



SAFEGUARD BIODIVERSITY AND THE RIGHT TO FOOD

EXECUTIVE SUMMARY

The rights and seed systems of peasants and Indigenous Peoples are under attack from laws on intellectual property rights and seed marketing and increasingly undermined by biotechnology, digitalization and increasing corporate control over food and technology. This has far-reaching consequences for the right to food and rapidly declining biodiversity. It is therefore critical that states and multilateral institutions take action to realize the right to seeds as part of a transition toward healthy, sustainable and just food systems.

This briefing paper argues that seeds should be dealt with as a human rights issue. It explains recent normative developments toward the recognition of a right to seeds. A specific emphasis is placed on the centrality of recognizing and protecting peasants' and Indigenous Peoples' distinct seed systems for the realization of the right to seeds. This would in turn help to ensure sustainable food production, improved nutrition, and addresses the existential challenges of climate change and biodiversity loss.

RECOMMENDATIONS

In order to ensure and promote the realization of the right to seeds and related human rights, states should take the following actions:

- → Recognize peasants' and Indigenous Peoples' right to seeds ("farmers' rights") in national and regional legal frameworks, developing specific legal measures protecting peasant and Indigenous Peoples' seed systems.
- → Ensure that plant variety protection and other intellectual property laws, certification schemes and seed marketing laws as well as policies concerning biotechnologies and "digital sequence information" (DSI) respect and take into account the rights, needs and realities of peasants and Indigenous Peoples. This includes withdrawing from the International Convention for the Protection of New Varieties of Plants (UPOV) and ensuring that DSI is considered as genetic resources.
- → Adopt measures to transition food systems to agroecology, including phasing out all pesticides with known harmful effects on human, environmental, and ecosystem health, starting with the banning of highly hazardous pesticides.

I. Introduction

Seeds are central to the realization of the human right to food and nutrition. Realizing peasants' and Indigenous Peoples' right to seeds is critical in the current context of compounding crises, including climate change and rapid loss of biodiversity as well as the further exacerbation of food insecurity. There is broad recognition of the urgent need to promote sustainable, healthy and just food systems, including in the context of the post-COVID pandemic recovery. Seeds are critical in this regard and human rights provide the right framework for policy action toward this goal.

This briefing paper provides arguments to policy makers on why it is crucial to promote human rights related to seeds. The key recommendations are concrete action points for governments and multilateral institutions to make the right to seeds a reality.

II. Seeds are a human right

In his recent report entitled "Seeds, right to life and farmers' rights", the UN Special Rapporteur on the Right to Food, Michael Fakhri, emphasizes that seeds are critical for the right to life, stating that "[t]he right to life with dignity is to be interpreted broadly, with the understanding that threats stemming from environmental degradation, climate change and unsustainable development are some of the most pressing and serious threats of today and tomorrow." More particularly, access to and control over seeds are critical for the right to food and nutrition: "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." 2

Seeds directly relate to states' human rights obligations, as enshrined in art. 25 of the Universal Declaration of Human Rights and art. 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR). In its General Comment on the right to food, the Committee on Economic, Social and Cultural Rights (CESCR) emphasizes that this right requires access to the natural resources needed to feed oneself.³ Access to and sustainable use of seeds are further recognized as key elements of food security in the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). Based on peasants' and Indigenous Peoples' past, present and future contribution to developing and maintaining biodiversity for food and agriculture,

Fakhri, M. 2021. Seeds, right to life and farmers' rights. Report of the UN Special Rapporteur on the Right to Food. UN Document A/HRC/49/43. Available at: https://undocs.org/en/A/HRC/49/43, para. 8.

2| Ibid., para. 9.

3|

Committee on Economic, Social and Cultural Rights (CESCR). 1999. General Comment, no. 12, para. 12. Available at: https://undocs.org/en/E/C.12/1999/5.





4 ITPGRFA, art. 9.3.

5| ITPGRFA, art. 9.2, CBD, art. 8j.

6 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), art. 31; United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP). art. 19.

7|
Committee on the Elimination of Discrimination against Women (CEDAW).
2016. General recommendation No.
34, para 56. Available at: https://undocs.org/en/CEDAW/C/GC/34.

8| Fakhri, paras. 6 and 9. this treaty recognizes their rights over seeds ("farmers' rights"), including the right to save, use, exchange and sell their seeds. The ITPGRFA further establishes states' obligation to protect peasants' and Indigenous Peoples' traditional knowledge, echoing the Convention on Biological Diversity (CBD), which specifies that such protection includes to respect, preserve and maintain their knowledge, innovations and practices.

Increased acknowledgement of the centrality of seeds for human rights in recent years has resulted in normative developments that recognize the right to seeds as a right of its own for peasants and Indigenous Peoples. The Committee on the Elimination of Discrimination against Women (CEDAW) has further clarified that rural women's rights to natural resources, including seeds, are fundamental human rights. The UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) specifies that the right to seeds includes states' obligation to support peasant seed systems. The importance of peasants' and Indigenous Peoples' distinct seed systems is also emphasized in the recent report of the Special Rapporteur, who clearly distinguishes them from commodity seed systems and emphasizes that "[t] he right to food is inherently tied to farmers' seed systems."

III. Understanding Peasant and Indigenous Peoples' seed systems

In recent years, there has been an increasing acknowledgement that most peasants and Indigenous Peoples realize their right to seeds through their own, distinct seed systems. This takes into account the fact that "no peasant or indigenous seed exists without a community that conserves, uses, nurtures and further develops it within its production system, its culture and the ecosystem it lives in." Peasant and Indigenous Peoples' seed systems refer to the collective rules and practices through which peasant communities and

9

International Planning Committee for Food Sovereignty (IPC), FIAN International, Centro Internazionale Crocevia. 2021. Recovering the Cycle of Wisdom: Beacons of Light for the Realization of the Right to Seed. Guide for the Implementation of Farmers' Rights. Available at: www.fian.org/files/files/GUIDE_Implementation-FRS_ENG_final.pdf.

Indigenous Peoples access, use and manage their seeds. These systems are based on the collective and/or customary rights of farming communities or Indigenous Peoples.¹⁰

As the Special Rapporteur's report underlines, peasant and Indigenous Peoples' seed systems are fundamentally different to commodity seed systems, which "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."

Consequently, "[w]hen 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."

12

Recognizing, protecting and promoting peasant and Indigenous Peoples' seed systems therefore need to be at the core of states' actions in support of the right to seeds and the right to food and nutrition. The following figure shows the elements of those seed systems.¹³

10| Ibid.

11|
Fakhri, para, 11.

12| Fakhri, para. 11.

13

Based International Planning Committee for Food Sovereignty (IPC), FIAN International, Centro Internazionale Crocevia. 2021.

FARMING PRACTICES:

Seed production by peasants and Indigenous Peoples is integrated into their agricultural activities. Seeds are carefully selected by them in their fields based on their knowledge systems and according to their own criteria and needs.

CULTURE:

For peasant farmers, seeds are not primarily a resource, nor an external agricultural input. Seeds are part of their culture and their seed management practices have spiritual and cultural expressions.

USE, CONSERVATION AND EXCHANGE:

Based on their knowledge, peasants and Indigenous Peoples have developed practices for storing, managing and transporting their seeds, and for ensuring good seed quality. Donating, exchanging and selling seeds are important components of peasant seed systems, and contribute to ensuring the renewal of the genetic diversity of their seeds. The rules for donations, exchange and sale are determined by the communities.

PEASANT & INDIGENOUS PEOPLES' SEED SYSTEMS

INDIGENOUS AND PEASANT KNOWLEDGE AND INNOVATIONS:

Farming communities have profound knowledge of plants as well as of their fields, soil and natural environment. Such knowledge is embedded in a social system, has been built in a community over time, is passed on from generation to generation, and is continuously enriched by peasant and indigenous innovations.

IV. Peasant and Indigenous Peoples' seed systems provide solutions to current challenges

SUSTAINABLE FOOD PRODUCTION 1.

Peasant and Indigenous Peoples' seed systems are a central pillar of sustainable, agroecological food production systems. The crop and intra-varietal diversity of such systems enhances their resilience and makes them less dependent on the use of fertilizers and pesticides. Pesticides, in particular, are causing a global human rights and environmental catastrophe and are responsible for an estimated 200,000 acute poisoning deaths each year. 14 Pesticides further play a key role in industrial food production systems that aggravate inequalities, decrease food diversity and fuel environmental destruction.

"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." Indeed, "[c]ommodity seed systems generally rely on pesticides. It is therefore not surprising that commodity seed companies and pesticides companies are often one and the same."16

This means it is critical to protect and promote peasant and Indigenous Peoples' seed systems in order to make food systems more sustainable. 17 Moreover, reduced dependency of peasants and Indigenous Peoples on external inputs increases their autonomy and income.

According to the UN Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos Orellana, Taken from: FIAN International, 2021, Transitioning towards Pesticide-Free Food Systems: People's Struggles and Imagination.

Available at: www.fian.org/files/files/ FIAN_StudyPesticidesE_06292new.

Fakhri, para. 79. 16 Fakhri, para 74.

15

FIAN International, 2021, Key Elements in Regulatory Frameworks to Ban Highly Hazardous Pesticides, Phase Out Other Pesticides, and Facilitate the Transition to Agroecology. Elements Paper. Available at: https:// www.fian.org/files/files/FIAN_ElementsPaper_E.pdf.

RECOVERING PEASANT SEEDS AND IMPROVING NUTRITION IN BENIN

In the village of Tora in the north of Benin, Organisation Rurale pour une Agriculture Durable (ORAD) works with farming communities to recover peasant seeds of local crops. Government incentives and farmer input support programs have incentivized peasant communities to produce new crops for markets, rather than traditional crops for consumption. Whereas the stated policy objectives are the creation of new sources of income for rural communities, the provision of industrial seeds of crops like maize has resulted in the abandoning of traditional local crops. As a result, families have faced food insecurity, especially in years of low harvests. Reintroducing peasant seeds of traditionally used crops like cowpea and sorgo has allowed communities to improve their nutrition and regain their autonomy. 18

18

Information based on testimonies from villagers and ORAD. For more information, please visit www.fian.org/ en/news/article/benin-rural-communities-recover-peasant-seeds-to-improve-nutrition-and-livelihoods-2921

2. HEALTHY DIETS

Peasants' and Indigenous Peoples' seed systems and their agroecological farming and management practices are critical components of sustainable, localized food systems which feed more than 70% of the world's population, ¹⁹ contributing to improve human health and well-being, while respecting and sustaining the natural environment. Biodiversity and locally adapted seeds are the foundation of dietary diversity and therefore need to be protected and enhanced, for the benefit of current and future generations.

Industrial agriculture and food systems have entailed a major shift in dietary patterns towards uniformity. Efforts to increase agricultural biodiversity in landscapes, food systems and diets are an important part of creating healthier diets from sustainable food systems. ²⁰ Agricultural biodiversity, as ensured through peasant and Indigenous Peoples' seed systems, results in increased dietary diversity, providing the spectrum of macro- and micro-nutrients essential for human health. Moreover, "a robust farmers' seed system ensures that people have access to food that meets their cultural values." ²¹

3. CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY

Through their seed management and production systems, peasants and Indigenous Peoples critically contribute to the conservation and sustainable use of biodiversity. In many instances, they are custodians and stewards of both natural and agricultural ecosystems – protecting, conserving and restoring them. Respecting, protecting and guaranteeing their rights is therefore a key contribution to halting biodiversity loss and protecting ecosystems.

Conversely, industrial agriculture based on commercial, hybrid seeds of a limited number of homogeneous and uniform, high-yielding crops and varieties, as well as genetically modified organisms (GMOs), has led to the loss of some 75% of agricultural biodiversity over the last century.²²

Article 20.2 of the UNDROP clarifies that "States shall take appropriate measures to promote and protect the traditional knowledge, innovation and practices of peasants and other people working in rural areas, including traditional agrarian, pastoral, forestry, fisheries, livestock and agroecological systems relevant to the conservation and sustainable use of biological diversity." The Special Rapporteur further emphasizes that "[t]he 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."²³

4. ADAPTATION TO CLIMATE CHANGE

Whereas peasants and Indigenous Peoples are most affected by climate change and biodiversity destruction, they are also key to true solutions to the challenges posed by it. Their seed management and production systems as well as their deep knowledge and their ability to innovate are critical to adapt crops and varieties to changing conditions, and to conserve, restore and further develop agricultural biodiversity.

19

GRAIN. 2012. Hungry for Land. Small farmers feed the world with less than a quarter of all farmland. Available at: https://grain.org/article/entries/4929-hungry-for-land-small-farmers-feed-the-world-with-less-than-a-quarter-of-all-farmland#sdfootnote36anc.

20

Pimbert, M. and Lemke, S. 2018. Using Agroecology to Enhance Dietary Diversity. In: United Nations System Standing Committee on Nutrition (UNSCN) News, no. 43, 33-42. Available at: www.unscn.org/uploads/web/news/UNSCN-News43.pdf.

21

Fakhri, para. 9.

22

FAO Commission on Genetic Resources for Food and Agriculture. 2019. The State of the World's Biodiversity for Food and Agriculture. Available at: www.fao.org/state-of-bio-diversity-for-food-agriculture/en.

23

Fakhri, para. 50.

24



deliberately sought by peasants and Indigenous Peoples because they enable constant adaptation to changes in growing conditions. Resilience of seeds is crucial to ensure regular, abundant harvests in increasingly irregular climatic conditions.

As pointed out by the Special Rapporteur, "[f]armers' seed systems allow farmers to grow food in a way that responds and adapts to change, making communities stronger and food systems more resilient."²⁴ "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)."²⁵

Peasant and indigenous seeds constantly evolve and develop in communities' fields. Their intra-varietal diversity and their ability to evolve are characteristics

Fakhri, para. 9.

25| Fakhri, para. 6.

26

V. Peasant and Indigenous Peoples' seed systems at risk

1. THE EXPANSION OF INTELLECTUAL PROPERTY RIGHTS OVER SEEDS

Despite their importance for food and nutrition security, the realization of human rights and the conservation of biodiversity and ecosystems, peasants' and Indigenous Peoples' seed systems are increasingly marginalized and under threat. One important factor is the expansion and harnessing of intellectual property rights regimes. According to the UN Special Rapporteur on the Right to Food, the expansion of "the legal and geographic scope of intellectual property rights, whether through the International Convention for the Protection of New Varieties of Plants [UPOV] or patents [...] has unfortunately enabled coercion and exploitation."²⁶ Moreover, intellectual property regimes contribute to biodiversity erosion by rewarding standardization and homogeneity.

Fakhri, para. 30.

27

Braunschweig, T.; Meienberg, F.; Pionetti, C.; Shashikant, S. 2014. Owning Seeds, Accessing Food. A Human Rights Impact Assessment of UPOV 1991 based on case studies in Kenva. Peru and the Philippines. Available at: www.publiceye.ch/fileadmin/doc/ Saatgut/2014_Public_Eye_Owning_ Seed_-_Accessing_Food_Report.pdf; Christinck, A. and Walløe Tvedt, M. 2015. The UPOV Convention, Farmers' Rights and Human Rights. An integrated assessment of potentially conflicting legal frameworks. Published by GIZ. Available at: wocatpedia.net/ images/c/cd/Giz2015-en-upov-convention.pdf;

28

International Planning Committee for Food Sovereignty (IPC), FIAN International, Centro Internazionale Crocevia. 2021. The Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) requires states to put in place some form of intellectual property protection on plant varieties. Although it explicitly allows countries to develop systems that are adapted to local contexts (so-called *sui generis* systems), the seed industry and several governments have used TRIPS and/or bilateral trade agreements as a catalyst to promote the UPOV system, which sets significant limitations to peasants' and Indigenous Peoples' rights and seed management practices.²⁷ UPOV criteria have been developed for industrial seeds, thus excluding peasants and Indigenous Peoples' seeds from marketing mechanisms. Moreover, the exceptions contained in the 1991 Act of the UPOV Convention concerning the respect of peasants' and Indigenous Peoples' rights are optional and limited to private and non-commercial use of seeds. As a result, UPOV restricts peasants' and Indigenous Peoples' rights to re-sow, conserve, exchange and sell seeds that they have selected from varieties that are protected by intellectual property rights.

Limitations of peasants' and Indigenous Peoples' right to seeds are also put in place through seed marketing rules, such as requirements for registration, certification and quality control, and sanitary regulations, which have been developed for the industrial seed sector and are not adapted to peasants' and Indigenous Peoples' seeds and practices. Being a prerequisite for marketing seeds, such rules often restrict peasants' and Indigenous Peoples' rights to exchange and sell their seeds.²⁸



HONDURAS DECLARES UPOV LAW UNCONSTITUTIONAL

On November 17, 2021, the Supreme Court of Justice of Honduras issued a decision upholding an appeal of unconstitutionality against the country's plant variety protection law, which was based on the 1991 Act of the UPOV Convention. The appeal had been filed by several peasant organizations. The ruling states that the law is contrary to the provisions of the national constitution, as well as to several international human rights agreements to which Honduras is a party. The decision explicitly refers to Honduras's human rights obligations relating to the right to food and nutrition as well as peasants' and Indigenous Peoples' right to seeds, as described in the ITPGRFA and the UNDROP.²⁹

29

For more information, please see www.biodiversidadla.org/Agencia-de-Noticias-Biodiversidadla/Semillas-en-manos-campesinas-un-fallo-a-favor-de-la-soberania-alimentaria-en-Honduras

30

In regions with widespread use of GMO, such as North America, it is virtually impossible to source non-contaminated seed. Please see: Soil Association. 2002. Seeds of Doubt. North American Farmers' Experiences of GM Crops. Available at: org/9041/1/Seeds_of_Doubt.pdf.

GENETICALLY MODIFIED ORGANISMS (GMO) AND BIOTECHNOLOGY

Genetic engineering technologies pose great risks for peasants' and Indigenous Peoples' rights and seed systems, health, biodiversity, ecosystems and the environment. Risks include contamination of their crops, seeds and fields with GMOs – by gene transfer, accidental seed mixing or the use of soiled harvesting machinery – as well as by pesticides and other chemical inputs that are used for their cultivation.³⁰

GMOs are incompatible with peasants' and Indigenous Peoples' ways of managing their seeds. Genetic engineering to overcome the natural barriers of reproduction of living organisms is at odds with the laws of natural evolution and peasants' and Indigenous Peoples' relationship with nature, which is based on respect, natural co-evolution and knowledge of the deep interrelatedness between all living beings in a given ecosystem. GMOs are further designed and artificially developed in laboratories to maintain their characteristics and to not adapt to the ecosystem in which they are cultivated.

New biotechnologies (such as cell fusion, and new techniques of mutagenesis, among others), which are sometimes referred to as "new breeding techniques", entail higher risks of adverse impacts on peasants and Indigenous Peoples as genetic manipulations are more difficult to identify. Moreover, biotechnology and agribusiness companies are pushing for the exclusion of such techniques from existing GMO regulations, thus side-lining measures that may exist to protect farming communities and consumers from risks, and undermining states' human rights obligations.³¹

31 See, for instance, UNDROP, art. 20.3.

3. GENETIC SEQUENCING AND DIGITALIZATION

In recent years, technological advances and a significantly reduced costs have allowed the sequencing of genetic information from plants, cultivars and wild species, and the storing of this information in digital data bases. According to the seed industry, new genetic engineering techniques allow for the introduction of genetic sequences of specific traits into plants, thus creating 'new' varieties that express those traits through processes that do not respect the natural physiological barriers of reproduction or recombination of living organisms.

The use of "digital sequence information" (DSI) carries serious risks of illegitimate appropriation and exploitation of peasants' and Indigenous Peoples' seeds and knowledge. It undermines their rights through the patenting of genetic sequences by corporations and commercial breeders. Such patents extend to all plants that contain the respective sequence and expresses its function. This includes "native" biological material and peasants' and Indigenous Peoples' seeds so that the latter may be required to pay royalties to patent holders in the event of their seeds containing patented sequences.

The seed industry and some governments claim that DSI are not to be considered as plant genetic resources, but as mere information. If such an interpretation prevails, agreements such as the ITPGRFA and the CBD would be obsolete, including their provisions on free, prior and informed consent, benefit sharing and farmers' rights.

4. CORPORATE CONTROL OVER SEEDS, FOOD AND TECHNOLOGIES

Harnessing intellectual property regimes and the increasing use of biotechnologies and DSI further increase corporate domination of the seed sector and food systems in general. "Four agrochemical companies control 60 per cent of the global seed market and 75 per cent of the global pesticides market."³² The resources needed to use biotechnologies and make use of the enormous

32| Fakhri, para, 18.

amount of digital sequences contained in data bases are only available to transnational corporations. These actors as well as their shareholders are primarily interested in generating financial profits, not the realization of the right to food and nutrition.

One manifestation of increasing corporate power is the influence of major agrifood companies in defining research priorities and policymaking, including through "multi-stakeholder" initiatives and partnerships with public institutions. One of the most blatant examples is the recent announcement of a strategic partnership between CropLife, an international trade association of agrochemical companies that includes the world's largest agricultural biotechnology and agricultural pesticide businesses, and the UN Food and Agriculture Organization (FAO). This partnership has been denounced by hundreds of smallholder food producer organizations around the world. In his recent report, the Special Rapporteur also points to serious "questions of conflict of interest and [...] undue corporate influence over international policymaking."

The concentration of power in the hands of few transnational conglomerates threatens the realization of the right to food and nutrition as well as efforts to protect, restore and sustainably use biodiversity. It further forecloses pathways to more healthy, sustainable and just food systems, redirecting "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."³⁶

V. Conclusion

Sustainably and equitably managing the world's seeds is crucial for tackling some of the biggest challenges facing the world today, including addressing climate change, halting biodiversity loss, promoting sustainable, healthy and just food systems, and realizing human rights. As the Special Rapporteur on the right to food has emphasized in his recent report, peasant and Indigenous seed systems need to be at the core of human rights-based seed policies: "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."³⁷

Detailed proposals for the respect, protection and fulfilment of peasants' and Indigenous Peoples' rights over seeds can be found in the Guide "Recovering the Cycle of Wisdom: Beacons of Light for the Realization of the Right to Seed. Guide for the Implementation of Farmers' Rights."

33

For more information, please see People's Working Group on Multistakeholderism. 2022. The Great Takeover: Mapping of Multistakeholderism in Global Governance. Available at: www.tni.org/en/publication/the-great-takeover.

34

Please see www.foodsovereignty.
org/ipc-statement-on-the-fao-worldconference-on-the-green-development-of-the-seed-industry; https://
pan-international.org/wp-content/
uploads/Petition-to-Stop-the-FAOCropLife-ToxicAlliance-en.pdf.

35| Fakhri, para. 92.

36

Fakhri, para. 79.

37

Fakhri, para. 41.



PUBLISHED BY



Willy-Brandt-Platz 5, 69115 Heidelberg, Germany

Author: Philip Seufert

| March 2022

FIAN acknowledges the financial support of the 11th Hour Project to produce this policy briefing.

@fianinternational

FIAN International