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

Seeds, right to life and farmers' rights

Report of the Special Rapporteur on the right to food, Michael Fakhri

Summary

In the present report, submitted to the Human Rights Council pursuant to Council resolution 43/11, the Special Rapporteur on the right to food, Michael Fakhri, provides a framework for the advancement of farmers', indigenous peoples' and workers' rights and a guide for States to ensure that the world's seed systems are biodiverse and safe and fulfil human rights obligations.



I. Introduction and framing the issue

A. Seed systems as a human rights concern

1. Seeds are life. And so, during times of celebration and ceremony, when people mark moments of meaning, many communities share or sprout seeds. People also share seeds as an expression of their love, friendship or solidarity with each other, as a way of sharing knowledge and culture. In everyday life, people prepare and eat certain seeds in myriad ways. Seeds are the primary basis for human sustenance; they are the repository of the genetic potential of crop species and their varieties result from continuous selection and adaptation over time. Because seeds are so central to people's cultures and food systems, to control seeds is to control life.

2. In the present report, the Special Rapporteur focuses on how seed systems are central to the full realization of the rights to life and food. He draws from consultations and submissions from internationally recognized experts and civil society organizations. He especially thanks the secretariats of the International Treaty on Plant Genetic Resources for Food and Agriculture and the International Convention for the Protection of New Varieties of Plants for the insights they provided during the elaboration of the report.

3. Although the focus of the present report is plant seeds (and by extension, germ plasm), the Special Rapporteur recalls that animal husbandry, pastoralism, fishing and hunting are equally important for the realization of the rights to life and food. Indeed, pastoral, fishing and hunting practices are even older than agriculture and continue to define communities' culture and fundamental ecological relationships.

4. From the approximately 382,000 known vascular plant species, we have cultivated a little over 6,000 for food. Of those, as of 2014, fewer than 200 species had significant production levels globally. Our relationship with only nine species (sugar cane, maize, rice, wheat, potatoes, soybeans, oil-palm fruit, sugar beet and cassava) accounts for over 66 per cent of all crop production by weight.¹

5. People have had a domestic relationship with plants for approximately 10 thousand years. Through this relationship based on continuous experimentation and adaptation, farmers have co-evolved and adapted genetic resources resulting in increased agricultural biodiversity. Relying on reproductive genetic recombination and mutation for novelty, farmers have driven innovation and agricultural biodiversity by selecting which seeds to save, grow and distribute within and among communities through gifting, exchange or sale.

6. Today, broadly, there are two different types of seed systems: farmers' seed systems and commodity seed systems. Farmers' seed systems are defined by the long-standing continuous renewal of biodiversity and free distribution of seeds and knowledge among peoples. Seeds are gifted, shared, bartered, or bought and sold in informal or formal markets. Farmers' seed systems make food systems more resilient against climate change, pests and pathogens. This is because the more diverse a food system and the more dynamic the global ecosystem, the higher the chance that any one species has a particular trait that enables it to adapt to a changing environment (and in turn, pass that trait along).

7. Since humankind relies on plants for food, feed, fibre and a functional ecosystem, nothing less than the right to life is at stake when farmers' seed systems are challenged or poorly supported. Farmers' seed systems are integral to the world's genetic and cultural diversity, and are foundational for all food systems.

8. The right to life has been described not only as a fundamental right but also as the supreme right from which no derogation is permitted, even in situations of armed conflict and other public emergencies.² The right to life with dignity is to be interpreted broadly, with the understanding that threats stemming from environmental degradation, climate change and

¹ Julie Bélanger and Dafydd Pilling, eds., *The State of the World's Biodiversity for Food and Agriculture* (Rome, Commission on Genetic Resources for Food and Agriculture, Food and Agriculture Organization of the United Nations, 2019), p. 114.

² Human Rights Committee, general comment No. 36 (2018), para. 2.

unsustainable development are some of the most pressing and serious threats of today and tomorrow. To establish adequate conditions for protecting the right to life, it is recognized that measures should be designed to ensure access without delay by individuals to essential goods and services such as food.³

9. People also have a right to an adequate standard of living, which includes the right to food.⁴ The right to food is inherently tied to farmers' seed systems. A seed system that allows farmers to freely save, use, exchange and sell seeds ensures that people can adequately feed themselves directly from productive land. Farmers' seed systems allow farmers to grow food in a way that responds and adapts to change, making communities stronger and food systems more resilient. Such systems also determine farmers' ability to distribute seeds and food to others either by sharing or selling through a market. Finally, a robust farmers' seed system ensures that people have access to food that meets their cultural values.⁵

10. In sum, the more a seed system recognizes and supports farmers as stewards of a seed system for all of humankind,⁶ the more likely this system fulfils people's human rights. This is reflected in target 2.5 of the Sustainable Development Goals.

11. Commodity seed systems, in contrast, are dedicated to the reproduction of homogenous varieties dependent on chemical inputs through property regimes and contract law; the main purpose is to make profits and produce as much food as possible. Commodity seed systems rely on farmers' seed systems (and naturally occurring biodiversity) to provide the raw material. In turn, a farmers' seed system depends on the right of farmers to freely save, use, exchange and sell seeds. As a result, when Member States buttress commodity seed systems and do not adequately protect and support farmers' seed systems, they destabilize ecosystems and violate people's human rights. The more a seed system relies on property regimes and contract law – either by focusing on farmers or organizations as owners or relying on intellectual property rights – the more that system requires institutional mechanisms to ensure human rights are protected. Certification systems carry the same risk as property regimes and contract law, albeit to a lesser degree.⁷

12. When a plant and its genetic material are turned into a commodity, it becomes easier for a small number of people to control seeds by restricting access against the majority of humanity. The more power that a small number of people have in restricting access to seeds, the more likely that farmers and indigenous peoples will be denied fair access to and benefits from seeds, increasing the risk that their long-standing contribution to biodiversity will be exploited.

13. Commodity seed systems benefit from the social ties and community organization that constitute farmers' seed systems, but engender the risk of not adequately recognizing and benefiting those communities. Without safeguards and left to their own devices, commodity seed systems would violate people's human rights on a global scale: they extract genetic material from plants that communities live with in a domestic relationship, in effect disrupting that relationship, impoverishing soil and often transforming landscapes in a way that focuses on genetic homogeneity.

14. It is also important to know that conserving desirable plants and traits is linked to using seeds. With the exception of well-maintained facilities that are extremely cold and dry,⁸ people can save and store seeds no more than a few decades before they are no longer viable. Therefore, seeds must be planted in order to regenerate vigorous seeds: "conservation is

³ Ibid., paras. 3 and 26.

⁴ United Nations Declaration of Human Rights, art. 25; International Covenant on Economic, Social and Cultural Rights, art. 11.

⁵ See, for example, Committee on Economic, Social and Cultural Rights, general comment No. 12 (1999), paras. 7–12.

⁶ Regine Andersen, "'Stewardship' or 'ownership'", in *Routledge Handbook of Agricultural Biodiversity*, Danny Hunter and others, eds. (New York, Routledge, 2017).

⁷ Tamara Wattnem, "Seed laws, certification and standardization: outlawing informal seed systems in the global South", *The Journal of Peasant Studies*, vol. 43, No. 4 (March 2016).

⁸ See <https://www.seedvault.no/ukatigorisert/svalbard-global-seed-vault-commences-seed-experiment-that-will-last-for-100-years/>.

performed through use”.⁹ Moreover, seed exchange is essential for the global development and adaptation of new crops and knowledge in response to climate change, pests, disease and people’s food security needs.

B. Challenges posed by industrial intensification and corporate concentration of power

15. Climate change is the existential crisis of our era, threatening people’s human rights, such as their rights to life and food. Food systems are also part of the problem, emitting globally approximately one third of the world’s greenhouse gases.¹⁰ With continued pollution, ecological destruction and deforestation and the removal of protective ecological barriers, around 1 million animal and plant species are now threatened with extinction, many within decades.¹¹

16. Biodiversity has been decreasing for approximately a century and the global diet is becoming more homogenized around a small number of crops. The reduction of biodiversity in people’s food systems poses a challenge to the right to food, since it undermines the ability of agricultural systems to adapt. As the World Health Organization (WHO) noted, on the linkages between people’s rights to food and health: “Biodiversity at every level (genetic, species and ecosystem level) is a foundational pillar for food security, nutrition, and dietary quality. It is the basic source of variety in essential foods, nutrients, vitamins and minerals, and medicines, and underpins life-sustaining ecosystem services.”¹²

17. This long decline in biodiversity was caused by the Industrial Revolution and the commodification of land and labour that began around 1870 and that globally expanded and accelerated with the green revolution in the 1950s. The world’s food systems have since become increasingly designed along industrial intensive models, relying on high-input, high-output agricultural systems, dominated by large-scale specialized farms. The idea is that if people are encouraged to purchase industrial inputs – synthetic fertilizers, pesticides and carbon-reliant machines – then they can produce a large amount of food. Productivity was not measured in terms of human and environmental health, but exclusively in terms of commodity output and economic growth. The productivity paradigm that accompanied industrial intensive agriculture has disrupted carbon, nitrogen and phosphorous cycles and displaced long-standing regenerative and integrated farming practices. In sum, industrial intensification is an extractive practice that unsettled the foundations of all ecosystems, leading to increased global rates of soil degradation and erosion and biodiversity loss.¹³

18. Industrial intensification also made farmers dependent on the expensive inputs provided by agrochemical companies. Four agrochemical companies control 60 per cent of the global seed market and 75 per cent of the global pesticides market.¹⁴ Such market concentration means that a small number of companies will unfairly control the price of seeds. Any increase in seed (and other input) prices makes it harder for small farmers to access seeds, as witnessed during supply chain disruptions related to the coronavirus disease (COVID-19) pandemic. The “Big Four” also produce most of the agrochemicals associated with genetically modified seeds. Those agrochemicals pollute the environment and reduce biodiversity, which lowers agricultural resilience, making farms more vulnerable to climate change shocks. The increasing use of pesticides contributes to harm to the health of agricultural workers, farmers and communities.¹⁵

⁹ Elsa Tsioumani, *Fair and Equitable Benefit-Sharing in Agriculture: Reinventing Agrarian Justice* (New York, Routledge, 2021), p. 16.

¹⁰ See <http://www.fao.org/news/story/en/item/1379373/icode/>.

¹¹ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *The Global Assessment Report on Biodiversity and Ecosystem Services* (2019).

¹² See <https://www.who.int/publications/i/item/guidance-mainstreaming-biodiversity-for-nutrition-and-health>.

¹³ See <http://www.fao.org/about/meetings/soil-erosion-symposium/key-messages/en/>.

¹⁴ [A/HRC/46/33](#), paras. 78–79.

¹⁵ See [A/HRC/34/48](#).

19. This high concentration of corporate power allows a relatively small group to restrict people's access to seeds, and to shape markets and innovation in a way that serves the ultimate goal of shareholder profit maximization and not the public good.

C. Farmers' rights are human rights

20. Human rights can be a bulwark against these threats to the environment and people's lives. The International Treaty on Plant Genetic Resources for Food and Agriculture is a significant advancement in fulfilling people's human rights. First, it recognizes the importance of farmers' seed systems and the enormous contribution that the local and indigenous communities and farmers throughout the world, particularly those in centres of origin and crop diversity, have made and will continue to make for the conservation and development of plant genetic resources which constitute the basis of food and agriculture production throughout the world.¹⁶ Second, the Treaty recognizes farmers' rights as a sovereign responsibility and directs contracting parties to protect and promote farmers' rights.¹⁷ Third, the Treaty enumerates farmers' rights and considers this enumeration as fundamental to the realization of those rights at the national and international levels.¹⁸

21. The United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas reaffirms farmers' rights as contained in the above-mentioned treaty, recognizing them as inalienable human rights and making explicit the rights of rural people to maintain, control, protect and develop their own seeds and traditional knowledge.¹⁹ The Declaration also clarifies States' obligations with added detail.²⁰ Generally, States are to take appropriate measures to support peasant seed systems and promote the use of peasant seeds and agrobiodiversity.²¹ Importantly, States are also to take measures to respect, protect and fulfil the right to seeds of peasants and other people working in rural areas.²²

22. It is worth explaining the use of the word "peasant". Sometimes the word is used as a pejorative term to denigrate rural people. In a growing number of places, it is a term people use to describe themselves, asserting their dignity. In some cases, "peasant" has been used, among other terms, as a way to distinguish small-scale food producers from big industrial "farmers". Meanwhile, small-scale food producers in some regions of the world prefer other terms to self-define, such as "smallholder farmer". The terms smallholder farmer or peasant can also mean independent farmers working within global value chains who seek to transition out from corporate dependency towards agroecological and other regenerative methods committed to human rights.²³

23. With the adoption of the Declaration, the word "peasant" has become a more widely used official term. The Declaration defines a peasant as any person who engages or who seeks to engage, alone, or in association with others or as a community, in small-scale agricultural production for subsistence and/or for the market, and who relies significantly, though not necessarily exclusively, on family or household labour and other non-monetized ways of organizing labour, and who has a special dependency on and attachment to the land.²⁴

24. Indigenous peoples make up less than 6 per cent of the world's population, yet are stewards of 80 per cent of the world's biodiversity on land. With indigenous peoples living on land that is among the most vulnerable to climate change and environmental degradation,

¹⁶ Art. 9.1.

¹⁷ Art. 9.

¹⁸ Art. 9, read within the context of the preamble and interpreted according to the Vienna Convention on the Law of Treaties, art. 31.

¹⁹ Art. 19 (1)–(2).

²⁰ Arts. 19–20.

²¹ Art. 19 (6).

²² Art. 19 (3).

²³ Philip Seufert, Mariapaola Boselli and Stefano Mori, *Recovering the Cycle of Wisdom: Beacons of Light Toward the Right to Seeds: Guide for the Implementation of Farmers' Rights* (International Planning Committee for Food Sovereignty, FIAN International and Centro Internazionale Crocevia, 2021), p. 32.

²⁴ Art. 1 (1).

indigenous rights are more important than ever. Indigenous peoples' right to seeds has been confirmed in the United Nations Declaration on the Rights of Indigenous Peoples, which affirms indigenous peoples' right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as their human and genetic resources, seeds, medicines and knowledge of the properties of fauna and flora.²⁵ In this regard, States are to take effective measures to recognize and protect the exercise of these rights in conjunction with indigenous peoples.²⁶

25. When reading the International Treaty on Plant Genetic Resources for Food and Agriculture in its entire context, together with the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas and the United Nations Declaration on the Rights of Indigenous Peoples, farmers' rights are best understood as the rights that smallholder farmers/peasants and indigenous peoples have in relation to seeds based on their long-standing and ongoing practices and contribution to enhancing global biodiversity; this comes with the corollary Member State obligations to respect, protect and fulfil those rights.

26. In many places around the world, some individuals care for and guard their community's seeds. Often, women are the seed stewards of their community.²⁷ For example, many millions of small-scale farmers in sub-Saharan Africa, most of whom are women, still supply 80 to 90 per cent of all the seeds planted in Africa. These women manage "seed diversity, preservation and use, including seed selection, storage, and deciding which varieties to plant, [and] when and how much to sow based on the weather".²⁸ Therefore, in instances when people's access to seeds is threatened, whoever is restricting general access to seeds is very likely also challenging rural women's power over seeds, making it harder for them to enjoy adequate living conditions – in effect, undermining women's rights.²⁹ Thus, when a community's seed system is threatened, patriarchal power can become emboldened.

II. Farmers' rights

A. Legal framework

27. Food plants selected by farmers over the millennia provide the necessary raw material for today's plant breeding. Starting in at least 1492, European countries freely took seeds from biodiverse regions in the Americas and later in Africa and Asia. They did so without any regard for local communities' laws or practices. European powers, through their research centres and botanical gardens, used those seeds to economically buttress their empires.³⁰ Since then, communities in the global South, especially in Africa, have been under constant threat of exploitation by European and North American powers because those communities are the main source of the world's biodiversity.

28. The International Undertaking on Plant Genetic Resources (1983) was in part an attempt to undo imperial patterns of exploitation through the doctrine of the common heritage of mankind. Unfortunately, this fell short. By the 1990s, seeds were less a matter of common heritage and more of a common concern.³¹ Subsequently, Member States built a multilateral

²⁵ Art. 31 (1).

²⁶ Art. 31 (2).

²⁷ Carlo Fadda, "The farmer's role in creating new genetic diversity", in *Farmers' Crop Varieties and Farmers' Rights: Challenges in Taxonomy and Law*, Michael Halewood, ed. (London, Routledge, 2016).

²⁸ Alliance for Food Sovereignty in Africa and GRAIN, "The real seed producers: small-scale farmers save, use, share and enhance the seed diversity of the crops that feed Africa" (2018).

²⁹ Convention on the Elimination of All Forms of Discrimination against Women, art. 14; Committee on the Elimination of Discrimination against Women, general recommendation No. 34 (2016), paras. 63–66; United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, art. 4; and General Assembly resolution 76/140.

³⁰ Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Westport, Greenwood Press, 1973); Lucile H. Brockway, *Science and Colonial Expansion: The Role of the British Royal Botanic Gardens* (New Haven, Yale University Press, 1979).

³¹ Tsiousmani, *Fair and Equitable Benefit-Sharing in Agriculture*, p. 11.

regime around the doctrine of permanent sovereignty over natural resources, through the Convention on Biological Diversity (1992), the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (2010), and the International Treaty on Plant Genetic Resources for Food and Agriculture. Unfortunately, as described below, this regime's multilateral system of benefit-sharing is not adequately functioning and farmers' rights remain vaguely defined.

29. Today, however, a strong human rights regime provides an opportunity to repair these long-standing relationships of exploitation and asymmetries of power over seeds.

30. Alongside the advancement of the human rights regime related to seeds, there have also been attempts by corporations and some States from the global North to use international law to expand the legal and geographic scope of intellectual property rights, whether through the International Convention for the Protection of New Varieties of Plants or patents. This has unfortunately enabled coercion and exploitation.

31. Before the World Trade Organization (WTO) and its Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) came into force in 1995, intellectual property rights over seeds and varieties remained a regional issue, mainly in the United States of America and the European Union. As the United States developed its patent system over plants throughout the mid-twentieth century, European seed industries were also eager to secure intellectual property rights for plant varieties. Aversion to intellectual property rights for plant varieties in Europe included fears that proprietary rights would grant a small number of individuals too much power and undermine people's food security. There were, therefore, variations in intellectual property rights systems for plant varieties within Europe at the outset. The post-Second World War efforts to integrate West European economies, as well as shared climatic conditions, inspired the harmonization of intellectual property rights systems on the continent, which culminated in the adoption of the International Convention for the Protection of New Varieties of Plants in 1961. The Convention was revised in 1972, 1978 and 1991.³²

32. The move from the 1978 version to the 1991 version of the International Convention for the Protection of New Varieties of Plants was controversial, since the 1991 version granted breeders more bargaining power over farmers by expanding the scope of breeder's rights and curtailing farmers' rights. Some of the differences are worth noting, since 17 countries remain party to the 1978 Convention, having refused to sign the 1991 Convention (since 1998, States can only join the 1991 Convention). For example, the 1978 Convention implicitly recognizes farmers' right to save, use and exchange seeds, leaving farmers to only have to seek permission from the intellectual property rights holder if they sell the seed or propagating material.³³ The 1991 Convention reframes farmers' rights to save, use and exchange seed or propagating material as an optional privilege that Member States can elect to enact.³⁴

33. If imperial conquest was underwritten by an open system of plant exchange, today's ever-expanding political and commercial interests have been buttressed by the extension of intellectual property rights through WTO. The TRIPS Agreement requires WTO members to implement an intellectual property rights regime with certain minimum requirements. Under article 27 (3) (b), plants and animals (other than microorganisms) and essentially biological processes for the production of plants or animals (other than non-biological and microbiological processes) may be excluded from the required patent regime. The same article, however, obliges members to provide protection for plant varieties either by patents, by an effective sui generis system or by any combination thereof.

34. The combination of the TRIPS Agreement and the International Convention for the Protection of New Varieties of Plants forced farmers to have a relationship with breeders.

³² Michael Fakhri and Titilayo Adebola, "Agriculture", in *Oxford Handbook of International Law and Development*, Ruth Buchanan, Luis Eslava and Sundhya Pahuja, eds. (Oxford University Press, forthcoming).

³³ Art. 5.

³⁴ Art. 15 (2).

United States- and European-style intellectual property rights systems for plant varieties did not initially concern most countries in the global South, and such countries focused their efforts on supporting farmers' seed systems. With the TRIPS Agreement, global South countries had to enact some sort of system to protect plant varieties. Patenting plant varieties remains an unattractive option for most countries. The TRIPS Agreement, however, does not define what is meant by an "effective sui generis system" or a combination of patent and sui generis systems. As a result, high-income parties to the International Convention for the Protection of New Varieties of Plants and the Convention secretariat used this as an opportunity to expand the European-style property regime and provide a "ready-made sui generis framework" combined with technical assistance for developing countries.³⁵

35. The United States and the European Union have levied further pressure on developing countries to ratify the 1991 version of the above-mentioned convention, adopt legislation compliant with that version, or even introduce patent protection for plants and biotechnological innovations that exceed TRIPS Agreement standards. For example, these requirements appear in the Comprehensive and Progressive Agreement for Trans-Pacific Partnership; European Union bilateral trade agreements with, respectively, Lebanon, Morocco and Tunisia; United States bilateral trade agreements with, respectively, Chile, Colombia, Morocco, and Peru; and in the Group of Eight's New Alliance for Food Security and Nutrition, in the case of the United Republic of Tanzania.³⁶ This type of pressure hardly presents the countries of the global South with a real choice, and raises significant right-to-development concerns. Indeed, the Secretary-General and the previous mandate holder raised concerns that the 1991 Convention puts undue pressure on small-scale farmers.³⁷

36. Without clear and robust systems of farmers' rights and international law, there is a serious concern that international commerce will continue long-standing patterns of imperial exploitation. Today's breeders are mostly found in the United States and Europe and are geared towards exporting their varieties. These breeders rely on the biodiverse farmers' seed systems in the global South for their source material, breed their varieties, and sell them as commodities to farmers throughout the world. Based on reports received from communities in a growing number of States, national laws have been misinterpreted to allow intellectual property rights to dominate and construe certain farmers' rights as illegal. This deprives farmers in the global South of the ability to benefit from their own seed systems and allows an application of intellectual property rights that amounts to a violation of human rights.

37. The best way to interpret the international legal landscape coherently and in compliance with human rights obligations is to start with the multilateral context. Because article 27 (3) (b) of the TRIPS Agreement was the result of a precarious compromise, it included a review of its own terms by 1999. The review began, but like many aspects of WTO, the issue has remained in deadlock, reflecting fundamental multilateral disagreement. Member States cannot agree whether the review is a question of implementation or reform.³⁸ Today, this schism is set against the backdrop of challenges to the very legitimacy of the TRIPS Agreement; people's rights to life and health are at stake, and contemporary forms of racism are reflected, in the current debate over COVID-19 vaccines and TRIPS Agreement waivers (as was the case during the public health challenges of the AIDS/HIV epidemic).³⁹

38. Meanwhile, multilateral support around farmers' rights sparked by the International Treaty on Plant Genetic Resources for Food and Agriculture has significantly advanced – first through the United Nations Declaration on the Rights of Indigenous Peoples and under the present mandate,⁴⁰ and most recently through the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, the Committee on the

³⁵ Tsioumani, *Fair and Equitable Benefit-Sharing in Agriculture*, p. 13.

³⁶ See <https://grain.org/en/article/6701-trade-agreements-privatising-biodiversity>; and Titilayo Adebola, "Access and benefit sharing, farmers' rights and plant breeders' rights: reflections on the African Model Law", *Queen Mary Journal of Intellectual Property*, vol. 9, No. 1 (2019).

³⁷ [A/70/333](#), para. 68; and [A/64/170](#), para. 16.

³⁸ See, for example, communication from the African Group, "Taking forward the review of article 27.3B of the TRIPS Agreement"; and Doha Ministerial Declaration, para. 19.

³⁹ Matiangai Sirleaf, "Disposable lives: COVID-19, vaccines, and the uprising", *Columbia Law Review Forum*, vol. 121 (June 2021).

⁴⁰ See [A/64/170](#).

Elimination of Discrimination against Women's general comment No. 34 (2016) and the Human Rights Committee's general comment No. 36 (2018). This is further buttressed by the Committee on World Food Security's 2021 policy recommendations, recognizing farmers' contributions to biodiversity and calling for the strengthening of policy instruments and coherence for the conservation of biodiversity for food and agriculture and the fair and equitable sharing of seeds in the context of the Treaty and the Convention on Biological Diversity.⁴¹ If existing intellectual property rights treaties are marked by definitional ambiguity and international strife, farmers' rights have contributed to normative innovation and international cooperation.

39. From a WTO perspective, patent protection is the norm and everything else is unique and exceptional. From the International Convention for the Protection of New Varieties of Plants perspective, breeder's rights are the norm that fits easily within the exceptional space of WTO. Both perspectives are a version of an intellectual property rights regime and have proven to not reflect a commitment to international cooperation or the reality of most small-scale farmers' and indigenous peoples' practices in the past or present, or their desires for the future.

40. For example, several countries, such as Ethiopia, India, Malaysia and Thailand, have woven together their obligations under the International Treaty on Plant Genetic Resources for Food and Agriculture, the Convention on Biological Diversity, the Nagoya Protocol and the TRIPS Agreement and adopted innovative national plant variety protection laws distinct from the 1991 International Convention for the Protection of New Varieties of Plants. In doing so, they are attempting to make room for both farmers' seed systems and commodity seed systems by balancing public interests, the interests of commodity breeders and the interests of small-scale farmers.⁴²

41. Because farmers' seed systems are foundational for all food systems, the starting point for any seed system must be the full realization of farmers' rights, combined with recognition that such realization does not threaten intellectual property rights. And since farmers' rights are human rights, States must ensure that all seed systems must comply with human rights standards.

B. Promotion of farmers' rights

42. Farmers' rights draw from traditions that are alive today in existing community practices. They are also based on international legal obligations dedicated to creating a system built on relationships of cooperation and solidarity. There has been global demand by governments and people to further define and facilitate the implementation and realization of farmers' rights. Thus, the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, through its resolution 7/2017, established the Ad Hoc Technical Expert Group on Farmers' Rights to undertake the following tasks.⁴³ First, to produce an inventory of national measures that may be adopted, best practices, and lessons learned from the realization of farmers' rights as set out in article 9 of the Treaty. Second, based on the inventory, to develop options for encouraging, guiding and promoting the realization of farmers' rights as set out in article 9 of the Treaty. Between 2018 and 2021, the Group produced the inventory of national measures, which is open for updates.⁴⁴

43. The Group is also in the process of finalizing the options for encouraging, guiding and promoting the realization of farmers' rights, as set out in article 9 of the Treaty. With regard to the most recent draft of the options,⁴⁵ the Special Rapporteur is concerned that the nature and scope of the options may be construed in a way that contravenes the original terms of

⁴¹ "Policy recommendations on agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition" (2021), recommendation 3 (d).

⁴² Sangeeta Shashikant and François Meienberg, "International contradictions on farmers' rights: the interrelations between the international treaty, its article 9 on farmers' rights, and relevant instruments of UPOV and WIPO" (Third World Network and The Berne Declaration, 2015), p. 9.

⁴³ See also Governing Body resolution 6/2019.

⁴⁴ See <https://www.fao.org/plant-treaty/areas-of-work/farmers-rights/overview-inventory/en/>.

⁴⁵ See <https://www.fao.org/3/cb4095en/cb4095en.pdf>.

reference. Draft paragraph 10 states that: “Options are thus understood in this document as examples of actions or measures that may be taken to achieve an anticipated objective. This non-prescriptive and discretionary character distinguishes the options from guidelines that are intended to advise on how something should be done.”

44. There is also a suggestion from the Group that more language be included (in draft paragraph 13) to further highlight that the use of the options is discretionary and non-prescriptive and that they should not be interpreted as guidelines. Such open-ended discretionary language undermines the potential of the options as a tool to encourage, guide and promote farmers’ rights as set out in article 9 of the Treaty. At best, such non-prescriptive language may lightly inform. It also makes it more difficult for the secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture to mobilize resources and provide technical assistance to contracting parties and relevant stakeholders to enhance the realization of farmers’ rights as per the Governing Body’s directive.⁴⁶

45. The inventory should instead be understood as source material for something even more prescriptive than guidelines. It should be understood as a source of international law in and of itself, pursuant to article 38 (1) (c) of the Statute of the International Court of Justice, since it provides an opportunity to extrapolate and interpret a definition of farmers’ rights in terms of general principles of international law.

46. With this in mind, the Special Rapporteur provides a framework on how to extrapolate general principles from the inventory, with the ultimate aim of better understanding, defining and designing farmers’ rights under the following non-exhaustive themes based on article 9 of the International Treaty on Plant Genetic Resources for Food and Agriculture and human rights law:

- (a) Recognition of farmers’ and indigenous peoples’ right to seeds;
- (b) Protection of farmers’ and indigenous peoples’ traditional knowledge;
- (c) Right to save, use, exchange and sell farm-saved seeds;
- (d) Right to participate equitably in benefit-sharing;
- (e) Right to participate in decision-making.

47. The challenge is that States enact farmers’ rights within their specific contexts and against different geopolitical power dynamics. This creates a diverse set of farmers’ rights that are applied through formal and informal markets and cultural practices, and also through different property regimes.

48. Within the two broad categories of seed systems, understanding the current international legal landscape is complicated by the fact that there are a wide range of national legal regimes that affect seed systems.⁴⁷ The more a legal regime relies on property, contracts and commodified plants, the more likely it will lead to violations of human rights.

49. Thus, seed systems and their attendant laws must be assessed within the context of each country’s national human rights regime. As part of the articulation of principles that should inform farmers’ rights, some examples are provided below. These examples drawn from the inventory are meant for explanatory purposes and do not indicate a finding of human rights fulfilment or violation.

(a) Recognition of farmers’ and indigenous peoples’ right to seed

50. The contribution of small-scale farmers/peasants and indigenous peoples to the conservation and development of plant genetic resources for food and agriculture production must be recognized as the foundation of all seed systems. As such, all Member States should recognize farmers’ rights in national legislation and prioritize the national and international support of farmers’ seed systems. Such recognition must reflect the fact that biodiverse farmers’ seed systems are the preconditions for any fair economic system and any type of

⁴⁶ Resolution 7/2017, para. 16.

⁴⁷ Clare O’Grady Walsh, *Globalisation and Seed Sovereignty in Sub-Saharan Africa* (London, Palgrave Macmillan, 2019).

market to function. Therefore, farmers' rights must be supported and implemented in a way that ensures that property and contract laws do not encroach on this fundamental element of seed systems.

(b) Protection of farmers' and indigenous peoples' traditional knowledge

51. Traditional knowledge in the context of plant genetic resources encompasses the multidimensional living body of knowledge that farmers, indigenous people and their communities employ in selecting, saving and adapting plant materials, which are passed from generation to generation. For many communities, traditional knowledge intertwines with sacred knowledge, creating collective identity and defining a community's relationship to nature. As such, traditional knowledge is inherently tied to peoples' and communities' right to self-determination.

52. Traditional knowledge is sometimes protected through an intellectual property regime – this increases the risk of exploitation. To ensure that peoples' traditional knowledge in all its forms is protected, Member States should first implement measures that guarantee that a community's knowledge cannot be shared or used in any way without the community's free, prior and informed consent. This includes a community's right to refuse collaboration.

53. Without commenting on their efficacy, it helps to understand how existing mechanisms that protect traditional knowledge are enacted through defensive or proactive approaches.⁴⁸ Defensive approaches involve having a traditional knowledge documentation system or a database to ensure that intellectual property rights are granted only for plant varieties that meet the conditions for protection, such as novelty and inventiveness. In such approaches, countries incorporate provisions borrowed from the Convention on Biological Diversity and the Nagoya Protocol, such as disclosure of origin, prior informed consent, mutually agreed terms and fair and equitable benefit-sharing. Examples include the community biodiversity registries and biocultural community protocols in Benin and the community seed registries established by the Campagao Farmers' Production and Research Association and the Southeast Asia Regional Initiatives for Community Empowerment in the Philippines.⁴⁹ A proactive approach to protecting traditional knowledge involves granting farmers and farming communities sui generis rights to protect and control the use of their traditional knowledge. For example, France recognizes traditional knowledge holders under the Intellectual Property Code and the Law on Literary and Artistic Property.⁵⁰

(c) Right to save, use, exchange and sell farm-saved seeds

54. The substantive core of farmers' rights is their indivisible right to freely save, use, exchange and sell farm-saved seeds.⁵¹ Any disruption of that right must be avoided. Sometimes the notion of exchange is limited to barter or sale; this is too narrow, since gifting is a central feature of farmers' seed systems.

55. Many global North countries and a growing number of global South countries treat farmers' rights as a bundle of rights that can be divided up or monetized. This creates an undue limitation of farmers' rights. For example, some European countries⁵² have introduced farmers' privileges to permit farmers to save and use seeds on the condition that they pay royalties that depend on the types of crop and the size of the exploitation. Nonetheless, the farmer is not allowed to exchange the seeds with other farmers or sell them.⁵³

⁴⁸ Ruth L. Okediji, "A tiered approach to rights in traditional knowledge", *Washburn Law Journal*, vol. 58 (2019); and Chidi Oguamanam, "Towards a tiered or differentiated approach to protection of traditional knowledge (TK) and traditional cultural expressions (TCEs) in relation to the intellectual property system", *The African Journal of Information and Communication*, vol. 23 (2019).

⁴⁹ Draft inventory of national measures, best practices and lessons learned from the realization of farmers' rights, as set out in article 9 of the international treaty, p. 28. Available at <https://www.fao.org/3/na906en/na906en.pdf>.

⁵⁰ *Ibid.*, pp. 29–30.

⁵¹ International Treaty on Plant Genetic Resources for Food and Agriculture, art. 9.3.

⁵² Austria, France, Germany, the Netherlands and Switzerland.

⁵³ South Centre, "Patenting of plants and exceptions to exclusive rights: lessons from European law" (September 2021), p. 21.

(d) Right to participate equitably in benefit-sharing

56. The right to food includes everyone's right to share in the full use and dissemination of agrarian and nutritional knowledge.⁵⁴ Further refined in the context of farmers' rights,⁵⁵ farmers have the right to participate in the fair and equitable sharing of benefits. An example is the Protection of Plant Varieties and Farmers' Rights Act of 2001 in India and its concomitant National Gene Fund. For too long, however, former colonial powers and private companies have disproportionately benefited from farmers' and indigenous peoples' seed systems and traditional knowledge. Therefore, the notion of benefit-sharing should be based on principles of protecting traditional knowledge and redistributing benefits back into the hands of farmers.

57. The sharing of benefits is based on the premise that the more that farmers are supported and enabled to save and exchange different seeds, the more a community benefits from enhanced biodiversity. In turn, the more resilient a community is to ecological change, the more a farmer is successful in his or her harvest. Benefit-sharing is more than monetarily rewarding individuals.

58. The International Treaty on Plant Genetic Resources for Food and Agriculture, in line with the Convention on Biological Diversity and the Nagoya Protocol, enables global benefit-sharing under its unique multilateral system.⁵⁶ Under the system, benefits from the use of plant genetic resources for food and agriculture are to be shared fairly and equitably through the following multifaceted monetary and non-monetary mechanisms: (a) exchange of information; (b) access to and transfer of technology, including technologies that can only be transferred through genetic material; (c) capacity-building; and (d) sharing of monetary and other benefits of commercialization. Most importantly, the Treaty specifies that these benefits should flow, primarily, directly and indirectly, to farmers in all countries, especially in developing countries and countries with economies in transition whose contribution to the diversity of plant genetic resources for food and agriculture in the multilateral system is significant and/or which have special needs.⁵⁷

59. Plant genetic resources for food and agriculture in the multilateral system are considered pooled goods. Therefore, benefits resulting from their use do not accrue to individual providers, rather they are shared under the system. In addition, not all entities that have access to the system have contributed materials or donations to it.

60. Unfortunately, the system remains underfunded and limited in its monetary disbursements. Moreover, when it comes to organizing the accumulation and distribution of benefits, under the system a distinction is made between monetary and non-monetary benefits. In practice, however, monetary and non-monetary benefits are not easily separable.⁵⁸ Therefore, the system is unlikely to contribute to farmers' rights anytime soon.

61. Any system of benefit-sharing should recognize that ultimately farmers and indigenous people contribute to agricultural biodiversity, and should therefore ensure that all benefits are distributed to farmers and indigenous people under terms jointly designed by farmers' and indigenous peoples' organizations.

(e) Right to participate in decision-making

62. In accordance with the International Treaty on Plant Genetic Resources for Food and Agriculture, farmers have the right to participate in making decisions, at the national level, on matters related to the conservation and sustainable use of plant genetic resources for food and agriculture.⁵⁹ This raises the question of what the scope of "matters related to the conservation and sustainable use of plant genetic resources for food and agriculture" is. This scope should be interpreted as broadly as possible. Farmers' right to participate should

⁵⁴ Universal Declaration of Human Rights, art. 27 (1); International Covenant on Economic, Social and Cultural Rights, art. 11 (2) (a).

⁵⁵ International Treaty on Plant Genetic Resources for Food and Agriculture, art. 9.2 (b).

⁵⁶ Arts. 10 and 13.

⁵⁷ Art. 13.3.

⁵⁸ Tsioumani, *Fair and Equitable Benefit-Sharing in Agriculture*, pp. 18–19.

⁵⁹ Article 9.2 (c).

include laws, policies and practices that address matters such as seed release, seed registration, seed commercialization laws, access and benefit-sharing laws, plant variety protection laws and trade laws at a national level.

63. Farmers' participation in formal decision-making enables knowledge exchange and dialogue that foster representative laws and policies suited to diverse domestic realities. Countries such as Canada, Chile, Japan, Malawi, the Netherlands, Norway, the Philippines, Spain, Sweden, Switzerland and the United States have introduced various avenues to promote farmers' participation in decision-making. For example, farmers contributed to the review of the Seed Bill in Malawi in 2018 and the issues they raised were addressed in the revised seed bill.⁶⁰

64. This right should be extended to the participation of smallholder farmers/peasants and indigenous peoples in international organizations. Many international organizations allow for civil society organizations to be involved as observers, or in some cases, as stakeholders. For example, the Civil Society and Indigenous Peoples' Mechanism for Relations with the UN Committee on World Food Security is an innovative mechanism that allows civil society organizations to organize and participate autonomously in the Committee's operations.

C. Farmers' rights enhance innovation and agrobiodiversity

65. During the past decades, there have been significant scientific advancements in genetic sequencing that will continue to advance our knowledge in profound ways. They also influence how people relate to each other and the environment.

66. There are more than 1,500 publicly accessible biological databases that include genetic/nucleotide sequence data. For over 40 years, the International Nucleotide Sequence Database Collaboration has been the leading global joint effort to collect and disseminate databases containing DNA and RNA sequences. It comprises databases from the DNA Data Bank of Japan, GenBank (United States) and the European Nucleotide Archive (United Kingdom of Great Britain and Northern Ireland). All data in the joint database are available for free with unrestricted access, for any purpose. There are also no restrictions on analysis, redistribution or republication of the data.

67. These open-source databases are extensively used by scientists for all types of research, including the breeding and development of new plant varieties. As evidenced by the session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture in November 2019, and similar debates in the mechanisms of the Convention on Biological Diversity, WHO and the United Nations Convention on the Law of the Sea, there remains a profound disagreement as to how to coordinate and govern this data globally. Negotiators even find it difficult to agree on common scientific terminology, and use the term "digital sequence information" as a placeholder.⁶¹

68. Through sequencing and data-management techniques, genetic information is "extracted, processed and exchanged in its own right", detached from the original plant and local communities.⁶² How we manage and conceptualize biodiversity is at stake. Many global South countries and international peasant movements want to rely on multilateral processes, such as those under the International Treaty on Plant Genetic Resources for Food and Agriculture, to ensure fair and equitable access and benefit-sharing. Many global North countries and corporations argue that such a multilateral system would restrict access to genetic sequence databases, impede scientific knowledge and limit technological and commercial benefits.⁶³

69. As countries continue negotiations, they should keep in mind that the more a system protects methods of freely sharing seeds and knowledge, ensures farmer participation in all

⁶⁰ Draft inventory, pp. 79–85.

⁶¹ See, for example, <https://www.cbd.int/doc/c/e95a/4ddd/4baea2ec772be28edcd10358/dsi-ahteg-2018-01-03-en.pdf>.

⁶² Tsioumani, *Fair and Equitable Benefit-Sharing in Agriculture*, p. 24.

⁶³ Rachel Wynberg and others, "Farmers' rights and digital sequence information: crisis or opportunity to reclaim stewardship over agrobiodiversity?", *Frontiers in Plant Science*, vol. 12 (2012).

aspects of breeding, and strengthens cultural ties to the land,⁶⁴ the more biodiversity is conserved and rights to life and food are fully realized. Therefore, the International Treaty on Plant Genetic Resources for Food and Agriculture, with its articulation of farmers' rights, further refined by the Convention on the Elimination of All Forms of Discrimination against Women, 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, provides the foundation for a human rights-based system of digital sequence information governance.

70. In contrast, the more an access and benefit-sharing system relies on property rights and contractual transactions, the more likely it will undermine farmers' seed systems and violate human rights. Therefore, processes like that of the Nagoya Protocol, which is based on private contracts or systems that derive intellectual property rights from open-source DNA databases, raise serious human rights concerns.

71. Farmers' seed systems already rely on other systems of access to and sharing of agrobiodiversity, through so-called community seed banks or seed houses and participatory breeding. It may be more accurate to describe those as seed libraries: they are places and practices for collectively conserving and managing seeds, along with the accompanying expertise and knowledge, through an interactive process of collecting seeds and sharing them with farmers and gardeners. They can be a physical place or a network of people, formal or informal.

72. In these systems, social organization and cultural preferences play an important role in deciding what is stored, what is reproduced, and what is cultivated at the local level. In fact, seed libraries and their respective rules on seed saving and exchange are mechanisms that put farmers' rights into practice.

73. What keeps seed libraries dynamic and responsive to local needs is the constant exchange between farmers collecting seeds from their fields and sharing them through the communal system, alongside the methods that determine which seeds are saved for use. The nature of support and rules around seed libraries vary greatly around the world but they all have something in common: they are managed by farmers for farmers.⁶⁵

III. Pesticides as a human rights concern

74. Farmers' seed systems are at the heart of agroecology, regenerative approaches, and indigenous foodways. These types of food system are labour intensive and rely on biological control, habitat manipulation, modification of cultural practices, traditional knowledge and use of resistant varieties to reduce damage caused by pests. Commodity seed systems generally rely on pesticides. It is therefore not surprising that commodity seed companies and pesticides companies are often one and the same.

75. The widespread use of pesticides⁶⁶ has caused health problems and fatalities in many parts of the world, often because of occupational or community exposure, and accidental or intentional poisonings. According to WHO, highly hazardous pesticides are recognized as a global health concern because they may have acute or chronic toxic effects and pose a particular risk to children.⁶⁷ There is particular concern in low-income countries, where such pesticides cannot be used safely.⁶⁸ Environmental contamination also results in human

⁶⁴ Ibid.

⁶⁵ Seufert, Boselli and Mori, *Recovering the Cycle of Wisdom*, pp. 38–39.

⁶⁶ Herbicides, fungicides, rodenticides and other chemicals used in food and agricultural production to kill living organisms (collectively referred to herein as “pesticides”).

⁶⁷ See <https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.4.6>.

⁶⁸ FAO and WHO, *Detoxifying Agriculture and Health from Highly Hazardous Pesticides: A Call for Action* (2019).

exposure through community proximity or consumption of pesticide residues in food, and possibly drinking water.⁶⁹

76. The continued and increasing use of pesticides seriously undermines the ability of members of present and future generations to enjoy their right to life, the right to adequate food, and the right to the highest attainable standard of health. Such human rights violations often disproportionately affect the more vulnerable segments of the population, such as farm workers and agricultural communities, children and pregnant women, communities living in poverty or extreme poverty, and indigenous peoples. Pesticide exposure during pregnancy increases the chance of miscarriage, preterm delivery and birth abnormalities. Unfortunately, there are no reliable global statistics on the number of people who suffer from pesticide exposure. Global estimates are alarming: approximately 385 million cases of acute unintentional poisonings by pesticides happen every year and pesticides have been linked to an increase in chronic diseases such as cancer, development disorders, and reproductive problems.

77. In 2017, a thematic report prepared by the Special Rapporteur on the right to food in collaboration with the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes provided a detailed account of the ways in which pesticides affect the enjoyment of human rights.⁷⁰

78. In 2019, the Human Rights Committee decided that Paraguay had violated the rights to life and a life with dignity of over 20 people who had been exposed to toxic pesticides.⁷¹ The Committee found that heavily spraying toxic agrochemicals had posed a reasonably foreseeable threat to the victims' lives given that such large-scale fumigation had contaminated the rivers in which they fished, the well water they drank and the fruit trees, crops and farm animals that were their source of food.

79. The Special Rapporteur reiterates that pesticides produce detrimental consequences and impede the enjoyment of an array of human rights, including the right to food.⁷² Crop breeding in industrial agriculture has focused on breeding high-yielding distinct, uniform and stable varieties that respond well to chemical inputs but that are more genetically susceptible to pests and diseases.⁷³ The concentration of corporate power reduces interest in developing robust varieties that are inherently more resistant to pests and disease. Corporate power also redirects attention and funding away from agroecology, regenerative approaches and indigenous foodways that do not use pesticides and emphasize farming that is genetically and culturally diverse at multiple scales.

80. The pesticide industry's efforts to influence policymakers and regulators have obstructed reforms and paralysed global pesticide restrictions globally.⁷⁴ The efficacy of chemical pesticides is also greatly reduced owing to pesticide resistance over time. Farmers using genetically engineered seeds find themselves obliged to buy the accompanying pesticides, which benefits the pesticide industry without regard to the financial burden on farmers or the cost to the environment.⁷⁵

81. Over decades, the holders of the present mandate and other independent experts of the Human Rights Council have received numerous submissions on the adverse effects of exposure to highly hazardous pesticides on the human rights to life, health, food and water. These experts have also witnessed how several major enterprises representing agroindustry have systematically tried to downplay the magnitude of health damage inflicted by these chemicals, restricting victims' access to adequate health care and effective remedy, denying

⁶⁹ See <https://www.who.int/publications/i/item/WHO-CED-PHE-EPE-19.4.6>; and Clémentine Dereumeaux and others, "Pesticide exposures for residents living close to agricultural lands: a review", *Environment International*, vol. 134 (January 2020).

⁷⁰ [A/HRC/34/48](#).

⁷¹ See *Cáceres et al. v. Paraguay* (CCPR/C/126/D/2751/2016).

⁷² See [A/HRC/34/48](#).

⁷³ Tsioumani, *Fair and Equitable Benefit-Sharing in Agriculture*, p. 7.

⁷⁴ [A/HRC/34/48](#), para. 86.

⁷⁵ *Ibid.*, para. 97.

information or providing fake arguments. In July 2021, for example, the personal data protection agency of France fined Monsanto for illegally compiling files of public figures, journalists and activists with the aim of lobbying support for controversial pesticides.⁷⁶

82. Many of these cases concern agricultural workers who are exposed to pesticides through spray, drift, direct contact with treated crops or soil, accidental spills, and insufficient personal protection equipment. Workers who apply the pesticides are exposed to higher levels, even with prescribed safety precautions. Agricultural workers' families are also at increased risk, as pesticide residues enter their homes through contact with skin, clothing and shoes.

83. While manufacturers and governments often argue that pesticide exposure risks are low when personal protective equipment is used appropriately, compliance with such equipment practices is generally low. Personal protection equipment may not be appropriate for working conditions such as intense heat and humidity, steep terrain and dense vegetation. Other reasons for non-compliance could include the need to work quickly, a lack of training on the health consequences of exposure, or training done in non-native languages, as well as excessive labour turnover.⁷⁷

84. Children who work in agriculture face a particularly high risk of exposure, since their organs are still developing and they are exposed to a larger dose per unit of body weight due to their smaller stature. The International Labour Organization estimates that about 60 per cent of child labourers worldwide work in agriculture, and children make up a substantial portion of the agricultural workforce in developing countries.⁷⁸

85. Systemic pesticide-treated seeds are routinely employed in the cultivation of soybeans, corn and peanuts. Proponents of systemic insecticides and genetically modified crops argue that eliminating liquid spraying considerably reduces the danger of exposure to farm workers and other non-target organisms. However, more research on the long-term effects of systemic pesticides and genetically altered crops on human health, beneficial insects, soil ecosystems and aquatic life is required. Glyphosate, the key chemical in several herbicides, is a prime example of the debate surrounding genetically altered crops. While corporations present glyphosate as less toxic, there is substantial debate about its environmental impact. In 2015, the International Agency for Research on Cancer identified glyphosate as a probable human carcinogen.⁷⁹

86. Pesticide application has sometimes served as a means of land-grabbing and diminishing the fertility of the land. Pesticides can be applied for the mere purpose of forcing peasants and their families, including members of indigenous communities, from their traditional lands in fear for their health and the health of their children, who are being exposed to extensive aerial sprayings.

87. United Nations independent mandate holders have also addressed issues related to legislation and policy that create double standards between countries in respect of protection from pesticides. Many low- and middle-income countries continue to use hazardous pesticides banned by high-income countries, which in some cases continue to produce and export hazardous pesticides for the production of agricultural products that are then imported back.⁸⁰

88. Major concerns also arise from reported cases of paraquat poisoning as a frequent mode of suicide in agricultural settings. Paraquat is also the cause of hundreds of deaths from accidental ingestion, especially in developing countries, where agrochemicals are often stored in homes. According to WHO, self-poisoning with pesticides causes up to one in five

⁷⁶ See <https://www.cnil.fr/fr/fichier-de-lobbying-sanction-de-400-000-euros-lencontre-de-la-societe-monsanto> (in French).

⁷⁷ A/HRC/34/48, paras. 76–77.

⁷⁸ See <https://www.ilo.org/ipecc/areas/Agriculture/lang--en/index.htm>.

⁷⁹ See <https://www.iarc.who.int/featured-news/media-centre-iarc-news-glyphosate/>; and A/HRC/34/48, paras. 37–38.

⁸⁰ See <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=26476>; and <https://spcommreports.ohchr.org/TMResultsBase/DownloadPublicCommunicationFile?gId=26474>.

of the world's suicides and "is one of the most readily preventable methods of suicide in certain parts of the world".⁸¹

89. Yet today safer practices exist and can be further developed to reduce the negative effects of such excessive and, in some cases unneeded, pesticide use. A gradual phasing out of pesticides, starting with highly hazardous pesticides, in accordance with WHO and FAO norms is considered a realistic objective by a large number of experts worldwide. Organic farming is becoming more popular in many regions, demonstrating that farming with fewer or no chemicals is possible. According to some studies, agroecology is capable of producing sufficient food and nourishment for the world's population.⁸²

90. As the previous mandate holder noted, the assertion promoted by the agrochemical industry that pesticides are necessary to achieve food security is not only inaccurate, but dangerously misleading.⁸³ Rates of hunger, malnutrition and famine continue to increase, while global production grows. Ironically, many of those who are food insecure are in fact smallholder farmers/peasants and agricultural workers, particularly in lower-income countries. The problem is inequitable production and distribution systems that prevent those in need from accessing food.

91. In 2006, the FAO Council proposed "that the activities of FAO could include risk reduction, including the progressive ban on highly hazardous pesticides".⁸⁴ But progress on highly hazardous pesticides has been uneven and the global goal to minimize adverse impacts of chemicals and waste by 2020 was not achieved.⁸⁵ The current and projected patterns of global pesticide and fertilizer use are not sustainable, according to the United Nations Environment Programme. It concluded that the above-mentioned global goal was not achieved for pesticides and fertilizers. Although progress has been made in strengthening management of pesticides and fertilizers, including through international agreements, those agreements have not proven sufficient to address all adverse environmental and health impacts comprehensively. While stakeholders in the value chain and agrifood system are contributing to minimize adverse effects of pesticides and fertilizers, there is further need to scale up their commitment through targets and road maps.⁸⁶

92. Considering all this, the Special Rapporteur is alarmed by the recent strategic partnership agreement signed between CropLife International and FAO.⁸⁷ CropLife International is an international trade association of agrochemical companies that includes the world's largest agricultural biotechnology and agricultural pesticide businesses. The agreement, signed in October 2020, is professedly aimed at strengthening the relations between organizations to build sustainable food systems and contribute to the achievement of the Sustainable Development Goals.⁸⁸ While it is important for governments, international organizations, farmers, businesses enterprises and civil society organizations to cooperate and consult in order to find solutions to the challenges posed by highly hazardous pesticides, the Special Rapporteur is concerned that institutionalized agreements between organizations, such as CropLife International, representing and lobbying for the pesticide producers, and United Nations agencies may raise questions of conflict of interest and result in undue corporate influence over international policymaking. The Special Rapporteur expects to engage further on this matter.

⁸¹ WHO and FAO, *Preventing Suicide: A Resource for Pesticide Registrars and Regulators* (2019).

⁸² Global Alliance for the Future of Food, *The Politics of Knowledge: Understanding the Evidence for Agroecology, Regenerative Approaches, and Indigenous Foodways* (2021).

⁸³ A/HRC/34/48, para. 91.

⁸⁴ Report of the FAO Council on its hundred and thirty-first session (Rome, 20–25 November 2006), para. 86.

⁸⁵ United Nations Environment Programme. *An Assessment Report on Issues of Concern: Chemicals and Waste Issues Posing Risks to Human Health and the Environment* (2020).

⁸⁶ United Nations Environment Programme, "Environmental and Health Impacts of Pesticides and Fertilizers and Ways of Minimizing Them", summary for policymakers (2021).

⁸⁷ See <https://www.fao.org/news/story/en/item/1311286/icode/>.

⁸⁸ See <https://croplife.org/wp-content/uploads/2020/10/CLI-FAO-Partnership-Announcement.pdf>.

IV. Conclusion and recommendations

93. Flourishing and resilient seed systems are key to the full realization of the rights to life and to food. The concentration of corporate power in food systems has made communities vulnerable to harm caused by ecological degradation and pesticides. Global South communities are disproportionately harmed, especially smallholder farmers/peasants, indigenous peoples, women, children and agricultural workers.

94. The challenge for Member States is that the current international and national legal landscape creates potentially divergent obligations and risks human rights violations. Establishing a robust farmers' seed system is made urgent if a State intends to include or has already included intellectual property rights as part of their national seed system.

95. For Member States to meet target 2.2 of the Sustainable Development Goals, the Special Rapporteur has provided a framework to cohere and advance farmers', indigenous peoples' and workers' rights and ensure that the world's seed systems are diverse and safe and fulfil the rights to life and food.

96. The Human Rights Council should:

(a) Reaffirm that farmers', indigenous peoples' and workers' rights are human rights;

(b) Recognize smallholder farmers/peasants and indigenous peoples as stewards of seed systems for all of humankind in line with the International Covenant on Civil and Political Rights, 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;

(c) Take note that intellectual property rights and commodity seed systems are often implemented in a way that threatens human rights.

97. Member States should:

(a) Recognize, support and reward smallholder farmers/peasants and indigenous peoples as stewards of seed systems for all of humankind;

(b) Invest in research and development to maintain and build sustainable farmers' seed systems;

(c) Avoid any funding, training and technical or capacity-building exclusively focused on commodity seed systems;

(d) Develop and interpret their seed and plant variety protection laws and policies based on the fact that fully realized farmers' rights are a precondition for any type of fair economic system.

98. As such, Member States should ensure that their national laws:

(a) Recognize farmers' rights as human rights;

(b) Establish farmers' rights as the fundamental aspect of their national seed system;

(c) In cases of national systems comprised of farmers' and commodity seed systems, conduct regular human rights impact assessments;

(d) Prioritize the full realization of farmer's rights.

99. Member States should base their national seed systems on the International Treaty on Plant Genetic Resources for Food and Agriculture and human rights law as articulated in instruments such as the International Covenant on Economic, Social and Cultural Rights, the Convention on the Elimination of All Forms of Discrimination against Women, 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. To this end, they should, as a minimum:

(a) Protect farmers' and indigenous peoples' traditional knowledge against exploitation resulting from the application of intellectual property rights. This includes implementing measures that guarantee that any community's knowledge cannot be shared or used in any way without the community's free, prior and informed consent;

(b) Fulfil farmers' and indigenous peoples' right to freely save, use, exchange and sell farm-saved seeds as an indivisible and fundamental right;

(c) Fulfil farmers' and indigenous peoples' right to participate equitably in all systems of benefit-sharing. All benefit-sharing mechanisms should be based on principles of protecting traditional knowledge and redistributing benefits back into the hands of farmers and indigenous peoples. In this regard, States should support local community seed libraries as the principal means to develop and fulfil farmers' rights. States are also encouraged to better support the multilateral system under the International Treaty on Plant Genetic Resources for Food and Agriculture;

(d) Respect and support farmers' and indigenous peoples' right to participate in decision-making regarding all laws, policies and practices that address matters such as seed release, seed registration, seed commercialization laws, access and benefit-sharing laws, plant variety protection laws and trade laws at the national level. This includes providing farmers with an opportunity to jointly design mechanisms intended to respect, protect and fulfil farmers' rights.

100. In order to ensure a stable multilateral system based on human rights, cooperation and solidarity, Member States should consider:

(a) Not pressuring other Member States to join the International Convention for the Protection of New Varieties of Plants in any way. Being a party to that Convention should no longer be required as part of bilateral or regional agreements. Member States are strongly encouraged to remove such requirements from current agreements;

(b) Ensuring that human rights are at the core of all negotiations around global governance for digital sequence information and that farmers' rights are the basis for the design of any access and benefit-sharing mechanisms;

(c) Ratifying and implementing all relevant International Labour Organization conventions on occupational health and safety and implementing recommendations and codes of practice related to the protection of workers from exposure to hazardous substances in the workplace;

(d) Cooperating to transition to agroecology and gradually phase out pesticides, starting with the phasing out and banning of highly hazardous pesticides.

101. The FAO Council is strongly encouraged to review the agreement with CropLife International with an eye to human rights concerns and to consider directing the Director-General of FAO to rescind the agreement.

102. The Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture is:

(a) Invited to consider the present report as a guide when interpreting the inventory of national measures, best practices and lessons learned from the realization of farmers' rights and when finalizing the options;

(b) Encouraged to ensure that the secretariat meets its duties to mobilize resources and provide technical assistance to contracting parties and relevant stakeholders for capacity-building to enhance the realization of farmers' rights.

103. **The Council of the International Convention for the Protection of New Varieties of Plants is invited to develop mechanisms to ensure that national implementation of the Convention does not restrict or violate human rights.**
