems transformation. In the United Arab Emirates Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action it is stated that any path to fully achieving the long-term goals of the Paris Agreement must include agriculture and food systems, and it is affirmed that agriculture and food systems must urgently adapt and transform.<sup>15</sup> A transition to sustainable, equitable and climate-resilient food systems that is guided by human rights and secures the right to food for all, including present and future generations, is necessary to minimize climate impacts on food and vice versa.<sup>16</sup>

11. The principles of equity, climate justice, polluter pays and common but differentiated responsibilities and respective capabilities require that climate change mitigation measures address entrenched injustices, inequalities and discrimination, past and present, and are informed by historical responsibilities. The primary obligation for mitigation lies with developed countries. According to UNEP, the Group of 20 countries produced nearly 80 per cent of historical emissions, and the least developed countries contributed only

<sup>11</sup> FAO, *The Impact of Disasters and Crises on Agriculture and Food Security: 2021* (Rome, 2021), p. 28.

<sup>12</sup> United Nations Environment Programme (UNEP), *Adaptation Gap Report 2023: Underfinanced. Underprepared. Inadequate Investment and Planning on Climate Adaptation Leaves World Exposed* (Nairobi, 2023), p. 30.

<sup>13</sup> [A/76/237](#), paras. 11 and 12.

<sup>14</sup> M. Crippa and others, "Food systems are responsible for a third of global anthropogenic GHG emissions", *Nature Food*, vol. 2, (March 2021), pp. 198–209.

<sup>15</sup> See <https://www.cop28.com/en/food-and-agriculture>.

<sup>16</sup> See Committee on World Food Security, "Policy recommendations: agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition" (2021), available at [https://www.fao.org/fileadmin/templates/cfs/Docs2021/Documents/Policy\\_Recommendations\\_Agroecology\\_other\\_Innovations/2021\\_Agroecological\\_and\\_other\\_innovations\\_EN.pdf](https://www.fao.org/fileadmin/templates/cfs/Docs2021/Documents/Policy_Recommendations_Agroecology_other_Innovations/2021_Agroecological_and_other_innovations_EN.pdf).

4 per cent.<sup>17</sup> While the per capita territorial emissions of the Group of 20 countries averaged 7.9 tons of carbon dioxide equivalent in 2021, those of least developed countries averaged only 2.2 tons of carbon dioxide equivalent.<sup>18</sup> Yet the worst climate impacts fall predominantly on people in existing situations of food insecurity, in countries and communities that benefited the least from industrial development and have suffered the most from industrialization, legacies of colonialism and slavery, as well as unjust economic and trade policies. A human rights approach can help guide action to achieve equitable mitigation trajectories, including in terms of addressing the unequal, discriminatory and unjust root causes and consequences of the triple planetary crisis, with reference to common but differentiated responsibilities to reduce emissions.<sup>19</sup> Mitigation policy should be rights-enhancing and promote food security, taking into account global inequalities in emissions shares, and should counter extreme concentrations of wealth and ownership, where a few produce globally disproportionate emissions.<sup>20</sup>

12. Measures to equitably reduce food systems emissions should include appropriate shifts in production, consumption, diet and food waste and loss. For example, according to the Intergovernmental Panel on Climate Change, producing more plant-based food for direct human consumption instead of for livestock can significantly mitigate climate change.<sup>21</sup> Developed countries consuming globally disproportionate per capita amounts of meat should lead in adopting mitigation policies to transition away from high-emissions diets.<sup>22</sup> Demand-side measures, where feasible, such as shifting to sustainable diets and locally sourced food while reducing food loss and waste, can further reduce emissions.<sup>23</sup> Consumers should, where they have the purchasing power, consider the human rights impacts of food choices on others, and move towards sustainable and rights-enhancing practices.

13. Transport, including in trade, which is often powered by fossil fuels, accounts for 5 to 11 per cent of global food systems emissions.<sup>24</sup> The transportation of food also tends to result in food waste and loss, and requires packaging, preservatives and other treatments, which further increase adverse environmental impacts. More broadly, export-oriented policies involve an outsourcing of carbon-intensive food and other production and associated emissions from developed to developing economies via global trade, involving a failure to adequately address the consumption-based emissions embodied in trade.<sup>25</sup> While it creates revenue, export-led production can lead to environmental harms, including from increased carbon emissions. Problematically, unsustainable consumption in developed countries can outsource emissions-generating production without associated emissions being reflected as part of developed countries' contributions to climate change under most carbon accounting systems, which usually attribute such emissions to the countries of production. States should consider ways to account for and mitigate the emissions embodied in trade, such as food trade, including by putting a greater focus on accounting for emissions where products and services are being consumed.

14. Special care should be taken to ensure that mitigation efforts do not pose risks to human rights, including to the right to food. Mitigation measures should be rights-based and safeguard against the aforementioned human rights risks. They should also ensure that the people most affected by climate change, and by mitigation measures to address climate

<sup>17</sup> UNEP, *Emissions Gap Report 2023* (Nairobi, 2023), p. XVIII.

<sup>18</sup> *Ibid.*, pp. XVII and 7.

<sup>19</sup> See [A/77/549](#); and FAO, IFAD, UNICEF, WFP and WHO, *The State of Food Security and Nutrition in the World 2022: Repurposing Food and Agricultural Policies to Make Healthy Diets More Affordable* (Rome, 2022).

<sup>20</sup> Oxfam International, *Climate Equality: A Planet for the 99%* (2023).

<sup>21</sup> Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability* (Cambridge, United Kingdom of Great Britain and Northern Ireland, and New York, Cambridge University Press, 2022), p. 799.

<sup>22</sup> See Sophie Boehm and others, *State of Climate Action 2023* (Bezos Earth Fund, Climate Action Tracker, Climate Analytics, ClimateWorks Foundation, NewClimate Institute, United Nations Climate Change High-Level Champions and World Resources Institute, 2023), p. 6.

<sup>23</sup> [FCCC/SB/2023/9](#), para. 128.

<sup>24</sup> UNEP, *Emissions Gap Report 2022*, p. 60.

<sup>25</sup> Intergovernmental Panel on Climate Change, *Climate Change 2022: Mitigation of Climate Change* (Cambridge, United Kingdom, and New York, Cambridge University Press, 2022), pp. 244 and 245.

change, can meaningfully participate in and benefit from a just transition. This includes ensuring that measures are taken to avoid adverse impacts of climate change mitigation on the availability and affordability of food and providing sufficient time to people engaged in food systems to adjust to mitigation measures.

## **B. Promoting universal social protection systems to strengthen resilience to fulfil the right to food in the context of climate impacts**

15. The climate crisis exacerbates existing poverty, inequality and food insecurity, resulting in persistent vulnerability and putting in focus the imminent need to strengthen resilience.<sup>26</sup> Guaranteeing basic social security is a critical element in ensuring continued access to and affordability of quality food for people, minimizing climate risk and addressing climate change-related loss and damage.<sup>27</sup> The Intergovernmental Panel on Climate Change has recognized that integrating climate adaptation measures into social protection increases climate resilience and has strong food security co-benefits.<sup>28</sup> By promoting economic security and autonomy, including in times of climate and other crises, social security also reduces the need for emergency assistance.

16. Access to basic universal social protection is a human right that is recognized in articles 22 and 25 of the Universal Declaration of Human Rights and article 9 of the International Covenant on Economic, Social and Cultural Rights. It requires that all people have access to adequate benefits to meet their basic needs, including with respect to food. In its general comment No. 19 (2007), the Committee on Economic, Social and Cultural Rights emphasizes that social security systems contribute to the reduction and alleviation of poverty and inequality. Social security thus also contributes to the achievement of the Sustainable Development Goals. The International Labour Organization (ILO) has also underlined the need for social protection as a key instrument in a just transition, in climate change mitigation and adaptation, and in addressing disruptions to food systems.<sup>29</sup> The ILO Social Security (Minimum Standards) Convention, 1952 (No. 102) and other labour standards guarantee the right to social security and provide guidance for realizing the right. Moreover, in the United Arab Emirates Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action the need to promote food security by increasing efforts to support vulnerable people through approaches such as social protection systems and safety nets is highlighted. In this context, non-contributory universal social security measures are particularly effective in addressing food insecurity by guaranteeing basic income security for food and other necessities for all, including marginalized groups, leaving no one behind.

17. Globally, the impacts of climate-related disasters often disproportionately hit countries where social protection systems are not sufficiently robust to respond to climate-induced food insecurity. With multiple cascading crises over the past years, many countries have experienced a further shrinking of fiscal space and are faced with a mounting debt burden, have been forced to put austerity measures in place. This has limited their ability to undertake critical investments in social protection, climate action and food security.<sup>30</sup> The parties to the United Nations Framework Convention on Climate Change and the Paris Agreement have recognized that high-income States should support adaptation and mitigation in developing countries by contributing to financing and that they must cooperate in good faith in the establishment of global responses to climate-related loss and damage.<sup>31</sup> In so doing, high-income countries should support developing countries' investment in social protection systems as a first line of defence against the impact of climate change and food insecurity, including through international finance. This could involve supporting countries

<sup>26</sup> See International Panel of Experts on Sustainable Food Systems, "Another perfect storm?" (2022).

<sup>27</sup> UNEP, *Adaptation Gap Report 2023*, p. XVIII; and Committee on World Food Security, "Policy recommendations".

<sup>28</sup> Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, p. 25.

<sup>29</sup> ILO, "Social protection for a just transition", Just Transition Policy Briefs (2023), pp. 1 and 3.

<sup>30</sup> Human Rights Watch, *Bandage on a Bullet Wound: IMF Social Spending Floors and the COVID-19 Pandemic* (2023).

<sup>31</sup> Paris Agreement, art. 7 (6).

in adopting adaptive social protection systems that address climate impacts by combining social security with changes in food production and distribution systems, and, where needed, humanitarian assistance and disaster risk reduction strategies.<sup>32</sup> The Special Rapporteur on extreme poverty and human rights has called for such support to low-income countries to be provided by a global fund for social protection.<sup>33</sup> Such support could empower low-income countries to maintain social protection floors in the form of robust legal entitlements and promote the universality of the human right to social security.

18. The promotion of decent work is critical to food security and sustainable food production systems.<sup>34</sup> Many food systems workers are treated as expendable, working in conditions that endanger their health and life, such as toxic exposure and extreme heat, which climate impacts can exacerbate. Climate impacts that devastate food yields lead to a lack of employment and related income shortages for those working in food systems. Policies and legislation must protect and ensure the rights of all workers in the face of climate impacts, including peasants, agricultural workers and those in the informal sector, drawing on relevant standards such as the ILO policy guidelines for the promotion of decent work in the agri-food sector.<sup>35</sup> Related measures necessary to protect human rights, including the right to social security, may include labour policies, unemployment security and the reskilling of those who lose livelihoods due to climate impacts on food production. Social protection can further support small-scale food producers and peasants facing climate impacts on food and livelihoods, who also play a key role in the just transition to more sustainable food systems.<sup>36</sup> Interrelated rights, such as the freedom of association and collective bargaining through trade unions, must also be upheld to protect workers' ability to vindicate their rights.<sup>37</sup>

19. Among policy measures relating to social protection, countries should consider strengthening shock-responsive and adaptive social protection by linking national social protection systems with disaster risk financing, which could include pre-arranged financing triggered and guaranteed to be released by the occurrence of climate impacts affecting human rights.<sup>38</sup> Other related critical measures may include support for cooperative food systems, investment in local food economies, socially pooled emergency food reserves to help cope with food shortages or price surges due to climate shocks, or equitable financing for early warning systems and climate technologies to ensure anticipatory monitoring, including to support those most at risk.

20. Overall, to better capture climate-induced risks to and impacts on human rights, there is a need to integrate human rights analysis, including regarding impacts on the right to food, into all climate policy, such as nationally determined contributions, national adaptation plans, loss and damage needs assessments and national plans for disaster management, while ensuring the meaningful participation of those most impacted by climate change and food insecurity in related processes.<sup>39</sup>

### **C. Addressing the roles and responsibilities of businesses with respect to climate impacts on the full and effective enjoyment of the right to food**

21. As recognized in the Guiding Principles on Business and Human Rights, States must ensure human rights compliance within their territory and/or jurisdiction by business enterprises, including through effective policies, legislation, regulation and adjudication. States should set out clear expectations that all business enterprises domiciled in their

<sup>32</sup> International Food Policy Research Institute, 2022 *Global Food Policy Report: Climate Change and Food Systems* (Washington, D.C., 2022), p. 58.

<sup>33</sup> See [A/HRC/47/36](#).

<sup>34</sup> See [A/HRC/54/48](#).

<sup>35</sup> ILO, document MEDWAF/2023/4.

<sup>36</sup> See FIAN International, "A just transition to agroecology" (2023).

<sup>37</sup> International Covenant on Economic, Social and Cultural Rights, art. 8.

<sup>38</sup> WFP, "Linking disaster risk financing with social protection: an overview of concepts and considerations" (2023), p. 2.

<sup>39</sup> See the United Arab Emirates Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action (see <https://www.cop28.com/en/food-and-agriculture>).

territory and/or jurisdiction respect human rights throughout their operations.<sup>40</sup> In the climate context, the obligations of States to protect against human rights impacts arising from business activities include the duty to protect against foreseeable climate impacts, including on the right to food.<sup>41</sup>

22. As climate impacts are felt and businesses operate across borders, State adherence to extraterritorial obligations to respect, protect and fulfil human rights in the context of potential harms related to business activities is essential.<sup>42</sup> States are required to take steps to prevent extraterritorial human rights violations by corporations domiciled in their territory and/or jurisdiction.<sup>43</sup> As the Committee on Economic, Social and Cultural Rights has stated, extraterritorial obligations of States under the International Covenant on Economic, Social and Cultural Rights follow from the fact that the obligations of the Covenant are expressed without any restriction linked to territory or jurisdiction.<sup>44</sup> States' human rights obligations extend beyond their territories, requiring regulatory mechanisms to ensure that businesses and other non-State actors that they are in a position to regulate do not impair the enjoyment of rights in other countries.<sup>45</sup> Respecting rights as part of the rule of law should be a central part of the fiduciary duty of businesses and investors as well as of State policies and regulations across borders, addressing entire value chains. States should take measures to ensure respect for rights by businesses and investors, and, when there are violations, hold them accountable, including for climate impacts. Such regulation should be guided by the polluter pays principle, as well as present and past emissions data, which show that the greenhouse gas emissions of businesses are highly concentrated in a few entities. For instance, 100 businesses burned or enabled others to burn enough fossil fuels to account for more than 70 per cent of global emissions from 1988 to 2017.<sup>46</sup>

23. In the food sector, the Special Rapporteur on the right to food has noted that farmers are dependent on the expensive inputs of a handful of agrochemical companies, four of which control 60 per cent of the global seed market and 75 per cent of the global pesticides market.<sup>47</sup> States should hold businesses accountable for any anti-competitive behaviours due to oligopolistic market structures, which may limit market access and affordability of key inputs for food production, including by smaller-scale producers and peasants. In relation to the right to information, measures to protect the right to food should also include regulations to discourage undue corporate influence in relevant political and regulatory spheres, to curb greenwashing and to promote transparency, including regarding emissions, diet and nutrition, and pesticides.<sup>48</sup> In food and climate governance, such as at the United Nations Food Systems Summit, States should ensure the meaningful participation of those most affected by climate change and food insecurity. With respect to food affordability, the International Panel of Experts on Sustainable Food Systems found that the disproportionate power of some producers and businesses, lack of market transparency, lack of regulation and speculation drive up food prices.<sup>49</sup> Climate shocks and fossil fuel pricing, which is linked also to transport

<sup>40</sup> Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note on climate change and the Guiding Principles on Business and Human Rights" (June 2023), p. 4.

<sup>41</sup> Ibid. See also Office of the United Nations High Commissioner for Human Rights (OHCHR), "Human rights, climate change and business: key messages", available at <https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/materials/KMBusiness.pdf>.

<sup>42</sup> Committee on Economic, Social and Cultural Rights, general comment No. 24 (2017), paras. 25–37.

<sup>43</sup> Ibid., para. 26.

<sup>44</sup> Ibid., para. 27. See also Olivier De Schutter and others, "Commentary to the Maastricht principles on extraterritorial obligations of States in the area of economic, social and cultural rights", *Human Rights Quarterly*, vol. 34, No. 4 (2012).

<sup>45</sup> Committee on Economic, Social and Cultural Rights, general comment No. 26 (2022), para. 42.

<sup>46</sup> See "Holding polluting sectors accountable for the climate crisis", *Economist Impact*, 10 October 2022.

<sup>47</sup> A/HRC/49/43, para. 18.

<sup>48</sup> Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note", p. 4. See also A/HRC/48/61.

<sup>49</sup> See International Panel of Experts on Sustainable Food Systems, "Another perfect storm?".

costs, inject a permanent layer of uncertainty into global markets.<sup>50</sup> Owing to the inelasticity of food demand, net-food-importing countries, such as small island developing States, are particularly affected by food price increases.<sup>51</sup> In the face of such risks, States should regulate the prices of food staples and take measures to avert speculation that would result in food price hikes and endanger food security.

24. For their part, business enterprises, including agribusinesses, have the responsibility to respect human rights, meaning that they should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved, including those related to climate change and food.<sup>52</sup> Measures by businesses to satisfy their human rights responsibilities should include human rights due diligence covering their entire value chain, including impact assessments that integrate climate change and the right to food.<sup>53</sup>

25. As recognized in the Guiding Principles on Business and Human Rights, both States and businesses have roles to play in ensuring access to effective remedy for human rights harms, which include adverse effects of climate change on the enjoyment of the right to food.<sup>54</sup> States must take appropriate steps to ensure, through judicial, legislative, administrative or other appropriate means, that when abuses occur regarding the right to food, the businesses responsible are held accountable. Where business enterprises have caused or contributed to human rights harms, including through the actions of subsidiaries, contractors and foreign affiliates, they should actively engage in remediation.

26. Greater accountability is also needed to protect human rights defenders, including those addressing business activities and their impacts. In 2022, there were at least 448 human rights defenders, journalists and trade unionists killed, and 33 disappeared, many of whom were Indigenous Peoples, Afro-descendants, peasants and small-scale farmers, and approximately half of whom were leaders of peasant communities and defenders of land and the environment, which are intertwined with the right to food.<sup>55</sup> States and business enterprises must ensure that human rights defenders face no threats, harassment or reprisals.<sup>56</sup>

#### **D. Mobilizing financing and promoting economic and trade policies to fulfil the right to food in the context of climate change**

27. States have obligations to cooperate internationally to realize all human rights, including the rights to food, a healthy environment and development. These obligations extend to taking measures with respect to national and international economic and trade policies to protect the right to food from adverse climate impacts. In its general comment No. 12 (1999), the Committee on Economic, Social and Cultural Rights states that the right to food entails an obligation not to take any measures that result in preventing access to food, including in terms of legislation and treaties. States should reform existing trade and investment agreements and policies as well as investor-State dispute settlement mechanisms

<sup>50</sup> Ibid.

<sup>51</sup> United Nations Conference on Trade and Development (UNCTAD), *Trade and Environment Review 2021: Trade-Climate Readiness for Developing Countries* (New York, United Nations, 2021), p. 23.

<sup>52</sup> Guiding Principles on Business and Human Rights, principle 11; and Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note", p. 5.

<sup>53</sup> Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note", p. 5; and A/HRC/53/47, para. 57.

<sup>54</sup> Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note", p. 7.

<sup>55</sup> United Nations, "Guidance note for United Nations resident coordinators and country teams: supporting Governments to better respect, promote and protect environmental human rights defenders" (2023), p. 2, available at <https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/SGC2A-EHRDs-Guidance-Note-Nov-2023-web.pdf>. See also Global Witness, *Standing Firm: The Land and Environmental Defenders on the Frontlines of the Climate Crisis* (2023).

<sup>56</sup> Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information note", p. 8.

to ensure that they support and do not restrict legislation and policies protecting human rights and the environment.<sup>57</sup>

28. Countries that wish to transition towards more sustainable and local food systems, self-sufficiency or economic diversification should be able to adopt relevant measures, as appropriate.<sup>58</sup> Within existing trade rules, developing countries should be afforded the necessary policy space and flexibility to provide subsidies to small-scale producers and others or impose import barriers to protect the right to food.<sup>59</sup> The Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment calls upon States to consider phasing out subsidies with negative rights impacts such as the perpetuation of inequality, including by benefiting large agribusinesses or those that produce waste. With regard to investment policy, the Rapporteur notes that States should ensure that investment treaties incorporate binding human rights obligations on foreign investors that safeguard the rights to food and a healthy environment, policymaking flexibility for developing countries and transparency and inclusive public participation in negotiation processes, while minimizing exposure to investor-State dispute settlement claims that adversely affect rights.<sup>60</sup>

29. Policies supporting economic diversification can help spread economic risk and provide a buffer against climate impacts on food affordability and availability. The Paris Agreement includes building the resilience of socioeconomic and ecological systems, including through economic diversification and sustainable management of natural resources, as part of potential adaptation policies (art. 7 (9) (e)). Climate-informed measures for economic diversification may include larger investments in stronger and more diversified local and regional food economies, the protection of subsistence food production and the reintroduction of native food varieties. As climate change injects risk into agriculture and food systems, States should steer away from trade policies promoting overreliance on food imports or export-oriented cash crops.<sup>61</sup> Overreliance on imported food can pose a threat to local food security in the case of shocks in foreign food markets, including due to multiple unpredictable climate risks and exchange rate variations, which can make imported food less affordable. Displacement of native food systems and reliance on imports for food staples has tended to contribute to food insecurity and reduced access to nutritious food.<sup>62</sup> To reinforce Indigenous and local food sovereignty and to ensure the long-term sustainability of food production and ecosystems, States should phase out measures and policies that shelter large-scale cash crop producers that use unsustainable farming methods. Instead, States should protect environmentally sustainable and socially responsible subsistence production practices, implementing related measures gradually while systematically considering possible negative impacts on food prices affecting the most vulnerable groups.

30. Policies regarding intellectual property should not harm, but rather should support, the protection and fulfilment of the right to food, including in terms of biodiversity, access, affordability and human rights pertaining to seeds and plant varieties.<sup>63</sup> The Committee on Economic, Social and Cultural Rights, in paragraph 35 of its general comment No. 17 (2005), stressed that intellectual property has a social function and that States have a duty to prevent unreasonably high costs for access to plant seeds or other means of food production that could undermine the right to food, among others. Intellectual property rights, such as patents or

<sup>57</sup> Ibid., p. 5.

<sup>58</sup> See Ha-Joon Chang, *Kicking Away the Ladder: Development Strategy in Historical Perspective* (London and New York, Anthem Press, 2003).

<sup>59</sup> See FAO, United Nations Development Programme and UNEP, *A Multi-Billion-Dollar Opportunity: Repurposing Agricultural Support to Transform Food Systems* (Rome, 2021).

<sup>60</sup> See [A/78/168](#).

<sup>61</sup> UNCTAD, *Trade and Environment Review 2021*, p. 40.

<sup>62</sup> [A/78/185](#), para. 20; and Carmen G. Gonzalez, "Food justice: an environmental justice critique of the global food system", in *International Environmental Law and the Global South*, Shawkat Alam and others, eds. (New York, Cambridge University Press, 2015), p. 415.

<sup>63</sup> Pierre Marie Dupuy and Jorge E. Viñuales, *International Environmental Law*, 2nd ed. (Cambridge, United Kingdom, Cambridge University Press, 2018), p. 242. See also [A/HRC/49/43](#); and Vandana Shiva, *Protect or Plunder? Understanding Intellectual Property Rights* (London and New York, Zed Books, 2001).

plant breeders' rights, can provide incentives to develop seeds that either produce higher yields or have specific characteristics to improve food security and agro-biodiversity management. While this can increase resource mobilization by the private sector for climate-resilient agriculture, concerns have also been raised that the benefits of scientific progress are not being equitably shared and that intellectual property rights are hampering rather than helping the realization of the right to food. The Special Rapporteur on the right to food has raised concerns that certain international standards, such as the International Convention for the Protection of New Varieties of Plants of 1991, may reframe farmers' rights to save, use and exchange seeds.<sup>64</sup> There is a critical need to take measures to protect food-related rights and knowledge, which includes the knowledge of Indigenous Peoples, peasants, local communities and other people living in rural areas, in line with the International Covenant on Economic, Social and Cultural Rights, the United Nations Declaration on the Rights of Indigenous Peoples and the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas. Adaptation measures, such as those regarding the development of climate-resilient food varieties, should be human rights-enhancing and based on that knowledge, as provided in the Paris Agreement (art. 7 (5)).

31. Reflective of limited fiscal space, 52 developing countries which are home to more than 40 per cent of the world's poorest people, suffer from severe debt distress. Many of them are forced to rely on expensive market-based financing.<sup>65</sup> The International Covenant on Economic, Social and Cultural Rights requires States parties to maximize available resources for the progressive realization of human rights through international assistance and cooperation. To safeguard broader fiscal space for necessary investments in socioeconomic rights and social spending in countries most affected by climate change, States and providers of development finance, including international financial institutions, should scale up international grant-based financing for climate action and food security to highly indebted countries, ensuring that finance broadens fiscal space and is targeted at benefiting groups in marginalized and vulnerable situations. They should mobilize, manage and disburse such funds in a manner that ensures respect for human rights, guided by the aforementioned principles of solidarity, climate justice, equity, polluter pays and common but differentiated responsibilities and respective capabilities, among others.

32. Other fiscal space-related measures that should be explored include generally providing access to timely, concessional and low-cost financial resources and, in cases of severe debt distress, debt moratoriums and debt cancellation.<sup>66</sup> Grant-based social protection finance can provide liquidity to ensure that communities in vulnerable situations have economic protection and thus enhance food security in the face of climate-related hazards. Efforts to mobilize resources to protect the right to food could also include Sustainable Development Goal stimulus to address hunger and climate action and other measures proposed under the Bridgetown Initiative, such as immediate liquidity support and grant-based loss and damage finance, funded, for instance, by equitable fossil fuel production levies or carbon border taxation.<sup>67</sup>

## **E. Advancing clean, healthy and sustainable environments and equitable land-related policies to safeguard the right to food**

33. The interconnected elements of the right to a healthy environment, including a safe and stable climate, healthy ecosystems and biodiversity, a nontoxic environment and clean air and water, provide a foundational basis for healthy and sustainable food production.

<sup>64</sup> A/HRC/49/43, para. 32.

<sup>65</sup> Inter-Agency Task Force on Financing for Development, *Financing for Sustainable Development Report 2023: Financing Sustainable Transformations* (United Nations publication, 2023), p. 124.

<sup>66</sup> A/HRC/54/38, para. 47. See also United Nations, "Reforms to the international financial architecture", Our Common Agenda Policy Brief 6 (May 2023).

<sup>67</sup> See United Nations, "The SDG stimulus: scaling up long-term affordable financing for the SDGs", video, 17 September 2023; and United Nations, "With clock ticking for the SDGs, UN Chief and Barbados Prime Minister call for urgent action to transform broken global financial system", press release, 26 April 2023.

Healthy and sustainable food is also an interconnected element of the right to a healthy environment, and both are threatened by the triple planetary crisis of climate change, pollution and biodiversity loss. In measures to minimize climate impacts on the right to food, States should ensure policy coherence with their obligations regarding other interdependent and interrelated human rights, including the right to a healthy environment and rights relating to land, territories and resources.

34. In general, industrial and non-regenerative agriculture that is based on monoculture and chemical inputs, in addition to the aforementioned impacts, can have severe and long-term adverse ecological impacts, harming people's right to a clean, healthy and sustainable environment. Industrial food production can cause soil degradation and reduce the soil's capacity to produce food and sequester carbon.<sup>68</sup> The full economic and environmental costs of such practices, including the degradation of countries' natural resource base, is frequently not considered or severely underestimated. States can promote healthy environments and climate resilience through agricultural practices that improve soil fertility, health and the ability to draw down emissions, protect biodiversity and increase water retention. In the outcome of the first global stocktake under the Paris Agreement, adopted by the Conference of the Parties to the United Nations Framework Convention on Climate Change at its twenty-eighth session, the implementation of integrated, multisectoral solutions, such as sustainable agriculture, resilient food systems, nature-based solutions and ecosystem-based approaches, is encouraged as part of a country-driven gender-responsive and participatory approach, building on the best available science as well as Indigenous Peoples' knowledge and local knowledge systems.<sup>69</sup> Related measures to minimize climate impacts on and of food systems may include transitioning to people-centred and sustainable food systems that operate on the basis of natural processes, such as agroecology, regenerative agriculture, soil rehabilitation, ecosystem-based fisheries, circular bioeconomies and aquaculture management.<sup>70</sup> Such measures, if designed in a manner geared towards the needs of people and communities in vulnerable situations, can also produce co-benefits for poverty reduction and other rights, especially where they support Indigenous Peoples, peasants, small-scale farmers and rural communities.

35. Since the 1900s, about 75 per cent of plant genetic diversity has been lost, due in part to the abandonment of local food varieties, while up to 75 per cent of the world's food is generated from only 12 plant and 5 animal species.<sup>71</sup> Both climate change and unsustainable land use driven by industrial food production are contributing to the sixth mass extinction decimating biodiversity, including food biodiversity.<sup>72</sup> Soil erosion and degradation from pesticides and chemical inputs reduces crop yields and the soil's ability to nurture biodiversity and store and cycle carbon, nutrients, and water.<sup>73</sup> Nitrogen and ammonia released from synthetic fertilizers contribute significantly to global warming.<sup>74</sup> Chemical inputs harm environmental and human health and safety by persisting in food and directly affecting agricultural workers, peasant farmers and communities.<sup>75</sup> By favouring more biodiverse, diversified and native food systems and land use that supports sustainable

<sup>68</sup> See Leah Penniman, "Black gold", in *All We Can Save: Truth, Courage and Solutions for the Climate Crisis*, Katharine K. Wilkinson and Ayana Elizabeth Johnson, eds., (New York, One World, 2021).

<sup>69</sup> [FCCC/PA/CMA/2023/L.17](#), para. 55.

<sup>70</sup> Intergovernmental Panel on Climate Change, *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* (Cambridge, United Kingdom, and New York, Cambridge University Press, 2022), p. 21; and *ibid.*, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, p. 90.

<sup>71</sup> See FAO, "Building on gender, agrobiodiversity and local knowledge: a training manual" (2006). See also Dan Saladino, *Eating to Extinction: The World's Rarest Foods and Why We Need to Save Them* (Jonathan Cape, 2021).

<sup>72</sup> World Wildlife Fund, "What is the sixth mass extinction and what can we do about it?", available at <https://www.worldwildlife.org/stories/what-is-the-sixth-mass-extinction-and-what-can-we-do-about-it>.

<sup>73</sup> FAO, *The State of the World's Land and Water Resources for Food and Agriculture: Systems at Breaking Point – Synthesis Report 2021* (Rome, 2021), p. 23.

<sup>74</sup> UNEP, "Four reasons why the world needs to limit nitrogen pollution", 16 January 2023.

<sup>75</sup> [A/76/237](#), paras. 12 and 18.

ecosystems, countries can enhance climate resilience and pathogen and pest resilience, in turn helping to ensure long-term food security.<sup>76</sup> Agroecological, regenerative, rotational, organic, biological and other sustainable farming practices can help reduce chemical inputs, delink food systems from polluting fossil fuel-based inputs, such as fertilizers, and produce healthier food.<sup>77</sup>

36. In the context of pollution, agrochemicals used in industrial food production systems offer generally short-term fixes rather than long-term solutions to food insecurity and pollute the environment, lowering agricultural resilience and making farms more vulnerable to climate change shocks.<sup>78</sup> Industrial productivity is typically not measured in terms of human and environmental health, but exclusively in terms of commodity output and economic growth.<sup>79</sup> Production output and growth do not necessarily translate to adequate, nutritious, healthy or culturally acceptable food for people, while related chemical inputs can be adverse to health. Unsafely and unsustainably producing unhealthy food is not a scientifically sound or rights-conforming solution to minimize climate impacts on food.

37. Unequal land and resource distribution, as well as the concentration of fertile land ownership, coupled with landlessness, is also a major cause of food insecurity and climate vulnerability. One per cent of all farms operate over 70 per cent of farmland globally and 40 per cent of agricultural land is held by farms larger than 1,000 hectares.<sup>80</sup> Small-scale farms, which account for 84 per cent of all farms, cover only 12 per cent of agricultural land, yet produce 36 per cent of the world's food.<sup>81</sup> Landless people working in food systems are among the poorest and most vulnerable to hunger. Women and girls tend to have less access to secure land tenure and their farmland tends to be more prone to adverse climate impacts, which can drive further vulnerability. Many Indigenous Peoples have been historically dispossessed of their lands, resources and territories. More equitable access to, use of and control over lands, resources and territories are critical to safeguarding the right to food of all people and to addressing pre-existing inequalities and discrimination. In line with the United Nations Declaration on the Rights of Indigenous Peoples, States must give legal recognition and protection to Indigenous Peoples' lands, resources and territories, including those on which their food systems depend, and should work with them on titling and securing rights thereto (arts 26 and 27).<sup>82</sup> In line with the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, States must take appropriate measures, inter alia, to remove discrimination relating to land and carry out agrarian reforms to facilitate broad and equitable access to land and other natural resources (art. 17). Measures for agrarian reform should promote more equitable land and resource distribution in line with human rights obligations, including the rights of Indigenous Peoples, peasants and rural communities to lands, territories and resources, as well as the redistribution of food systems wealth from large businesses to the people and communities producing it.<sup>83</sup> Redistributive land reform and community-driven land redistribution can also be viable poverty reduction measures with co-benefits for climate and food security.<sup>84</sup> Land reform measures should ensure the rights, in particular, of those in situations of poverty and vulnerability, including women, peasants, small-scale farmers and fishers, pastoralists, Indigenous Peoples, rural workers and local communities, to own, access and sustainably use land and resources.<sup>85</sup> Importantly, the

<sup>76</sup> See Vandana Shiva, *Agroecology and Regenerative Agriculture: Sustainable Solutions for Hunger, Poverty, and Climate Change* (Synergetic Press, 2022).

<sup>77</sup> [A/HRC/16/49](#), para. 31.

<sup>78</sup> [A/76/237](#), para. 18.

<sup>79</sup> [A/HRC/49/43](#), para. 17.

<sup>80</sup> See Sarah K. Lowder, Marco V. Sánchez and Raffaele Bertini, "Farms, family farms, farmland distribution and farm labour: what do we know today?", FAO Agricultural Development Economics Working Paper, No. 19-08 (Rome, FAO, 2019).

<sup>81</sup> *Ibid.*; and FAO, "Small family farmers produce a third of the world's food", 23 April 2021.

<sup>82</sup> See [A/HRC/48/75](#).

<sup>83</sup> See [A/HRC/53/47](#).

<sup>84</sup> Frank F.K. Byamugisha, ed., *Agricultural Land Redistribution and Land Administration in Sub-Saharan Africa: Case Studies of Recent Reforms* (Washington, D.C., World Bank, 2014).

<sup>85</sup> FAO, "Achieving SDG 2 without breaching the 1.5 °C threshold: a global roadmap, part 1 – how agrifood systems transformation through accelerated climate actions will help achieving food security and nutrition, today and tomorrow" (Rome, 2023), p. 24.

empowerment and inclusion of women and girls can advance climate-resilient agricultural productivity.<sup>86</sup> Overall, States should undertake reform measures to promote more equal land and resource rights, access and ownership, including benefiting particularly those vulnerable to adverse climate impacts on food.

## IV. Conclusions and recommendations

### A. Conclusions

38. The upholding of the interrelated rights to food and a clean, healthy and sustainable environment should be a cornerstone of economic and climate policies. This requires rights-enhancing and equitable measures for climate change mitigation, adaptation and loss and damage, including through the transformation of relevant social and economic policies. Meaningful progress toward achieving the right to food for all depends on the alignment of financing, economic and trade policies and business activities with human rights and climate justice, across value chains and extraterritorially. Under the current economic paradigm, the global food and climate systems are locked in a vicious cycle that harms people and the planet. While climate impacts deepen food insecurity, overreliance on industrial food systems exacerbates climate change and vulnerability to climate impacts.

39. Transforming global food systems, strengthening universal social protection systems, enhancing business regulation, putting in place rights-enhancing changes to economic and trade policies and international financing, adopting sustainable food production practices that minimize biodiversity loss and pollution, as well as redistributing land and resources, as part of a broader effort to transition towards a human rights economy, are all critical steps to protecting the right to food of people and the planet. Such efforts also necessitate the promotion of inclusive and meaningful participation in all related decision-making processes.

### B. Recommendations

40. **To address the impacts of climate change on the full realization of the right to food, States and other key actors should consider the recommendations set out below.**

41. **In line with the principles of equity, climate justice, polluter pays and common but differentiated responsibilities and respective capabilities, States should adopt mitigation measures that address entrenched injustices, inequalities and discrimination, past and present, and are informed by historical responsibilities for climate change. States should adopt measures to equitably reduce food systems emissions, including with respect to production, consumption, diet, and food waste and loss. Developed countries should take the lead in transitioning away from high-emissions diets as part of their overall effort to reduce their carbon footprint. States should consider ways to account for and mitigate emissions embodied in trade, including food trade. States should also effectively safeguard against human rights risks from climate change mitigation measures, including when dedicating land for energy transition measures, which can put the right to food at risk.**

42. **To ensure the right to food in the face of increasing climate shocks, which disproportionately affect those in vulnerable situations, States should work towards establishing universal social security systems that cover climate risks and impacts. High-income countries should support developing countries' investment in social protection systems as a first line of defence against the impact of climate change and food insecurity, including through international finance. States should protect workers against adverse climate impacts on food systems and integrate human rights analysis, including regarding the right to food, into all climate policy.**

<sup>86</sup> A/HRC/41/26, para. 27; A/HRC/51/28, para. 30; and Intergovernmental Panel on Climate Change, *Climate Change and Land*, p. 439. See also Committee on the Elimination of Discrimination against Women, general recommendation No. 34 (2016).

43. **The Guiding Principles on Business and Human Rights should be applied to efforts to address climate change and its impacts on the right to food. States should set out clear expectations that all business enterprises domiciled in their territory and/or jurisdiction respect human rights throughout their operations. This should include protecting against foreseeable climate impacts on the right to food arising from business activities. States should take measures, including through the regulation of business activities, to ensure the affordability of food, especially for people in vulnerable situations or facing marginalization.**

44. **Business enterprises should respect human rights and should address adverse human rights impacts with which they are involved, including those related to climate change and food. States and businesses should ensure access to effective remedy for human rights harms, including the adverse effects of climate change on the enjoyment of the right to food, and protect human rights defenders.**

45. **States should cooperate internationally to realize all human rights and take measures with respect to national and international economic and trade policies to protect the right to food from the adverse effects of climate change. States should promote policies supporting economic diversification of agriculture and food production, which can increase climate resilience. States should ensure that policies regarding intellectual property do not harm the right to food and take measures to protect food-related rights and knowledge of Indigenous Peoples, peasants, local communities and others.**

46. **States and providers of development finance, including international financial institutions, should scale up international grant-based financing for climate action and food security, especially to highly indebted countries. Such support should, inter alia, help broaden countries' fiscal space to invest in a just transition. Development finance, including to support countries' investments in social security, should be targeted to benefit groups in marginalized and vulnerable situations.**

47. **As part of efforts to ensure long-term food security for all, to protect the natural resource base and to mitigate emissions, States should promote and transition to people-centred and sustainable food systems that operate on the basis of natural processes, such as agroecology, regenerative agriculture, soil rehabilitation, ecosystem-based fisheries, circular bioeconomies and aquaculture management. States should take measures to protect the biodiversity of food sources and systems and recognize the rights of people, including, in particular, Indigenous Peoples and people in situations of poverty and vulnerability, to own, access and sustainably use lands, territories and resources. This should include agrarian reform measures that promote more equitable land and resource distribution in line with human rights obligations, including the rights of Indigenous Peoples, peasants, and rural communities.**

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