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**Pesticides and farming: promoting gender equality and minimizing
environmental degradation**

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*The views expressed in this paper are those of the authors and do not necessarily represent those of the United Nations.

Pesticides and farming: promoting gender equality and minimizing environmental degradation

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Women, pesticides, land and food lie at the very heart of the intersection of gender, equality, climate change/climate risk, and biodiversity loss and restoration. Yet, nowhere is this fundamental intersection recognised and explored. We hear that poor rural women are some of the most discriminated against, marginalised, and nutrition-poor; but we do not often hear about them in relationship to pesticides and biodiversity. Certainly a recent workshop in Asia confirmed that the vulnerability and marginalisation of poor rural women has intensified in recent years: the draft proceedings of the Rural Women's Workshop on Just, Equitable, Healthy and Sustainable Food Systems reported:

- deteriorating access to food for poor rural women due to a widening economic gap and lack of economic autonomy
- worsening landlessness
- the impact of climate change and climate injustice aggravating the situation for rural women
- the role of corporate farming in destroying biodiversity and food systems
- women workers in plantations receiving far lower wages than their male counterparts, often enduring many forms of discrimination, sexual harassment and poisoning from highly hazardous pesticides
- the continuing rise of gender-based violence.¹

Artisanal gold mining is a highly toxic environment for all engaged in it because of the exposure to mercury involved in the recovery of that gold and there is an extra layer of hazard for women who suffer sexual violence and exploitation as well.² It is not an environment into which one would want to see women being driven. Yet women are being driven into it in some countries by the failure of subsistence and family farming. This has been reported at least in Tanzania, by the Vice-Presidents Office³ and in Colombia.⁴ The reasons for the failure of subsistence farming in these instances was not given, but understanding and addressing them would be of value. Is it because of limited access to inputs that are often seen to be necessary for improving output?

¹ Rural Women's Workshop on Just, Equitable, Healthy and Sustainable Food Systems Asia and the Pacific, 18 and 20 August 2021. Organized by Asian Rural Women's Coalition, People's Coalition on Food Sovereignty, Asia Pacific Forum on Women, Law and Development, PAN Asia Pacific, Global Forest Coalition, Serikat Perempuan Indonesia, National Federation of Peasant Women, Support for Women in Agriculture and Environment, All Nepal Women Peasants' Association. Draft proceedings (unpublished).

² Watts, M. 2021. Mercury & Gender: A Literature Review. Prepared for the Programme of work and budget of the Minamata Convention, 2020-2021 biennium, Activities.

³ Submission to the Secretariat of the Minamata Convention from the United Republic of Tanzania Vice-President's Office. December, 2020.

⁴ Torres-Vélez I, Vanegas D, Hurtado D. Sept 2018. Mercury pollution and artisanal gold mining in Alto Cauca, Colombia: Woman's perception of health and environmental impacts. *J Environ Develop* 27(3) 1–30. doi.org/10.1177/1070496518794796.

The 2019 report from FAO and CARE⁵ stated that “Women’s access to inputs such as improved seeds, fertilisers and pesticides is limited by their access to extension services. Government-subsidised inputs to small-scale farmers are often distributed through cooperatives. Women are rarely members of cooperatives, and often lack the money needed to purchase inputs even when they are subsidised.” This suggests that enabling women’s access to pesticides is seen as a good thing for women. But is it? Perhaps it will only worsen the problems they already face. Perhaps it would be better to keep the pesticides away and find safer and more sustainable ways to enable improved production.

A recently published systematic review of acute pesticide poisoning estimated that 385 million of the world’s farmers and farmworkers suffer unintentional acute pesticide poisoning every year – that’s 44% of the world’s farmers and farmworkers.⁶ That does not include suicides or chronic health effects. How many of these 385 million are women? We don’t know. As one of the authors of the paper I can say that we were unable to find sufficient data to estimate the incidence for women. The studies reviewed did not differentiate between men and women farmers and farmworkers. If women’s access to pesticides is limited we can only hope that this is reflected in the poisoning statistics. At the same time as women are not using pesticides, they are contributing to reducing the contamination of the environment, the loss of biodiversity, and the reduction of family harm through residues in food, reuse of pesticide containers to make toys for the children, etc.

Of course, simply not enabling the access of rural women to pesticides is not enough. Women must be enabled to produce more and to produce better quality, in ways that also respect and enhance the environment – and implementing agroecology is one of the best ways to achieve that. One of the 10 principles of agroecology, as defined by FAO,⁷ is agroecology’s strong emphasis on human and social values, and through this focus agroecology becomes an enabler of women. This from FAO: “Women’s participation is essential for agroecology and women are frequently the leaders of agroecology projects.”⁸ Yet the report from FAO and Care mentioned agroecology only once, and that was a visit to an agroecology centre.⁹

⁵ FAO, CARE. 2019. Good Practices for Integrating Gender Equality and Women’s Empowerment in Climate-Smart Agriculture Programmes. Atlanta. <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1195137/>.

⁶ Boedeker W, Watts M, Clausing P, Marquez E. 2020. The global distribution of acute unintentional pesticide poisoning: estimations based on a systematic review. BMC Public Health 20:1875. <https://doi.org/10.1186/s12889-020-09939-0>.

⁷ FAO. Undated. The Ten Elements of Agroecology. <http://www.fao.org/agroecology/home/en/>

⁸FAO. Undated. Human and social values: protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems <http://www.fao.org/agroecology/knowledge/10-elements/human-social-value/en/>

⁹ FAO, CARE. 2019. Good Practices for Integrating Gender Equality and Women’s Empowerment in Climate-Smart Agriculture Programmes. Atlanta. <http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1195137/>.

There is now widespread consensus that the overall impact of agriculture on biodiversity has reached alarming proportions that exceed planetary boundaries, and that agroecology is key to enhancing and restoring biodiversity and regenerating ecosystems and particularly soils.¹⁰ Agroecology reduces or completely removes the need for toxic pesticides: “Agroecological practices recover the biological complexity of agricultural systems and promote the necessary community of interacting organisms to self-regulate pest outbreaks”.¹¹ Finally, building resilience to climate change and other natural disasters is another key element of agroecology.¹²

The Committee on Food Security’s 2019 report on agroecology contains a key recommendation on gender:

- *Agroecology initiatives that advocate for women’s formal rights are essential. These ensure land access, more equitable family and community relationships, and reorientation of institutions and organizations to explicitly address gender inequality. This latter inequality is a key barrier to transitions to SFS in many contexts. There is increasing momentum in the policy arena for gender transformative actions that address gender inequality in agriculture and food systems. These actions aim to challenge the underlying causes of gender inequality, such as norms, gender relations in households and society, and institutional structures that perpetuate discrimination and imbalances, rather than merely addressing its symptoms. They seek to achieve more equitable involvement of women and girls in decision-making, control of resources and control of their own labour and destiny. A sufficient proportion of the population in a community must be involved to ensure that the needed structural changes will be lasting and pervasive. Addressing gender inequality requires recognition of: (i) women’s central roles in agriculture and food systems; and (ii) the often-high labour demands in holistic agricultural management systems, making greater income equality for those providing important labour.*

In the recent virtual negotiations on the Committee on World Food Security’s Policy Recommendations on Agroecology and other Innovative Approaches,¹³ there was evident resistance from some of those involved to the inclusion of women’s rights - including CEDAW’s General Recommendation 34 on rural women’s rights. Despite the best efforts of the Civil Society Mechanism (CSM)¹⁴ engaged with the process, women’s rights have only been included

¹⁰ HLPE. 2019. Agroecological and other innovative approaches for sustainable agriculture and food systems that enhance food security and nutrition. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. <http://www.fao.org/3/ca5602en/ca5602en.pdf>.

¹¹FAO. Undated. Resilience: enhanced resilience of people, communities and ecosystems is key to sustainable food and agricultural systems. <http://www.fao.org/agroecology/knowledge/10-elements/balance/en/>

¹² <http://www.fao.org/agroecology/knowledge/10-elements/balance/en/>

¹³ CFS. 2021. CFS Policy Recommendations on Agroecological and Other Innovative Approaches for Sustainable Agriculture and Food Systems that Enhance Food Security and Nutrition. <http://www.fao.org/cfs/resources/detail/en/c/1403798/>

¹⁴ The CSM mechanism is the collective means by which civil society NGOs are able to participate in the Committee on Food Security.

in the Preamble – and even that was opposed by one major country – and not in the recommendations themselves, undermining the normative force of the document (pers comm Marcia Ishii, PAN North America Oct 2021). For example, the CSM fought for the inclusion of women’s rights in recommendation 4 f which only mentioned women at the end in terms of their “critical role” in food security and nutrition, but failed to specifically support their values and interests :

- f) *Take appropriate measures to promote the human rights of all and recognize the importance of the values and interests of peasants, indigenous peoples, local communities, family farmers and other people working in rural areas, particularly in maintaining, expressing, controlling, protecting and developing their knowledge, including traditional knowledge, taking into account its specificity, for example through knowledge systems embedded in agricultural heritage systems, while recognizing the critical role of rural and indigenous women in the context of food security and nutrition;*

Agroecology, and the transformation of food systems to restore biodiversity and regenerate ecosystems, cannot be successful without recognising the absolutely necessity of engaging women producers, recognising their rights to land, appropriate resources, and markets.

Many such projects engaging women producers are undertaken by CSOs including PAN,¹⁵ although funding is always a limiting factor. The Tamil Nadu-based NGO Society for Rural Education and Development (SRED), founded by Fatima Burnad in 1979, works with landless Dalit women who are discriminated against 3 ways: as Dalits, as women, as landless in a system that does not recognise landless workers and does not even include them in the census: helping these women to form collectives to acquire land from the government, often beginning by simply occupying it and then farming it organically – claiming their right to produce food, claiming their dignity, moving from sexual abuse and violence to trusted community leaders. The movement has reached out to 350 villages in three districts of Vellore, Tiruvallur and Kancheepuram in Tamil Nadu and 19 villages in Andhra Pradesh.^{16 17}

Here is another example of what women leaders can achieve. One woman educationalist in Pakistan is single-handedly teaching people to produce their own healthy food by encouraging urban organic farming. Nasira Habib¹⁸ runs Khoj - Society for People’s Education in Lahore, a non-governmental organisation that works with women and children in rural and urban Pakistan.¹⁹ Nasira has made, so far, 41 videos (in Urdu and Hindi with English subtitles) of organic home gardening, explaining many techniques from developing garden beds to sowing seeds to managing pests to harvesting produce and preparing it in the kitchen – posting them

¹⁵ Quijano II (Ed). 2016. Stories from the Field: Women Working Towards a Nontoxic Environment. PAN Asia Pacific, Penang.

¹⁶ Masoodi A (in Press). Dalit women are brewing their own social revolution.

¹⁷ TN dalit women sow seeds of equality through land ownership. Times of India, Aug 15th, 2019.

https://timesofindia.indiatimes.com/city/chennai/tn-dalit-women-sow-seeds-of-equality-through-land-ownership/articleshow/70682845.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

¹⁸ https://www.youtube.com/channel/UCVNo_wnQihNFajDFxpSaQzA/about

¹⁹ <https://khoj.edu.pk/about-khoj/>

to YouTube for all to see.²⁰ She has 1,119 subscribers to her YouTube channel, and some videos have been viewed up to 26,000 times, with a total of 85,023 views. She also runs a Facebook page *Organica Pakistan*, with 16,545 followers, a private Facebook page called *Ecological Gardening and Farming* with 1,105 members, and a What's APP group called *A Thousand Food Gardens* exclusively for gardeners, with 43 members. Nasira ran a 50-acre farm owned by her and her sisters for five years. As she had been simultaneously working with the women and children in twenty underserved and crime-hit villages, she thought the village communities needed her focussed attention, so she turned her talents towards them. Her work yielded an innovative approach to education that is relevant and integrative. Her extensive experience led her to establish two model schools. *Khoj School for Community Education*²¹ was started in a village in 2003, which had a large kitchen garden in which the girls learned the skills of organic food production, and the second, *School in a Garden*, was established in Lahore in September 2021. Growing safe, healthy food and protecting the environment are the critical components of the school curricula (pers comm Nasira Habib Oct 2021). Everything Nasira does is based on agroecological principles, which safeguard the lives of the women and children, restore biodiversity and regenerate the soils, enhances their social well-being, and empowers them to become their own agents of change.

If one woman can do all that, how much more can women together achieve? And how can such knowledge and skill be harnessed to:

- assist many more women farmers
- assist in policy setting, programme development and decision-making, at local, national, regional and international levels?

Sustainable Development Goal 2 is not achievable until rural women are effectively empowered to implement biodiversity-enhancing agroecological food production everywhere. Whilst the policy direction of the Committee on World Food Security's 2019 report on agroecology was positive, the reluctance of countries to fully embrace that in the subsequent negotiations on the CFS's Policy Recommendations on Agroecology and other Innovative Approaches is concerning.

Key Recommendations

1. Fully endorse and implement the HLPE Committee Food Security's 2019 report on agroecology's key recommendation on gender
2. Continue to strive for women's rights in all policy platforms relating to agroecology
3. Recognise and address the key problem landlessness of women rural workers, assisting them into land ownership
4. Develop policies and programmes that foster women's engagement in and ownership of agroecological food production that restores biodiversity, regenerates the agroecosystem and especially the soil, and provides resilience against climate change and other disaster risks

²⁰ https://www.youtube.com/channel/UCVNo_wnQihNFajDFxpSaQzA/videos

²¹ <https://khoj.edu.pk/khoj-school-for-community-education/>

5. Fund and empower the training of rural and urban women in agroecological food production; recognise and empower women leaders to empower other women.
 6. Make visible the invisibility of poor landless rural women
 7. Explore the reasons for the failure of subsistence farming in Tanzania and Colombia driving women in to artisanal gold mining
 8. Close the data gaps on women experiencing pesticide poisoning, on landlessness.
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