SPECIAL PROCEDURES
UNITED NATIONS
HUMAN RIGHTS COUNCIL

PALAIS DES NATIONS • 1211 GENEVA 10, SWITZERLAND
www.ohchr.org • Tel: +41 22 917 9000 • Fax: +41 22 917 9008 • E-mail: ohchr-registry@un.org

Mandate of the Special Rapporteur on the promotion and protection of human rights in the context of climate change

Annex IV – Relevant Practices

To the report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, Elisa Morgera, titled “Transforming food systems for a safe climate and health for all” (A/HRC/62/44)

SPECIAL PROCEDURES
UNITED NATIONS
HUMAN RIGHTS COUNCIL

PALAIS DES NATIONS • 1211 GENEVA 10, SWITZERLAND
www.ohchr.org • Tel: +41 22 917 9000 • Fax: +41 22 917 9008 • E-mail: ohchr-registry@un.org

Mandate of the Special Rapporteur on the promotion and protection of human rights in the context of climate change

Annex IV - Relevant Practices

As a complement to the report 'Transforming food systems for a safe climate and health for all' (A/HRC/59/42), this document provides an illustrative overview of relevant initiatives led by governments, Indigenous Peoples and peasants, civil society, international organizations, financial sector actors, and academics, that can be related to some of the recommendations made in the report. This is not meant to be a comprehensive global overview, but rather provide an indication of relevant developments on which the Rapporteur invites States, sub-national public authorities, national human rights institutions, researchers, civil society and the UN System to exchange lessons learnt, support impact assessments and develop capacity building initiatives. Crucially, human rights holders most affected by climate change and by these climate measures should be central in these conversations and assessments.

Due to capacity and time limitations, these practices included in this document, which were collected through independent research and from the submissions received (see Annex I - Methodology) have not been evaluated by the Special Rapporteurs. Considering the challenges of assessing information on business sector's practices, due to the documented practices of climate disinformation and obstruction, this document does not include examples from the private sector.

ADDITIONAL MATERIALS IV: RELEVANT PRACTICES..... Error! Bookmark not defined.

1. GOVERNMENT INITIATIVES 5

1.1 Brazil 5

1.2 Colombia 5

1.3 Costa Rica 6

1.4 Ecuador 6

1.5 Ethiopia 6

1.6 Samoa 7

1.7 Republic of Korea 7

1.8 Mexico 7

1.9 Spain 8

1.10 Sweden 9

2. INDIGENOUS-LED AND PEASANT-LED INITIATIVES..... 10

2.1. The Maya "Milpa" system – Belize 10

2.2. Khasi People - Meghalaya – India 10

2.3. Inari Sámi people, Finland 10

2.4. Melanesian communities, Solomon Islands 11

2.5 Agroecology in Andhra Pradesh – India 11

2.6 Living community seeds banks – Mali 11

2.7 Pacific Islands 11

2.8 Participatory research combining Indigenous meteorological knowledge and science for crop planning 12

2.9 Ucunivanua Locally Manages Marine Area - Fiji 12

2.10 Kuruwitu Community Reserve - Kenya 12

2.11 Apo Island Marine Sanctuary - Philippines 12

2.12 Veliondrake Locally Managed Marine Area - Madagascar 13

2.13 Women fish processors in West Africa 13

2.14 The Fisher People's Tribunal – South Africa 14

2.15 Silvo-fisheries in Indonesia 14

3. CIVIL SOCIETY-LED INITIATIVES..... 16

3.1 Small-scale aquaculture in East Africa 16

3.2 Access to certification for small-scale aquaculture in Southeast Asia 16

3.3 Urban food-sharing initiatives, Europe 16

3.4 Incredible Edible, UK 17
3.5 PAKT Rooftop garden, Antwerp, Belgium 17
3.6 Foodsharing network, Germany 17
3.7 The Milan Urban Food Policy Pact and community food initiatives, Italy 18
3.8 Gender initiatives to transform food systems – Cuba 18
3.9 Gender initiatives to transform food systems - India 18
3.10 Decentralised renewable-agriculture systems - Colombia 18
4. INTERNATIONAL ORGANIZATIONS **20**
4.1. Food and Agriculture Organisation (FAO) - Livestock farmers 20
4.2 FAO - implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF Guidelines) 20
4.6 International Plant Treaty – Benefit Sharing Fund 21
4.7 The Great Green Wall Initiative -the Sahel 21
5. FINANCIAL SECTOR ACTORS **22**
5.1. Holding banks accountable in Cambodia 22
5.2. Green Climate Fund-FAO zero-deforestation cocoa production in Cote D'Ivoire 22
6. ACADEMIA 23
6.1. Triple land use – Mali and The Gambia 23
6.2 Participatory approaches to conservation, food security and climate resilience – Malawi 23

1. GOVERNMENT INITIATIVES

1.1 Brazil

The "Brazil Sem Fome" (Brazil without Hunger) strategy combines social protection, food access and support for family farming within a coordinated cross-government framework. This initiative has expanded "Bolsa Família" cash transfers and linked universal school feeding with public procurement from local and agroecological farmers and targeted support for vulnerable communities. The programme has also strengthened urban food access through public restaurants, food banks and local markets, while embedding the right to adequate food within national policy.[1]

In addition, Brazil has implemented the National School Feeding Programme, one of the world's largest universal school meal programmes, serving more than 40 million students. Led by the federal government through strong interministerial coordination, the programme links school feeding with goals of reducing hunger, supporting family farmers and promoting sustainable food systems. Key features include decentralised procurement, mandatory purchasing from small-scale family farmers and community participation through School Feeding Councils. The programme has improved nutrition and education outcomes while increasing income for family farmers and strengthening local food systems. It also contributes to climate objectives by supporting local and more resilient food supply chains and encouraging sustainable agricultural practices in a sector with high greenhouse gas emissions.[2]

1.2 Colombia

Law 2226 (2022) places peasant, family and community agriculture at the centre of the country's ecological transition and the progressive realisation of the human rights of peasants, supporting legal security regarding their territories, with a view to reducing deforestation, soil degradation, and climate vulnerability. The law, which recognizes peasants as subjects of rights, guarantees effective participation in agrarian decision-making, strengthening peasant production systems, and promoting family-based, agroecological, and small-scale agriculture. This recognition has enabled the reinforcement of sustainable production practices that reduce dependency on fossil-fuel-based inputs, protect the soil, foster agricultural biodiversity and ensure a transition toward just and resilient food systems.

Colombia also highlights progress made in land titling and territorial delimitation for peasant, Indigenous Peoples, and Afro-descendant communities, covering 1.38 million hectares.

Other key measures include the implementation of Constitutional Court Judgment T-247 (2023) through a national multisectoral roundtable to develop the Public Policy on Native and Creole Seeds. Colombia has also developed a Public Policy on Agroecology which is aimed at reducing reliance on agrochemicals and transitioning toward more sustainable food systems. In addition, the Rural Disability Guidelines have been updated to strengthen disability-inclusive rural development and food systems policies, alongside

[1] IPES FOOD. See: https://ipes-food.org/brazil-beats-hunger/.
[2] See: https://cms.marianamazzucato.com/wp-content/uploads/2025/09/A_Mission-Oriented_Approach_for_School_Meals_0.pdf, page 92 onward.

the promotion of Agreement NT4-118 to co-finance integrated productive projects for ethnic communities, supporting livelihoods and culturally appropriate, rights-based development pathways.[3]

1.3 **Costa Rica**

Climate change has made coffee farming increasingly difficult in parts of Costa Rica due to rising temperatures, unpredictable rainfall, droughts and crop diseases such as coffee leaf rust. In response, some farmers have been supported to transition from coffee to citrus production, which is better suited to warmer and drier conditions. This shift helped farmers maintain stable incomes, reduce climate-related crop losses, and strengthen long-term resilience, making it a successful example of transformative climate adaptation in agriculture.[4]

1.4 **Ecuador**

Commented [A1]: I have homogenized all sub-headings (just country name)

Ecuador's *Socio Bosque* Programme was established as a voluntary incentive-based conservation scheme: it provided annual payments to private and communal landholders in poverty situations, in exchange for maintaining forest cover. The programme has been explicitly designed to prioritise smallholders and rural communities, with higher per-hectare payments for smaller land areas, in order to protect livelihoods while reducing deforestation. Participation is conditional on sustainable land management plans and compliance is monitored through satellite imagery, to strengthen accountability and credibility. By combining social protection with avoided deforestation, the programme has helped conserve over 1.5 million hectares of forest and significantly reduce greenhouse gas emissions.[5]

1.5 **Ethiopia**

The Ethiopia Sustainable Land Management Programme sought to integrate land restoration and climate resilience. Led by the Ethiopian government with support from the World Bank and international development partners, the programme was designed to combat severe land degradation, soil erosion and declining agricultural productivity in vulnerable highland and watershed regions. The initiative combines terracing, watershed rehabilitation, reforestation, soil and water conservation and sustainable farming practices to restore degraded landscapes, while supporting rural livelihoods and food security. According to research, the program has contributed to reduced soil erosion, increased vegetation cover, improved water retention and higher agricultural productivity in restored areas. It is highlighted as an important climate adaptation initiative because healthier soils and restored watersheds help communities better withstand droughts and

---

[3] Submission by Colombia.

[4] World Resources Institute (2020) *Applying Climate Services to Transformative Adaptation in Agriculture*. Washington, DC: WRI. Available at: https://www.wri.org/publication/climate-services-transformative-adaptation; World Resources Institute (2018) *Climate Change is Transforming Agriculture. Adaptation Must Be Transformative, Too.* Available at: https://www.wri.org/insights/climate-change-transforming-agriculture-adaptation-must-be-transformative-too; and World Resources Institute, *Thanks to Climate Change, Oranges Are Becoming the New Coffee in Some Parts of Costa Rica.* Available at https://www.wri.org/insights/thanks-climate-change-oranges-are-becoming-new-coffee-some-parts-costa-rica?.

[5] Initiative 20x20. See: https://initiative20x20.org/restoration-projects/ecuadors-socio-bosque-program.

rainfall variability, while also contributing to carbon sequestration and long-term ecosystem resilience.[6]

1.6 **Samoa**

The Community-Based Fisheries Management Programme in Samoa, launched in 1995, has developed a hybrid governance framework that combines State support with customary village leadership (*pulega a matai*). Under this system, village communities develop fisheries management plans, establish no-take zones and fish reserves and adopt locally enforceable by-laws recognised under national legislation. This model is notable for its integration of biodiversity protection, sustainable livelihoods and food sovereignty, as village reserves help restore marine ecosystems, while protecting access to culturally significant seafood resources. The programme also promotes inclusive participation, with women's committees playing an active role in fisheries governance, monitoring and livelihood diversification.[7]

Samoa's Marine Spatial Plan[8] supports Samoa's culture, tradition, sustainable fisheries, tourism, and other marine-based industries by balancing Samoa's ability to harness its marine resources while safeguarding critical ecosystems. Additionally, the Plan promotes the long-term sustainability of Samoa's marine environment, ensuring that future generations can continue to benefit from the ocean's resources.

1.7 **Republic of Korea**

In the Republic of Korea, a nationwide pay-as-you-throw system was introduced in 1995, followed by a ban on food waste disposal in landfills in 2005, requiring households and businesses to separate and recycle food waste. The system was strengthened through volume-based pricing, Radio Frequency Identification-enabled tracking technology, public education campaigns and investments in recycling making waste management more efficient and environmentally sustainable, with a view to contributing to lower methane emissions.[9]

1.8 **Mexico**

In Mexico, the 'Fideicomisos Instituidos en Relación con la Agricultura (FIRA)' – trusts established in relation to agriculture, have channelled public and private investment toward agri-food projects with a sustainable and rural focus. Also noteworthy are programmes such as Producción para el Bienestar (Production for Well-being), which

---

[6] United Nations Convention to Combat Desertification. *Global Land Outlook, Second Edition*. See: https://www.unccd.int/sites/default/files/2022-04/UNCCD_GLO2_low-res_2.pdf.

[7] See: https://sdgs.un.org/partnerships/samoa-community-base-fisheries-management-program-cbfmp and *Blue Food Sovereignty Benefits Social-Ecological Resilience: A Case Study of Small-Scale Fisheries Co-Management and Mariculture in Samoa* (2023); and UNDP, *Enhancing Resilience of Coastal Communities of Samoa to Climate Change.* See: https://www.adaptation-undp.org/projects/af-samoa.

[8] See: https://www.samoaocean.org/marine-spatial-plan.

[9] Harvard Law School Food Law and Policy Clinic and The Global FoodBanking Network, *Pioneers in the Fight Against Food Waste: Implementation of Food Waste Deterrence Policies in South Korea, France, and Peru* (2023), P. 7–11. See: https://www.foodbanking.org/wp-content/uploads/2025/02/Full-Paper-Pioneers-in-Fight-Against-Food-Waste.pdf.

provides direct support to small and medium-sized producers and promotes agroforestry systems and agroecological practices in communities facing the greatest developmental lag by strengthening productive capacities, reducing deforestation, and minimizing the use of agrochemicals. Furthermore, native maize is protected through regulations that restrict transgenic maize, thereby safeguarding genetic diversity and the right of future generations to preserve and cultivate their own varieties.[10]

1.9 **Spain**

A gender perspective was mainstreamed within Spain's Common Agricultural Policy Strategic Plan 2023–2027. Some examples include:
1. targeted support for women farmers:
- Complementary Income Support for Young Farmers is 15 percent higher if the farm's owner or co-owner is a woman;
- investment aid aimed at improving women's participation in agriculture;
- and cooperation interventions designed to strengthen women's entrepreneurship and rural economic participation.

2. Spain's implementation framework included indicators with gender breakdowns, especially regarding generational renewal and support for young farmers;

3. The broader rural development strategy linked women's participation to combating depopulation and strengthening the socioeconomic fabric of rural areas.[11]

Law 1/2025 on the prevention of food loss and waste established obligations for all actors in the food chain, including producers, food processors, distributors, retailers, hospitality and catering businesses, food banks and charities, and public administrations operating in Spain, with the aim to strengthening prevention and reduction efforts. All actors covered by the law must prepare and implement a food loss and waste prevention plan. The law also establishes a formal hierarchy that actors must follow:
1. Prevention first - avoid creating surplus food.
2. Human consumption - redistribute edible surplus through donation or repurposing.
3. Animal feed.
4. Industrial uses (e.g., bio-based materials).
5. Energy recovery/composting only as a last resort.

The law also strongly promotes donations; businesses are encouraged or required to establish agreements with food banks and nonprofit organizations.[12]

Lastly, Spain has used a participatory rural development methodology under the LEADER approach, which involves local communities in planning and implementation through Local Action Groups, supporting inclusive territorial governance and meaningful participation. These groups are integrating climate mitigation and adaptation into their local development strategies. For example, the Mariñas-Betanzos LAG in Galicia has included in its strategy: "climate change mitigation, energy saving, waste management, efficient water management, and production with alternative energies.[13][14]

---

[10] Submission by Mexico City.
[11] See: https://eu-cap-network.ec.europa.eu/news/advancing-gender-equality-through-cap-lessons-spain_en?.
[12] Ley 1/2025, de 1 de abril, de prevención de las pérdidas y el desperdicio alimentario. See: https://www.boe.es/boe/dias/2025/04/02/pdfs/BOE-A-2025-6597.pdf (in Spanish).
[13] See: https://eu-cap-network.ec.europa.eu/news/spains-2023-2027-leader-ambitions_en?.
[14] Submission by Spain.

1.10 Sweden

Sweden transformed its universal school meals programme into a broader strategy for sustainable food systems and climate action. Led by the national innovation agency Vinnova together with the Swedish Food Agency, Livsmedelsverket, the initiative brought together municipalities, schools, civil society and private-sector actors to promote healthy, sustainable and tasty school food. Key elements included sustainable procurement, support for local food producers, redesigned menus, food waste reduction and integration of food education into schools. The programme contributed to climate goals by encouraging lower-emission diets, reducing food waste, strengthening local and resilient food supply chains and supporting Sweden's ambition to become a fossil-free welfare state by 2045. Some of the achievements include innovative procurement tools and new national guidelines for sustainable school meals, although challenges have remained in scaling successful local initiatives and ensuring consistent implementation across municipalities.[15]

[15] See: https://cms.marianamazzucato.com/wp-content/uploads/2025/09/A_Mission-Oriented_Approach_for_School_Meals_0.pdf, page 97 onward.

2. INDIGENOUS-LED AND PEASANT-LED INITIATIVES

2.1. The Maya "Milpa" system – Belize

The Maya Milpa systems is a traditional intercropping system of regional vegetables. Mayan farmers apply this intercropping system through the practice of slash and burn together with small plots of other vegetable crops such as chillies, corn, beans and squash. The Maya milpa entails a rotation of annual crops with a series of managed and enriched intermediate stages of short-term perennial shrubs and trees, leading to the re-establishment of mature closed forest on the once-cultivated parcel. The milpa cycle involves two years of cultivation and eight years of fallow or secondary growth, to allow for natural regeneration of vegetation. As long as this rotation continues without shortening fallow periods, the system can be sustained indefinitely.[16] In Belize, the Mayan milpa system has become more vulnerable in recent decades due to droughts, flooding, hurricanes, soil degradation and forest loss associated with climate change. In response, farmers and agricultural extension services have promoted adaptations such as mulching, soil enrichment, soil cover and reduced burning practices to improve water retention, reduce erosion, enhance soil fertility and strengthen food security.[17]

2.2. Khasi People - Meghalaya – India

In Meghalaya, India, Indigenous food systems contribute to biodiversity-based resilience and community-led stewardship. Indigenous communities in Meghalaya maintain diverse food sources across forests, shifting cultivation fields (jhum), terrace farms, home gardens and water bodies, creating a highly adaptive system capable of withstanding climate shocks such as erratic rainfall, landslides, and crop stress. By preserving traditional knowledge and seed diversity, these systems strengthen food sovereignty while protecting ecosystems and cultural heritage.[18]

2.3. Inari Sámi people, Finland

The Inari Sámi food system is built on observing snow, ice, migration routes and seasonal ecological rhythms, allowing them to adjust movement and grazing patterns in response to environmental conditions. This mobile livelihood protects pasture ecosystems from overuse while sustaining food security and cultural identity. The system also demonstrates sustainable use of cold-climate ecosystems and resilience under climate change pressures.[19]

---

[16] See: https://www.marc.ucsb.edu/research/maya-forest-is-a-garden/maya-forest-gardens/milpa-cycle#:~:text=The%20milpa%20cycle%20is%20a%20traditional%20intercropping,Chiles%20*%20Corn%20*%20Beans%20*%20Squash.

[17] Climate-Smart Adaptations and Government Extension Partnerships for Sustainable Milpa Farming Systems in Mayan Communities of Southern Belize (2021). See: https://www.mdpi.com/2071-1050/13/6/3040?.

[18] Heinrich Boell Foundation. See: https://in.boell.org/en/indigenous-food-systems and FAO, *Indigenous Peoples' food systems: Insights on sustainability and resilience from the front line of climate change* (2021). See: https://www.fao.org/in-action/kore/publications/publications-details/en/c/1414665/.

[19] FAO, *Indigenous Peoples' food systems: Insights on sustainability and resilience from the front line of climate change* (2021). See: https://www.fao.org/in-action/kore/publications/publications-details/en/c/1414665/.

2.4. Melanesian communities, Solomon Islands

In the Solomon Islands, an integrated land-sea food system is applied, where fishing, agroforestry, gathering and storytelling-based knowledge-sharing work together. The system links marine and terrestrial ecosystems, ensuring dietary diversity and reducing dependence on one single food source, which strengthens resilience to climate-related shocks and environmental change. Agroforestry practices maintain tree cover, soil stability and crop diversity, while also helping to protect ecosystems from erosion, biodiversity loss and the impacts of climate variability. The transmission of ecological knowledge through oral traditions and community storytelling strengthens cultural continuity and sustainability.[20]

2.5 Agroecology in Andhra Pradesh – India

An example of community-led agroecology is the Andhra Pradesh Community Managed Natural Farming initiative in India. It is one of the world's largest agroecological transitions, driven through women's self-help groups, farmer collectives and peer-to-peer extension systems at village level. The initiative empowers local communities to lead the transition through farmer-to-farmer learning, community resource persons and the use of locally available biological inputs such as seed treatments, mulching and microbial soil enhancers. There is strong emphasis on social organization and local ownership, where women's groups play a central role in mobilization, knowledge sharing, and scaling up of the initiative across villages. This community-based governance model has helped reduce dependency on external chemical inputs, lower production costs, improve soil health, and strengthen climate resilience for smallholder farmers.[21]

2.6 Living community seeds banks – Mali

The National Coordination of Peasant Organizations in Mali and the West African Committee for Peasant Seeds in Mali have worked to strengthen community seed systems in response to the growing expansion of commercial and genetically modified seed markets. More than 80 percent of seeds used in the region are still "peasant seeds" that are selected, reproduced and exchanged by farming communities themselves. The peasant organisations have supported 'living community seed banks' that enable farmers to conserve local crop diversity while sharing knowledge about seed selection, storage and adaptation. Farmers continuously adapt seeds to local drought conditions, soil changes and ecological pressures. Another worthwhile element of this initiative is that these systems are governed collectively through customary community rules rather than private intellectual property systems, reinforcing food sovereignty and farmer autonomy.[22]

2.7 Pacific Islands

In the Marshall Islands and other Pacific states, the use of drought-tolerant crop varieties, community protection of breadfruit trees, traditional composting practices using seaweed

[20] *Ibid.*
[21] See: https://apcnf.in/wp-content/uploads/2023/10/Brief-Andhra-Pradesh-091023-print.pdf.
[22] FIAN, State of the Right to Food and Nutrition Report (2019). See: https://www.fian.org/files/files/state-rtfn-report_2019_eng.pdf, p. 28.

and coastal revegetation with native salt-tolerant species have been applied to revitalise traditional agricultural and coastal management practices and strengthen food security under increasingly severe climate impacts. These approaches combine local knowledge with climate adaptation approaches, while maintaining community governance over food systems. Pacific communities themselves are leading these adaptation processes rather than relying on external technical interventions.[23]

2.8 Participatory research combining Indigenous meteorological knowledge and science for crop planning

The Andean Climate and Water Initiative, the Pan-African Farmers' Organization, and the Pacific Islands Climate Adaptation Network have institutionalised participatory research that combines Indigenous meteorological knowledge and scientific forecasting to create and refine early warning and crop planning systems that align with the traditional calendars.[24]

2.9 Ucunivanua Locally Manages Marine Area - Fiji

The first Fijian locally managed marine area was established in 1997 in the village of Ucunivanua on Viti Levu as a community response to climate change and overfishing, particularly the decline of kaikoso clams, a key food and income source. After a three-year tabu (no-take) pilot and strong local management, clam populations and community income increased significantly, leading to the permanent locally managed marine area and inspiring the wider Fiji Locally Managed Marine Area Network that now includes hundreds of communities.[25]

2.10 Kuruwitu Community Reserve - Kenya

In southern Kenya, the Kuruwitu community formed the Kuruwitu Conservation and Welfare Association in 2003 to protect marine life because overfishing, climate change and uncontrolled fish and coral collection were degrading the marine ecosystem. By 2006 they agreed on a 0.3 km² no-take zone, which has since seen coral cover rise by about 30 percent and fish abundance by 200 percent, while spillover to adjacent fishing grounds boosted catches and supported local ecotourism. The success of Kuruwitu has encouraged more than 30 coastal communities in Kenya to adopt similar locally managed marine areas.[26]

Commented [A2]: anything can be added to make a stronger link with climate change here?

2.11 Apo Island Marine Sanctuary - Philippines

Apo Island in the Philippines established a small community-led marine reserve in 1982 covering roughly 10 percent of its coral reef, with legal backing developed collaboratively

---

[23] Frontiers. Lessons From the Pacific Islands – Adapting to Climate Change by Supporting Social and Ecological Resilience (2019). See: https://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2019.00289/full.

[24] Patrick Nunn and others, 'Traditional Knowledge for Climate Resilience in the Pacific Islands' (2024) 15(4)
WIREs Climate Change e882.

[25] https://marine-conservation.org/on-the-tide/how-fishing-communities-use-locally-managed-marine-ares/#:~:text=The%20first%20Fijian%20LMMA%20was,for%20both%20food%20and%20income.

[26] *Ibid*

by villagers, scientists, and local government. Managed by a board including community and government representatives, the sanctuary has delivered conservation outcomes comparable to government-run no-take zones, protecting habitat and supporting fisheries and led to the creation of the Philippine Locally Managed Marine Area Network that now spans multiple island groups.[27] In 2011 and 2012 respectively, the island's reefs were heavily damaged by Typhoon Sendong and Typhoon Pablo, which were linked to stronger climate-driven storms in the region. However, the community-based management system helped coordinate recovery and continued protection efforts.[28]

2.12 Veliondrake Locally Managed Marine Area - Madagascar

The small-scale fishing communities within the Velondriake Locally Managed Marine Area in Madagascar have been implementing periodic fishery closures for the reef octopus since 2004. The closures cover 20 to 25 percent of a community's overall octopus fishing grounds and are usually in place for 2 to 3 months at various times of year. An analysis of eight years of data found that octopus landings increased by more than 700 percent in the month following the opening of a closure, boosting the catch per fisher per day by almost 90 percent over the same period.[29] In Velondriake, through the *Tahiry Honko* mangrove carbon project, local communities have conserved and restored mangroves that absorb and store large amounts of carbon dioxide. The project reportedly prevents around 1400 tonnes of CO2 emissions annually.[30]

Established in 2012, the MIHARI Network connects Locally Managed Marine Area associations across Madagascar to promote learning and exchange on sustainable fisheries management. As a founding member, Velondriake has played a central role in sharing best practice among fishers, community managers, and NGO partners. The network also develops national management guidelines, with Velondriake hosting MIHARI's first Locally Managed Marine Area Forum in Andavadoaka.[31] Velondriake continues to lead knowledge-sharing through fisheries learning exchanges hosted with Blue Ventures. These exchanges have driven rapid expansion of locally managed fisheries in Madagascar and inspired similar approaches in countries including Tanzania, Indonesia, and Mozambique. Over the past decade, around 550 community representatives from ten countries have visited Andavadoaka to learn directly from Velondriake's Locally Managed Marine Area experience.[32]

2.13 Women fish processors in West Africa

In West African small-scale fisheries, women processors are responding to climate stress by adapting their drying and curing practices. Improvised shelters have been built across

---

[27] *Ibid*
[28] Greenpeace. See: https://www.greenpeace.org/philippines/story/1378/hope-amid-devastation-in-one-of-the-worlds-best-marine-sanctuaries/?.
[29] See: https://globalislandpartnership.org/bright-spot/fisheries-management-in-madagascar?.
[30] See: https://thecommonwealth.org/case-study/case-study-tahiry-honko-community-led-mangrove-carbon-project-velondriake-locally.
[31] BlueVentures: https://blueventures.org/mihari-network-wins-prestigious-conservation-prize-2/.
[32] FAO: https://openknowledge.fao.org/server/api/core/bitstreams/b36cd831-e88e-436f-a5b9-a990132b2c46/content.

drying racks to protect small fish from extreme heat and increasingly unpredictable rainfall as the fish are prepared for consumption and trade.[33]

2.14 The Fisher People's Tribunal – South Africa

In South Africa, a Fisher People's Tribunal took place in 2024 to bring together affected fishing community members from South African coastal areas as well as experts, allies and activists who testified about loss of access to harvesting areas, declining mussel populations due to warming waters, increased food insecurity, and the intersecting impacts of climate change with existing rights violations. The tribunal demonstrated the urgent need for climate adaptation measures that center the experiences and knowledge of affected fishing communities.[34]

Small-scale fishing communities along South Africa's coastline possess extensive traditional ecological knowledge that is increasingly important for climate adaptation. Communities are responding to shifting fish stocks, changing weather patterns and ocean conditions through strategies such as diversifying target species, adapting fishing methods and locations, and combining fishing with other livelihoods. These locally driven approaches are often more responsive to climate impacts than top-down interventions, but their effectiveness is constrained by loss of access to fishing grounds, exclusion from marine spatial planning and weak recognition of customary rights.

Fishing communities are also developing innovative community-led responses to climate challenges, including co-management systems for marine resources, localized food systems that reduce dependence on distant supply chains, and diversified livelihoods that strengthen resilience during climate disruptions. In addition, communities along the West Coast and Wild Coast have mobilized against offshore oil and gas exploration by companies such as Shell and TotalEnergies, demonstrating how that these activities threaten marine ecosystems, fish populations, livelihoods and cultural heritage.[35]

2.15 Silvo-fisheries in Indonesia

A community-led silvo-fisheries system can be found in Indonesia, where coastal communities have redesigned shrimp ponds to coexist with restored mangrove ecosystems. In this model, fish and shrimp ponds are co-managed alongside mangrove restoration, using traditional pond designs such as the *empang parit* system, where mangroves are retained or replanted within and around aquaculture ponds. This approach combines traditional ecological knowledge, community stewardship and ecosystem restoration, allowing communities to sustain livelihoods while rebuilding degraded coastal ecosystems. The restored mangroves provide critical ecosystem services including storm surge protection, flood buffering, shoreline stabilization, erosion control, and nursery habitat for fish and crustaceans, all of which strengthen the resilience of coastal

[33] Submission by Dr Alice Trotter (Human Rights Centre, University of Essex), Dr Ian Calliou (Faculty of Law, University of Manitoba), Judith Bueno de Mesquita and Professor Karen Hulme (Essex Law School, University of Essex), and Dr Nathan Derejko (Faculty of Law, University of Manitoba). See the project website for further information: https://reimaginingfoodsystems.ca.
[34] Submission by Masifundise Development Trust and the Legal Resources Centre. See also: https://www.masifundise.org/fisher-people-tribunal/.
[35] Submission by Masifundise Development Trust and the Legal Resources Centre.

livelihoods to climate change. Mangroves also function as blue carbon sinks, making this practice an important climate mitigation strategy.[36]

[36] See: https://repository.seafdec.org.ph/bitstream/10862/1977/1/fitzgerald2000-integrated-mangrove-aquaculture-indonesia.pdf.

3. CIVIL SOCIETY-LED INITIATIVES

3.1 **Small-scale aquaculture in East Africa**

Initiatives have been implemented in Southeast Africa to support small-scale aquaculture to adapt to climate impacts, such as intermittent harvesting, constructing deeper ponds and through agroforestry and reforestation; farmers receive support to plant trees around ponds and watersheds to reduce erosion and improve water retention during droughts and heavy rains.[37]

3.2 **Access to certification for small-scale aquaculture in Southeast Asia**

The Asian Seafood Improvement Collaborative is a multi-stakeholder initiative focused on improving the environmental, social, and traceability performance of fisheries and aquaculture across Asia. Through the Collaborative programme, small-scale aquaculture in South-East Asia are provided access to certification and thereby international markets. The programme makes fisheries and shrimp aquaculture in South east Asia more sustainable and improve production standards.[38] The Collaborative promotes better environmental practices in aquaculture and fisheries, including improved resource management and sustainability standards, which can help ecosystems remain more resilient to climate stressors such as coral bleaching and ocean warming.[39] In Vietnam, Collaborative-supported mangrove-shrimp farming programmes explicitly reference climate adaptation. Training programmes encouraged farmers to maintain mangrove cover and adopt more sustainable production systems adapted to climate risks.[40]

3.3 Urban food-sharing initiatives, Europe

Food Sharing Initiatives across nine European cities, including Milan, Barcelona, Utrecht and Dublin, demonstrate how urban community-led food systems can support climate action, food security and social inclusion. These initiatives include community gardens, food redistribution networks, community kitchens, seed libraries and co-operatives that share food, skills and spaces. These initiatives contribute to climate mitigation by reducing food waste and associated greenhouse gas emissions, shortening food supply chains through local production and redistribution, and promoting shared infrastructure that lowers resource use and consumption.

They also support climate adaptation by strengthening local networks of trust and mutual aid, improving access to food during crises, and creating more resilient local food systems. Community gardens and composting initiatives additionally enhance urban biodiversity, water retention and cooling, helping cities respond to heat stress and environmental pressures. Some cities have integrated food sharing initiatives into broader urban food and climate strategies through participatory governance and support for community-led infrastructure. In spite of challenges such as unstable funding, limited

[37] https://www.adaptationcommunity.net/wp-content/uploads/2025/01/giz2024-en-adapting-to-climate-change.pdf.
[38] Oxfam. See: https://oxfam.org.ph/verification-of-small-scale-shrimp-farmers-in-southeast-asia-pushed/.
[39] Seapact. See: https://www.seapact.org/grant-projects-directory/asian-seafood-improvement-collaborative-asic?
[40] See: https://www.apn-gcr.org/bulletin/wp-content/uploads/2024/04/3-CBA2020-04MY-Le.pdf?.

recognition in climate and carbon accounting frameworks, and insufficient integration into formal urban planning and governance systems, Food Sharing Initiatives have demonstrated that locally-driven food initiatives can simultaneously advance climate mitigation, adaptation, circular economy and human rights goals in urban settings.[41]

3.4 **Incredible Edible, UK**

A community group started by a group of citizens, in partnership with community volunteers, schools, local businesses and the local council, this initiative turns underused public spaces into edible gardens where fruits, vegetables and herbs are freely available to residents. Since its launch in 2008, the initiative has expanded from a single town-based project into a wider network of more than 100 groups across the UK. The resulting Incredible Edible is registered as an Ltd and has inspired similar models internationally. Key achievements include increased local food production, strengthened community participation, improved food literacy and explicit integration of local food growing into climate action and community resilience efforts.[42]

3.5 **PAKT Rooftop garden, Antwerp, Belgium**

An urban development collective together with local entrepreneurs, food producers and community partners, uses industrial rooftop space for urban agriculture and green infrastructure. As part of the project, a multifunctional rooftop food hub has been created, as well as stronger urban biodiversity and better local supply links with restaurants and consumers. The project shows how unused roofs can be transformed into productive food-growing areas while contributing to climate adaptation through cooling effects, rainwater retention and reduced urban heat stress.[43]

3.6 **Foodsharing network, Germany**

Implemented by the foodsharing.de civil society network and a large volunteer base in cooperation with retailers, bakeries, restaurants and households, this initiative redistributes surplus edible food that would otherwise be wasted. Operating across multiple German cities, the platform combines digital coordination with community collection points and food-sharing stations. The initiative has led to substantial food waste prevention, reduced greenhouse gas emissions linked to wasted food and improved access to food for vulnerable groups.[44]

---

[41] Submission by Submission by Dr Alice Trotter (Human Rights Centre, University of Essex), Dr Ian Calliou (Faculty of Law, University of Manitoba), Judith Bueno de Mesquita and Professor Karen Hulme (Essex Law School, University of Essex), and Dr Nathan Derejko (Faculty of Law, University of Manitoba). See the project website for further information: https://reimaginingfoodsystems.ca.
[42] See: https://www.incredibleedible.org.uk/our-story/.
[43] See: https://www.pakt-antwerpen.be/.
[44] See: https://foodsharing.de/ (website in German).

3.7 The Milan Urban Food Policy Pact and community food initiatives, Italy

Implemented by the City of Milan, Italy, through municipal food policy governance, in partnership with civil society organizations, research institutions and international city networks, this initiative mainstreams sustainable food systems into urban planning and climate policy. It includes support for community gardens, food waste reduction, sustainable procurement and food-sharing initiatives. Key achievements include the establishment of an internationally recognized governance framework adopted by more than 300 cities worldwide, regeneration of peri-urban agricultural areas, reduced food waste, and strengthened food access and social inclusion mechanisms.

3.8 **Gender initiatives to transform food systems – Cuba**

A transition from monoculture farming to agroecology in Cuba not only improved farming systems facing increasingly severe droughts, unpredictable rainfall patterns and more powerful hurricanes,[45] but also transformed household decision-making by giving women greater recognition in productive work and stronger agency within family food systems.[46]

3.9 **Gender initiatives to transform food systems - India**

In India, through the Deccan Development Society, women-only community groups collectively reclaimed fallow land and revived nearly 80 traditional crop varieties. These women also established Dalit women-run community gene banks across 60 villages, strengthening seed sovereignty, biodiversity and women's leadership with regard to productive resources.[47] The Society's work has focused on developing agricultural practices that are resilient to climate change and support community nutrition, health, and livelihoods.[48] The revival of drought-resistant millet diversity, rainfed farming and community seed systems has enhanced resilience to climate change impacts such as drought and erratic rainfall, while reducing dependence on carbon-intensive industrial agriculture.[49]

3.10 Decentralised renewable-agriculture systems - Colombia

Communities were supported by international and local NGOs to set up decentralised renewable energy systems, such as solar dehydrators and solar panels for pumping water (irrigation) or for powering freezers to store goods. The energy produced is integrated into the local production system, with the aim of increasing and stabilizing agricultural production and food security because of the option to freeze and store fish. At the same time, this opened up new business opportunities. The small-scale solutions are financed

[45] FAO. *Agroecology in Cuba: For the Farmer, Seeing is Believing*. See: https://openknowledge.fao.org/server/api/core/bitstreams/2dc8a59f-61ca-47e0-880b-67811b167585/content
[46] Right to Food and Nutrition Watch, Women's Power in Food Struggles (2019). See: https://www.cidse.org/wp-content/uploads/2019/10/rtfn-watch11-2019_eng.pdf p. 45.
[47] Ibid note 38.
[48] Equator Initiative. See: https://www.equatorinitiative.org/2019/07/30/deccan-development-society/.
[49] UNDP, SDG Integration Centre. See: https://sdgintegration.undp.org/%E2%80%98untouchables%E2%80%99-internationally-celebrated-farmers.

via a community-owned credit mechanism. This initiative served to provide multiple benefits for the community, allowing to leapfrog the intensification of fossil fuels in existing energy systems.[50]

[50] Submission by Fastenaktion and Operation Native Amazon.

4. INTERNATIONAL ORGANIZATIONS

4.1. Food and Agriculture Organisation (FAO) - Livestock farmers

In Uruguay, FAO has been working with family livestock farmers to address the environmental and economic impacts of extensive grassland grazing, which has contributed to land degradation, desertification and declining livelihoods. Through improved grassland management, better alignment of fodder use with animal needs and measures to prevent overgrazing, the project has helped farmers increase forage production, strengthen resilience to drought and water scarcity, and restore biodiversity. These interventions have also delivered measurable economic and climate benefits, with 60 percent of participating farms reporting a 50 percent increase in net income within one year, alongside a 16 percent reduction in greenhouse gas emissions intensity per kilogram of meat produced.[51]

4.2 FAO - implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries (SSF Guidelines)

The Voluntary Guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security (VGGT) call upon states to recognize and protect the legitimate tenure rights of Indigenous Peoples and small-scale fishers, and to adapt policy, legal and organizational frameworks to Indigenous Peoples' and small-scale fishers' tenure systems.

FAO supported Costa Rica in the implementation of the SSF Guidelines through a participatory and rights-based approach to small-scale fisheries governance. Since 2014, the government, in partnership with small-scale fisher organizations, civil society actors and the Costa Rican Institute of Fisheries and Aquaculture, Marine Areas for Responsible Fishing were established as a shared governance model that integrates sustainable resource management with the protection of community livelihoods and cultural identity. This approach has strengthened collaboration between fishers and public institutions, supported ecosystem recovery, improved livelihoods and increased the visibility of women and Indigenous communities in fisheries governance. [52]

In Tanzania, FAO supported the Ministry of Livestock and Fisheries, as part of implementation efforts of the SSF Guidelines. As part of the initiative, women fish workers joined the Tanzania Women Fish-workers Association, with a view to gaining better access to credit, stronger bargaining power, and business training. This helped them increase incomes, strengthen resilience, and improve their role in the fisheries value chain.[53]

The Philippines developed and launched a National Plan of Action for Small-Scale Fisheries, the first such framework in Asia. Developed through extensive consultations involving more than 250 stakeholders across 12 fisheries management areas, the plan translates the SSF Guidelines into a national policy framework covering tenure rights, sustainable resource management, decent work, value chains, gender equality and climate

[51] FAO, *Agrifood Solutions to Climate Change: FAO's Work to Tackle the Climate Crisis*, 2023, p. 43–44. See: https://openknowledge.fao.org/server/api/core/bitstreams/9876a09f-3041-4785-8e9d-b2cdd16a592c/content.

[5252] FAO, See: https://www.fao.org/voluntary-guidelines-small-scale-fisheries/news/news-detail/-Aligning-the-stars-for-the-implementation-of-the-SSF-Guidelines-A-story-from-Costa-Rica/en.

[53] See: https://www.fao.org/fishery/en/news/41511.

resilience. By institutionalising these principles within government planning and implementation processes, the Philippines has strengthened policy coherence and created a structured pathway to support the livelihoods, food security and resilience of small-scale fishers in the context of climate change.[54]

4.6 International Plant Treaty – Benefit Sharing Fund

The International Treaty on Plant Genetic Resources for Food and Agriculture (concluded in 2001 and entered into force in 2004), also known as the International Seed or Plant Treaty, aims at guaranteeing food security through the conservation, exchange and sustainable use of the world's plant genetic resources for food and agriculture, the fair and equitable benefit sharing arising from its use, as well as the recognition of farmers' rights.

The Benefit Sharing Fund was established by the International Treaty's Governing Body in 2009 and under its direct control, it supports projects that leverage plant genetic resources to find solutions for complex challenges relating to food and nutrition insecurity, biodiversity loss and climate change. The Fund enables small-scale farmers, scientists and breeders to tap into the Treaty's global gene pool of millions of genetic materials to develop crop varieties that are more resilient to climate change and more productive. One of the innovations of the Fund is that it directly finances farmers and local communities to conserve and use crop genetic diversity *in situ* and on-farm, rather than relying only on formal seed banks. Another feature of the Fund is the explicit recognition of farmers not merely as beneficiaries but as custodians of agrobiodiversity and holders of knowledge essential for climate resilience.[55]

4.7 The Great Green Wall Initiative -the Sahel

Coordinated through the African Union and supported by partners including the United Nations Convention to Combat Desertification, FAO, the World Bank, and national governments across the Sahel, the Great Green Wall Initiative originally aimed to create a belt of trees across Africa's drylands, but evolved into a broader resilience and sustainable development programme. The initiative focuses on restoring degraded land through agroforestry, farmer-managed natural regeneration, sustainable agriculture, soil and water conservation, and livelihood support. The initiative contributes to climate adaptation and mitigation because restored landscapes improve water retention, reduce erosion, store carbon, and support more climate-resilient food systems, while also benefiting local livelihoods and ecosystem health.[56]

---

[54] FAO. See: https://www.fao.org/voluntary-guidelines-small-scale-fisheries/news/news-detail/philippines-launches-the-national-plan-of-action-for-small-scale-fisheries--the-first-in-asia/.
[55] See: https://openknowledge.fao.org/server/api/core/bitstreams/c57562d2-b094-429c-bf08-35f525d2c983/content and https://www.fao.org/plant-treaty/areas-of-work/benefit-sharing-fund/bsf-faqs/en.
[56] United National Convention to Combat Desertification. *Global Land Outlook, Second Edition*: https://www.unccd.int/sites/default/files/2022-04/UNCCD_GLO2_low-res_2.pdf.

5. FINANCIAL SECTOR ACTORS

5.1. Holding banks accountable in Cambodia

Between 2011 and 2014 an Australian banking group had provided finance to sugar plantations in Cambodia, and was implicated in large-scale land seizures, forced evictions, destruction of crops and forests, intimidation of villagers, and alleged child labour. In response to these impacts, local and international civil society organisations filed a complaint to the Australian National Contact Point under the OECD Guidelines on Multinational Companies. The organizations argued that the bank's due diligence was insufficient and that it had contributed to, and profited from, the human rights violations connected with its client's operations.[57] In 2018, the Australian National Contact Point found that the banks' financing was "difficult to reconcile" with its own policies and OECD standards, and recommended stronger human rights due diligence and grievance mechanisms. Initially, however, it did not compel compensation.[58] After years of engagement, in 2020, the bank agreed to return the profits earned from the loan to help affected families rebuild their livelihoods.[59]

5.2. Green Climate Fund-FAO zero-deforestation cocoa production in Cote D'Ivoire

The Green Climate Fund-FAO project 'Promoting zero-deforestation cocoa production for reducing emissions' in Cote D'Ivoire places smallholder farmers at the centre of zero-deforestation cocoa production. The initiative supports farmers to transition from full-sun cocoa cultivation to agroforestry systems, which is a solution for cocoa farmers in the face of the effects of climate change. The project also integrates cocoa with fruit, shade, and timber trees to improve yields, restore soil fertility and enhance climate resilience. The project led to increased productivity, with farmers doubling cocoa output while diversifying incomes through crops such as plantain and cassava. The project combines technical training, regular field support, access to shared equipment and youth employment opportunities, helping address labour constraints while strengthening local livelihoods.[60]

[57] See: https://www.oecd.org/en/networks/national-contact-points-for-responsible-business-conduct/database/au0012.html; andhttps://www.business-humanrights.org/en/latest-news/australian-ncp-concludes-anzs-action-not-in-line-with-the-companys-human-rights-policy-in-phnom-penh-sugar-case-company-responds/.
[58] See: https://www.inclusivedevelopment.net/sugar/anz-issued-rare-rebuke-by-australian-oversight-body/.
[59] See: https://equitablecambodia.org/website/data/LettersPress-Releases/2020/02/ANZ_Settlement_Press_Release__FINAL_EMBARGOED.pdf?
[60] Case study provided by FAO.

6. ACADEMIA

6.1. Triple land use – Mali and The Gambia

The APV-MaGa project, implemented in Mali and The Gambia and coordinated by United Nations University, promotes a 'triple-land-use' model that combines solar energy generation, agriculture, and water management on the same land through agri-voltaic systems. The initiative demonstrates how renewable energy can improve irrigation, increase agricultural productivity, reduce post-harvest losses, and strengthen rural livelihoods while using land and water more efficiently.

In The Gambia, pilot sites including the Fass Community Women's Garden showcase community-led and gender-responsive approaches to sustainable agriculture. The project links climate change adaptation and mitigation by improving water access during drought conditions, reducing dependence on fossil fuels, enhancing food security and building resilience to climate-related stresses affecting farming communities.

A key feature is the participatory co-design approach, where farmers, local organisations, universities and village leaders jointly design systems tailored to local needs. The project has also challenged gender norms, by training and employing female technicians to install and maintain solar systems, creating new economic opportunities for women in the energy and agriculture sectors.[61]

6.2 Participatory approaches to conservation, food security and climate resilience – Malawi

Using scenario-based household research, in Malawi, particularly in the smallholder farming district of Kasungu, participatory and context-specific approaches to balancing food security, biodiversity conservation and climate resilience found that government policies such as rising farm input costs or restrictive conservation measures could undermine food security and livelihoods, especially for vulnerable households. On the other hand, more inclusive measures, such as input subsidies and wildlife damage compensation, were viewed as fairer and more supportive of well-being. The research pointed to conservation and climate-related land-use interventions that incorporate local perspectives, address equity concerns and protect access to land and natural resources. It also showed that community perceptions of fairness strongly influence support for conservation, livelihood diversification and sustainable resource management.[62]

[61] See: https://bmbf-client.de/en/projects/apv-maga; Stefan Jungcurt, Lynn Wagner, and Hillary Rosentreter, A Natural Fit: Renewable energy and sustainable land management (IISD, 2025).
[62] Submission by Jamma Conservation and Communities.