

## Connections Between Food Systems and the Climate



The interconnection between the global food system and climate crises have increasingly become a more visible and important topic at the climate negotiations over the last decade. Rapid changes in climate undisputedly compromise the present and future of the food system. The neoliberal economic model is the root cause of today's climate crisis, as it sustains dominant industrial agriculture and affects women's — particularly rural and indigenous women's — access to resources, their human rights, food sovereignty and livelihoods.

Agriculture is a very climate dependent sector. Changes in temperature, precipitation and sunlight affect the condition of arable land, livestock and water sources. In a domino effect, changes in the climate alter everything from flowering and harvesting seasons to the moisture balance in farmlands, as well as the intensity of pests. This ultimately impacts the quantity and quality of food production.

Likewise, other food production sectors like fisheries are heavily dependent on the climate. Changes in the water temperature could determine the quantity and diversity of fish available. Climate change impacts — including the increased occurrence of extreme weather events such as storms and tide levels — are critical determining factors as to whether fisherfolk are able to sail or not. The situation applies not only to fisheries but also to aquaculture production. The rising temperature, growth of diseases, excessive growth of algae (Harmful Algal Blooms - HABs), changes in rainfall/precipitation patterns and the uncertainty of external input supplies for feedstock, all contribute to threatening the continuation of aquaculture production.

The Intergovernmental Panel on Climate Change (IPCC) warns that more frequent and intense heat waves will increase mortality and morbidity among

vulnerable groups. Further, more frequent floods and droughts and their negative impact on food production will exacerbate rural poverty in many parts of the world. Limited access to food, crop failures and climate induced disasters have also led to increased migration.

Cyclone Amphan that hit Bangladesh in 2020 caused agricultural losses estimated at US\$ 72 million, followed by the longest and worst flood in the last 20 years, destroying as much as US\$ 42 million worth of crops.<sup>1</sup>

It is well documented that climate change impacts women differently and more deeply than men. For example, women are exposed to increased risks because of their primary role in care work and agricultural production. Climate change increases the burden of water and food collection, particularly for rural women, as water sources are drying out due to the climate crisis and women have to travel long distances in order to fetch water. This is also a concern for irrigation of farmlands. Some of the government and corporate led false climate solutions like Reducing Emissions from Deforestation and Forest Degradation (REDD+) have increased the burden on rural women in collecting food. In addition, rural women are also likely to suffer higher disaster-related mortality and carry the burden of the long-term impacts of loss of land, livelihood and security as a result of climate change.<sup>2</sup> Climate change can also exacerbate existing gender inequalities in rural communities by increasing workloads for women. During APWLD's Feminist Participatory Action Research (FPAR), women from Thailand referred to their farms and gardens as a supermarket where they could get their food and other daily supplies. Now their 'supermarket' comes with less supplies and is becoming more difficult to get produce from. Longer periods of intense heat and dry spells have also added extra burdens to women's health. Many peasant women experienced heat strokes, sunburn and skin rashes. According to them, the increased heat is also forcing them to look for alternative sources of income outside of farming.

Meanwhile, in Bangladesh, a persistent link has been identified between the loss of productive agricultural land due to climate change and early child or forced marriage. Researchers have found that climate change has increased demands for dowry payments, and that child marriage and dowry may be forming local (mal)adaptation strategies.<sup>3</sup>

In 2019, Thailand suffered more than US\$ 880 million loss due to prolonged droughts, followed by heavy floods in its rice growing regions in the north and northeast of the country, which caused an almost one million tonne drop in rice production.<sup>4</sup>

 $<sup>\</sup>overline{\ }^1$  The Daily Star. (2020, August 29). Flood deals a heavy blow to fish farmers. https://www.thedailystar.net/backpage/news/flood-deals-heavy-blow-fish-farmers-1952661

<sup>&</sup>lt;sup>2</sup> UN Women. (2017, September 20 -22). Report of the Expert Group Meeting on the CSW 62 Priority Theme: Challenges and Opportunities in Achieving Gender Equality and the Empowerment of Rural Women and Girls. https://www.unwomen.org/sites/default/files/Headquarters/Attachments/Sections/CSW/62/EGM/Expert%20Group%20Report\_Revised\_Final.pdf

<sup>&</sup>lt;sup>3</sup> Human Rights Watch. (2015). Marry before your house is swept away. https://www.hrw.org/world-report/2016/country-chapters/asia-bangladesh

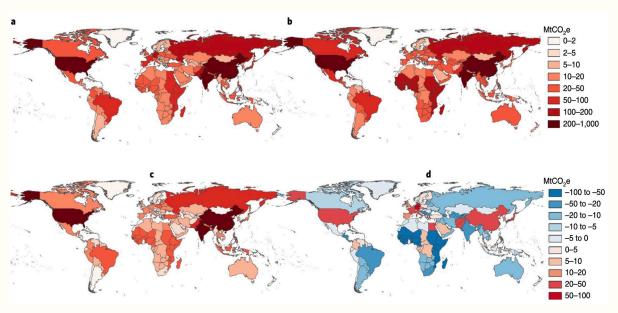
 $<sup>^4</sup>$  Bangkok Post. (2019, November 8). Disaster to hit rice output. https://www.bangkokpost.com/business/1789579/disasters-to-hit-rice-output

Massive industrial agriculture is one of the main culprits of the climate crisis. It has been acknowledged globally as stated in the report by Food and Agriculture Organization (FAO) of the United Nations (UN) and European Commission's Joint Research Centre that industrial agriculture is responsible for one-third of total global Greenhouse Gas (GHG) emissions. Both methane and nitrous oxide have considerably higher emissions than carbon dioxide (CO2). These two gases are largely generated by industrial farming practices that rely on the heavy use of nitrogen-based fertilisers and pesticides, heavy machinery run on petrol and highly concentrated industrial livestock operations.

Synthetic Nitrogen fertilisers have increased by a whopping 800 per cent since the 1960s according to the IPCC. The production and use of synthetic Nitrogen fertiliser accounts for 2.4 per cent of global emissions, making it one of the top climate polluting industrial chemicals.<sup>6</sup>

Along with deforestation, refrigeration and long distance transportation are all parts of the industrial food system.

Food transportation accounts for nearly half of all direct emissions from road vehicles. Only eight countries (US, China, Japan, Germany, UK, India, Russia and Brazil) collectively account for almost half of all food-miles emissions.<sup>7</sup>



Global food-miles emissions broken down by countries/regions, Nature Food journal.8

<sup>&</sup>lt;sup>5</sup> Crippa, M., Solazzo, E., Guizzardi, D., Monforti-Ferrario, F., Tubiello, F. N. & Leip, A. (2021). Food systems are responsible for a third of global anthropogenic GHG emissions. Nature Food. https://www.nature.com/articles/s43016-021-00225-9

<sup>&</sup>lt;sup>6</sup> GRAIN & Greenpeace International & Institute for Agriculture and Trade Policy (IATP). (2021, November 1). New research shows 50 year binge on chemical fertilisers must end to address the climate crisis. GRAIN. https://grain.org/e/6761

 $<sup>^7</sup>$  Li, M., Jia, N., Lenzen, M., Malik, A., Wei, L., Jin, Y. & Raubenheimer, D. (2022). Global food-miles account for nearly 20% of total food-systems emissions. *Nature Food*. https://doi.org/10.1038/s43016-022-00531-w

<sup>&</sup>lt;sup>8</sup> Li, M., Jia, N., Lenzen, M., Malik, A., Wei, L., Jin, Y. & Raubenheimer, D. (2022). Global food-miles account for nearly 20% of total food-systems emissions. *Nature Food.* https://doi.org/10.1038/s43016-022-00531-w

Despite existing evidence for the need to drastically cut emissions from the food system, polluters across the world continue to promote and expand high carbon intensive agriculture to allow business as usual under the guise of solving the climate crisis. Driven by corporate interests, this new phase of industrial agriculture is mostly based on risky and highly unproven technologies, such as carbon capture and storage and extending 'carbon sinks' that would affect land use.

False solutions to tackle climate crises continue to commodify and privatise functions of nature and destroy ecosystems — forests, soil, wetlands, rivers, mangroves and oceans, upon which life depends — rather than work to genuinely solve the climate crisis and reduce GHG emissions or address the social crises caused by climate change.

What was missing from the majority of climate solutions being proposed inside the high-level international fora such as the United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COP), was the recognition of the socio-economic and ecological complexity of food webs and the commitment to address power imbalances and capitalism as root causes of the problem.



## Debunking False Solutions and Greenwashing in the Global Food System



Since the signing of the Paris Agreement in 2015 and its promise of market-based solutions, only few corporations have done the bare minimum to disclose their emissions, let alone to take actions to reduce them. Of the world's top 500 corporations, only 67 have made commitments to reduce their emissions in line with the Paris Agreement.<sup>9</sup>

Industrial livestock production contributes to nearly 15 per cent of global GHG emissions, even more than the transportation sector. The top 20 meat and dairy companies emitted more GHGs than all of Germany, Europe's biggest climate polluters by far. If these companies were a country, they would be the world's 7th largest GHG emitter.<sup>10</sup>

 $<sup>^{10}</sup>$  GRAIN, IATP & Heinrich Böll Foundation. (2017, November 7). Big meat and dairy's supersized climate footprint. GRAIN. https://grain.org/en/article/5825-big-meat-and-dairy-s-supersized-climate-footprint



<sup>&</sup>lt;sup>9</sup> The Food and Land Use Coalition. (2020). *Nature for Net Zero: consultation document on the need to raise corporate ambition towards naturebased net-zero emissions.* https://www.foodandlandusecoalition.org/wp-content/uploads/2020/12/FOLU\_Nature-for-Net-Zero\_Report\_Final.pdf

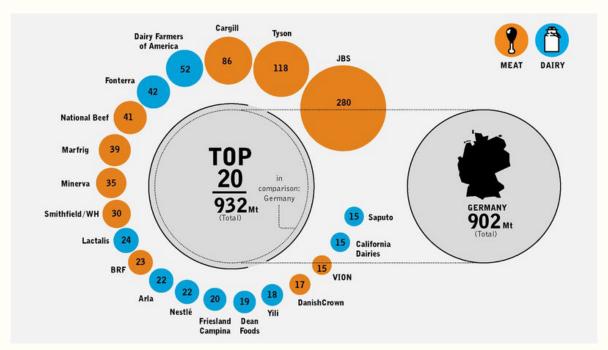


Image source: GRAIN, Institute for Agriculture and Trade Policy (IATP) and Heinrich Boll Stiftung, 2017.<sup>11</sup>

A principal tactic used by food and agribusiness corporations is 'greenwashing'. Greenwashing is a marketing or advertising strategy where corporations recognise environmental problems but then use misleading or false narratives to make it appear as if they and the products they sell are providing solutions to these problems.

They claim to be committed to halting deforestation, solving the climate crisis, reversing biodiversity loss and ending hunger. They also claim to champion human rights, including those of Indigenous Peoples over their lands and territories. Yet, they continue to sell the same products and promote the same models of food production and consumption that are killing the planet and destroying peoples' control over their territories and biodiversity. Just as fossil fuel companies like Shell and Exxon have used greenwashing to make it appear as if they are serious about climate change, the big food and agribusiness companies are using greenwashing to confuse people and block actions that would jeopardise their profits.

Below are some of the key greenwashing concepts and false solutions that food and agribusiness corporations use to derail effective action on the climate crisis:<sup>12</sup>

**Net Zero:** according to the UN, Net Zero means 'cutting GHG emissions to as close to zero as possible, with any remaining emissions re-absorbed from the atmosphere'. The problem with the corporate 'net zero' commitments, however, is that they are nowhere near 'real zero'. They continue with business as usual and claim that they do not have to cut their emissions because they can offset them through projects that remove carbon from the atmosphere by planting trees, conserving forests or geoengineering the planet. Net zero is based on the principle of carbon offsetting rather than reducing actual emissions. It thus plays a significant role in the financialisation of nature, which in practice could affect people's access to land and natural resources.



<sup>&</sup>lt;sup>11</sup> GRAIN, IATP & Heinrich Böll Foundation. (2017, November 7). Big meat and dairy's supersized climate footprint. GRAIN. https://grain.org/en/article/5825-big-meat-and-dairy-s-supersized-climate-footprint

<sup>&</sup>lt;sup>12</sup> GRAIN. (2022, September 7). An agribusiness greenwashing glossary. GRAIN. https://grain.org/e/6877

In March 2022, UN Secretary-General António Guterres established a High-Level Expert Group on the Net-Zero Emissions Commitments of Non-State Entities. The high-level expert group, chaired by former Canadian Minister Catherine McKenna, works to develop stronger and clearer standards for net-zero emissions pledges by non-State entities such as businesses, investors, cities and regions and speed up their implementation.<sup>13</sup>

**Carbon Offset:** is a mechanism through which a government or company buys credits generated by projects that avoid, reduce or remove GHGs to compensate for its own emissions. For instance, this is done through renewable energy projects and reforestation and conservation projects that often displace communities from their ancestral territories and criminalise environmental and women's human rights defenders in their struggle for food sovereignty. Carbon trading essentially permits the rich to continue polluting.

The Clean Development Mechanism (CDM), which is operationalised through the Kyoto Protocol, allows rich industrialised countries to earn certified emission reduction credits. As of August 2022, 83.5 per cent of the 7,885 CDM projects registered globally are targeting Asia and the Pacific in the form of large-scale hydropower, solar, biomass, to name a few. Women and their communities have testified that these climate solutions are depriving communities' rights to their territories and food sources as they are often enforced without Free, Prior and Informed Consent (FPIC), and escalate conflicts over land and natural resources.

Reducing Emissions from Deforestation and Forest Degradation (REDD): known mostly by its acronym, REDD was first introduced in the UN Climate COP 13 in 2007 in Bali. Since then, it has become one of the most dominant forest policies promoted by large conservation Non-Governmental Organisations (NGOs). The idea behind REDD is that countries, mainly in the Global North, provide funding for measures that claim to halt forest loss in tropical countries and, in return, the countries providing the funds can claim credit for the emissions supposedly saved through REDD activities. While REDD is a convenient proposition for governments in industrialised countries, it is one of the most dangerous proposals on the table at the UN Climate COP for rural and indigenous communities.

<sup>&</sup>lt;sup>15</sup> Asia-Pacific Forum on Women, Law and Development (APWLD). (2022, March 30). Submission to the United Nations Special Rapporteur on Violence Against Women, its Causes and Consequences. https://apwld.org/wp-content/uploads/2022/04/APWLD\_Submission\_SR-VAW\_300322-FINAL.pdf



 $<sup>\</sup>overline{\ }^{13}$  United Nations. (n.d.). Credibility and Accountability of Net-Zero Emissions Commitments of Non-State Entities. UN. https://www.un.org/en/climatechange/high-level-expert-group

<sup>&</sup>lt;sup>14</sup> United Nations Framework Convention on Climate Change. (2022). Annual report of the Executive Board of the clean development mechanism to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol\*. https://unfccc.int/sites/default/files/resource/cmp2022\_07E.pdf

In its 15 years of implementation, there is mounting evidence from Indonesia to Congo on how REDD projects undermine peasant and indigenous communities' agricultural practices such as shifting cultivation and puts the blame on small-scale farmers as culprits of deforestation. With rising opposition to REDD and the flaws in the REDD design becoming ever more apparent, large conservation NGOs began to promote REDD under yet another name: Nature-Based Solutions (NbS).

Most REDD projects place limits — quite often severe limits — on the use of forests by Indigenous Peoples and local communities for shifting cultivation, gathering and collecting forest products and other subsistence activities. Restrictions on hunting, fishing, grazing or cutting some trees for the construction of homes or canoes are also regularly established and enforced by REDD project owners, often with the support of armed guards.

**Zero Deforestation:** Deforestation is a major driver of both climate change and biodiversity loss. Most deforestation is caused by the production of global agricultural commodities such as beef, soybeans and palm oil which has displaced rural and Indigenous people from their land and forest. The world's largest food corporations agreed to eliminate deforestation from their supply chains by 2030. They made a pledge for 'zero-deforestation' at the UN Climate Summit in 2014<sup>18</sup> and another one at the UN Climate Summit in 2021. However, little has changed.<sup>19</sup>

Zero-deforestation pledges have been used by big food corporations like Nestlé and Cargill to offset their carbon emissions rather than cutting emissions from their own supply chain. For Nestlé, it will require them to cultivate 4.4 million hectares of land annually, more than the size of its home country, Switzerland. The implementation will increase total demand for land and land-related conflict in places where the project is, such as in the island of Mindanao in the Philippines.<sup>20</sup>

**Climate Smart Agriculture:** The Food and Agriculture Organisation (FAO) first coined the term in 2010 to attract climate finance for its programme in Africa. The term is now used by agribusiness corporations to counter growing support for agroecology in international forums related to agriculture and climate change. An alliance for Climate Smart Agriculture was formally presented at UN Climate Summit 2014 as an international community platform for action on climate change and agriculture.



<sup>&</sup>lt;sup>16</sup> World Rainforest Movement & GRAIN. (2015, October 29). How REDD+ projects undermine peasant farming and real solutions to climate change. GRAIN. https://grain.org/en/article/5322-how-redd-projects-undermine-peasant-farming-and-real-solutions-to-climate-change

 $<sup>^{17}</sup>$  World Rainforest Movement. (2022, April 25). What's hiding behind the letters R-E-D-D? WRM. https://www.wrm.org.uy/15-years-of-redd-whats-hiding-behind-the-letters

<sup>&</sup>lt;sup>18</sup> United Nations. (2014, September 23). Governments, corporations pledge at UN summit to eliminate deforestation by 2030. UN News. https://news.un.org/en/story/2014/09/478312

<sup>&</sup>lt;sup>19</sup> United Nations. (2021, November 2). World leaders, corporations at COP26, take major step to restore and protect forests. UN News. https://news.un.org/en/story/2021/11/1104642

<sup>&</sup>lt;sup>20</sup> Nestlé. (2021, October 8). *Nestlé to plant 3.5 million native bamboo clumps and trees in the Philippines*. Nestlé. https://www.nestle.com/media/news/nestle-plants-native-bamboo-philippines

The Global Alliance for Climate Smart Agriculture is currently stacked with fertiliser companies, fertiliser lobby groups and other entities that work directly with them. Its steering committee includes the world's largest fertiliser companies like Yara and Mosaic.

**Regenerative Agriculture:** Unlike organic farming or agroecology, which are based on agreed upon rules or principles and which do not use chemical inputs or Genetically Modified Organisms (GMOs), regenerative agriculture can refer to any practice that claims to improve soil health, which is why the term has become so popular with food and agribusiness corporations over the past few years.

Large food corporations, such as Archer-Daniels-Midland (ADM), Cargill, Danone and Nestlé, are pursuing regenerative agriculture programmes as part of their climate initiatives. Other corporate-led spaces such as the World Economic Forum (WEF) supports similar programmes. All of these initiatives focus on encouraging farmers to tweak their agricultural practices in ways that are said to build back carbon in soils.

Regenerative agriculture places the responsibility to reduce corporate emissions in the hands of the farmers who are under contracts within the companies' supply chain. For example, PepsiCo's regenerative agriculture projects in India and Thailand ensure that potato farmers produce only for the company's Lay's potato chips.<sup>21</sup> PepsiCo's joint project with the United States Agency for International Development (USAID) in West Bengal, India, even claimed to help empower women in agriculture.<sup>22</sup>

However, it is evident that such practices are keeping small farmers, particularly peasant women, as a mere part of the corporate supply chain to grow crops for the industry. At the same time, regenerative agriculture does not consider the amount of emissions produced to process the potato into potato chips or to distribute it globally for example.

**Carbon Farming:** Farmers who sign up for carbon farming programmes implement practices that are supposed to draw carbon into their soils, mainly by planting cover crops and spraying herbicides instead of ploughing their fields. After a set number of years, they are paid for the amount of carbon that is estimated to have been captured in their soil.

 $<sup>^{\</sup>overline{21}}$  Balch, O. (2022, September 21). PepsiCo's biggest challenge: winning over millions of farmers to regenerative agriculture. Reuters. https://www.reuters.com/business/sustainable-business/pepsicos-biggest-challenge-winning-over-millions-farmers-regenerative-2022-09-21/

<sup>&</sup>lt;sup>22</sup> PepsiCo, Inc. (2020, September 9). PepsiCo, USAID Launch Five-Year, \$20 Million Partnership to Empower Women in Agriculture. https://www.pepsico.com/our-stories/press-release/pepsico-usaid-launch-five-year-20-million-partnership-to-empower-women-in-agricu09092020

There are major flaws with carbon farming projects. To start with, they produce offsets that corporations buy to avoid cuts to their own emissions. But even if we leave this fundamental problem aside, any offset programme must, at a minimum, guarantee a permanent removal of carbon from the atmosphere. Carbon farming programmes provide no mechanism to keep carbon in the soil beyond a mere 10 years, while carbon needs to be stored for at least 100 years to meaningfully reduce global warming.

The carbon farming projects are being closely monitored through satellite or aeroplane surveillance. Farmers are then paid based on the calculated amount of carbon sequestered and the prevailing price for carbon in global carbon credit markets. Unless farmers are cultivating thousands of hectares, they have very little gain from the projects. Meanwhile, corporations offering the programme could capitalise the carbon by selling it to big climate polluters like Shell or Nestlé.

**Biofuels:** Biofuels have been trying to make a comeback in recent years. In 2005, The United Nations Conference on Trade and Development (UNCTAD) launched the BioFuels Initiative and presented biofuels (bioethanol, biodiesel and biogas), derived from agricultural crops, as an ecological alternative to conventional fossil fuels and a source of 'green energy' that can tackle climate change.<sup>23</sup> However, the expansion of monoculture plantations to produce biodiesel and ethanol quickly raised concerns due to increasing competition for the arable land to produce food and fuel and the increase in GHG emissions. It became evident that if the scale and intensity of the food production model is not reversed, the energy based on biofuels could not be considered renewable.

Palm oil corporations, for instance, are working with energy companies to promote and produce aviation fuels made from palm oil. This is already leading to an expansion of oil palm plantations in Brazil and Southeast Asia.

Indonesia's state oil company, PT. Pertamina, started producing diesel and jet fuel entirely out of palm oil. By the end of 2021, Pertamina was processing 3,000 barrels of palm oil per day to produce biodiesel and aimed to double the amount to 6,000 barrels of crude palm oil per day to make both biodiesel and jet fuel by December 2022. The daily production targets aimed to produce 20,000 barrels at a second refinery in 2023. Indonesia's energy minister has estimated that 15 million hectares of new oil palm plantations would be needed to meet the nation's biodiesel production targets.<sup>24</sup> Currently, there are over 14 million hectares of oil palm plantations in the country making it the world's number one producer of palm oil at the cost of people's right to food.

<sup>&</sup>lt;sup>23</sup> UNCTAD. (2005, June 22). UNCTAD launches biofuels initiative. United Nations. https://press.un.org/en/2005/tad2024.doc.

<sup>&</sup>lt;sup>24</sup> Slavin, T. (2021, March 17). *Indonesian rush to biodiesel raises fears about spike in deforestation risk*. Reuters Events. https://www.reutersevents.com/sustainability/indonesian-rush-biodiesel-raises-fears-about-spike-deforestation-risk

## Feminist Struggles and Demands for Food Sovereignty and Climate Justice



The struggle for food sovereignty at its core is a feminist struggle. It is the struggle to topple inequality and power dynamics from corporate control of the food system back into the hands of small scale food producers, peasants, fisherfolk and Indigenous Peoples. Food sovereignty aims to tackle exploitative systems and pursue equal cooperation between peoples and the earth, workers and land owners, migrants and locals, cities and villages and people in all their diversities. The industrial model of agriculture has, for a long time, undermined women's role and knowledge of the food system, and has even actively eliminated the role of women as guardians of seeds and biodiversity and decimated it by heavy machinery and agrochemicals. Further, the neoliberal model of the food production system has perpetuated the sexual and gendered division of labour that often puts women at the very bottom of precarious labour

structures. Growing alliances between feminist and food sovereignty movements for more than two decades have been crucial in the transformation of the food system towards food sovereignty.

Food sovereignty, to which agroecology practices contribute, is critical to increase the adaptive capacity of women and other communities who are vulnerable to climate crises. Across the Asian region, women farmers continue to practice their local wisdom and have developed their own local food sovereignty strategies to deal with the climate emergency.

Indigenous women in Odisha, India, have cultivated pearl millet and sorghum ideal for regions prone to drought and extreme heat, as well as indigenous short duration upland rice varieties that consume less water and make them resilient to drought-like conditions.<sup>25</sup> In the coastal areas of the Philippines, where seawater intrusion is common, women farmers used local saline resistant rice varieties to deal with soil salinity. The communities managed to do this using their local knowledge and control of indigenous seeds, which they learned to adapt overtime and made the communities stronger to face the different challenges posed by climate crises.<sup>26</sup>

Despite all the solutions and innovations of peasant women and farming communities, the struggle for food sovereignty amid the climate crises has not been easy. Corporations are, without a doubt, the number one obstacle to meaningful action in tackling the climate crisis. Corporations have spent decades undermining scientific evidence, blocking meaningful legislation for sustainable, community and women-led food systems and greenwashing their own responsibility.

Greenwashing by corporations will continue to undermine meaningful climate actions and solutions until grassroots women take back control over the lands, territories and resources that have been captured by corporations.

The global area under large plantations for soybeans, oil palm, sugar cane and other industrial commodity crops — all of them notorious emitters of GHGs — is set to further grow if global policies regulating food systems do not change. It will encroach further into the world's last remaining forests in Brazil, Indonesia and Congo.

Genuine solutions to tackle the climate crisis have been put on the table by many rural and indigenous women around the world for a long time. And that is, to realise a shift from a globalised, industrial food system governed by corporations

<sup>&</sup>lt;sup>25</sup> Mahapatra, B. (2019, September 10). How India's Indigenous Farmers Are Successfully Resisting Climate Change. Earth.org. https://earth.org/how-indias-indigenous-farmers-are-successfully-resisting-climate-change/

<sup>&</sup>lt;sup>26</sup> Southeast Asia Regional Initiatives for Community Empowerment (SEARICE). (n.d.). *Building Resilient Community Managed Seeds System Towards Climate Change Adaptation* (2013-2015). SEARICE. https://www.searice.org.ph/building-resilient-community

to local food systems in the hands of grassroots peasant women and their communities.

Governments must move beyond empty promises and false solutions to address climate crises. The food and farming system is highly interconnected with climate change, which provides more reason to push for concerted efforts for climate mitigation and adaptation. It must also go hand-in-hand with advancing food sovereignty practices as meaningful solutions to drastically reduce emissions from the industrial food and agriculture system.

The expansion of unsustainable agricultural practices over the past century has led to the destruction of 30 to 75 per cent of the organic matter on arable lands. Massive loss of organic matter is responsible for the current excess of CO2 in the atmosphere. The good news is that this CO2 can be put back into the soil by restoring the farming practices that peasants and women farmers have been engaging in for generations. If the right policies and financing go directly to women and their communities worldwide, soil organic matter contents could be restored to pre-industrial agriculture levels within a period of 50 years.

In the common struggles to achieve food sovereignty in the context of climate crises, feminists and grassroots women's movements for climate justice demand system change and not climate change. That is, not just a shift away from fossil fuel dependency, but a change in the extractive nature of our economies. It will require large shifts in agricultural modes of production, significant public investment and a fundamental reorientation away from the neoliberal economic consensus of profits at all costs, to one that focuses on the common good and a restorative, thriving natural environment. This can be realised through:

- 1. A radical shift from massive industrial agriculture to small-scale, women-led and community-based agroecological practices, preserving biodiversity and promoting food sovereignty. Intellectual property and patenting rules that come through trade and investment agreements must be dismantled as they accelerate globalisation including deregulation and privatisation, violating women's human rights, lives and livelihoods while taking away the power of governments to take real climate actions.
- 2. Ensuring the realisation of public health and care facilities, including in rural and remote areas.
- 3. Ensuring grassroots women's access to scientific information on climate change so that they can combine this with their traditional knowledge to help women and their communities plan for their cropping calendar and farming activities.

- 4. Recognising grassroots women's knowledge and supporting their initiatives to maintain the diversity of crops and animals without the use of chemicals, for example, by incorporating trees and wild vegetation, diversifying cropping systems and integrating crop and animal production. These practices enhance soil fertility, prevent erosion and help to build up organic matter in the soil.
- 5. Promoting and advancing women's traditional food production knowledge and practices that contribute to reducing emissions, while providing technical and financial support for grassroots women and small food producers to strengthen their practices.
- 6. Guaranteeing meaningful and equal participation of peasant, rural and indigenous women in the climate negotiations to inform governments and policymakers at all levels, of their insights and lived experiences. Conversely, leave out the private sector such as big food and agriculture companies, livestock and fertiliser industries and their lobby groups from climate negotiations and decision-making processes.
- 7. Recognising and securing land rights of peasant women, farmers and their communities and stopping large scale monoculture plantations. A worldwide redistribution of lands to peasants, indigenous women and their communities combined with policies to help them rebuild soil fertility can reduce GHG emissions by almost half within the next 20 years.
- 8. Reorientation of the industrialised food production system towards local markets and fresh food led by women and their communities, to significantly eliminate emissions produced by the unsustainable global food system.
- 9. Stronger collective work between feminist climate justice and food sovereignty movements recognising the interconnectedness of the issues so as to effectively tackle climate crises, and rejecting climate 'solutions' that undermine women's human rights, community-based food systems and perpetuate industrial food practices for profit.





## **About APWLD**

The Asia Pacific Forum on Women, Law and Development (APWLD) is the region's leading network of feminist and women's rights organisations and individual activists. For over 35 years, we have been carrying out advocacy, activism and movement-building to advance women's human rights and Development Justice.

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