



“Urgent Need for Gender Equity, Climate Action, and Food Security in Global Policies”

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Experts Outline Urgent Actions for Sustainable Development in India and Beyond

Intro: As rising inequities threaten vulnerable populations, the dialogue underscores the critical role of policy innovation and community engagement in fostering resilience and ensuring a sustainable future for all... among the ongoing drastic climate change. This week on **Socio-economic Voices** we **Dr Simi Mehta**, CEO and Editorial Director, IMPRI Impact and Policy Research Institute. Interacting with senior journalist **Mahima Sharma** of **Indiastat**, she shares the strategies that India and global powers need to follow to ensure not just climate control but even global food security.

MS: Recent reports from the Intergovernmental Panel on Climate Change (IPCC) indicate that global temperatures are projected to rise by 1.5°C as early as 2030. How do you assess the adequacy of current international policies in addressing this urgent climate crisis, particularly concerning gender justice and vulnerable populations?

SM: According to the IPCC Synthesis Report 2023, the estimated global Greenhouse Gas (GHG) emissions projected for 2030, as per the IPCC report of 2021, confirm that global warming is likely to surpass 1.5°C, making it even more challenging to limit warming below 2°C. This unprecedented rate of warming has triggered multiple, simultaneous hazards on a global scale that pose significant threats to both humanity and ecosystems, ranging from intense heat waves, erratic rainfall, and other extreme weather events. The widespread impacts include heightened heat-related mortality and morbidity, spread of food-borne, water-borne, and vector-borne diseases, mental health challenges, coastal and low-lying city flooding, biodiversity loss in terrestrial, freshwater, and marine ecosystems, and decreased food production in certain regions.

With this "Code Red for Humanity", it is crucial for nations worldwide to unite and confront this urgent crisis. Some efforts have been made, for instance, the Paris Agreement, adopted under the UNFCCC, which has seen near-universal participation, spurring policy development and target-setting at both national and sub-national levels, particularly for adaptation and mitigation, and has enhanced transparency around climate action and support. Various regulatory and economic tools have been successfully deployed in many countries, improving energy efficiency, reducing deforestation, and accelerating the adoption of technologies, resulting in avoided, and in some cases reduced, emissions.

However, challenges remain in implementing these policies. Adoption of low-emission technologies lags in most developing nations, especially the least developed countries (LDCs), due in part to limited financial resources, technological development, and capacity.

According to IPCC, this will have particularly severe effects in Africa, LDCs, Small Island Developing States (SIDS), Central and South America, Asia, and the Arctic, disproportionately affecting the most vulnerable populations: women, transgender people, children, the elderly, persons with disabilities, indigenous groups, and those living in mountainous or coastal regions. Women are especially vulnerable to climate change due to their roles in agriculture, food production, and resource management. They also face structural inequalities that restrict their access to resources, land, and decision-making authority. Gender-responsive climate policies are still underfunded, and many countries lack mechanisms to integrate gender considerations into their climate adaptation and mitigation strategies.

While the UNFCCC and the United Nations Convention to Combat Desertification (UNCCD) have adopted gender-sensitive frameworks and tools as part of their adaptation strategies, including a Gender Action Plan that highlights the crucial roles women play in raising awareness, decision-making, and in capacity-building to prevent land degradation, yet critical political ecology perspectives emphasize that multilateral organizations and development funds alone cannot lead climate adaptation policies. These institutions can act as facilitators and provide funding, but the responsibility ultimately falls on individual nations, extending to grassroots levels, which remain vulnerable due to top-down policy inaction.

MS: According to the FAO, nearly 828 million people worldwide are affected by hunger. Given the intersecting crises of climate change and urbanization, what innovative strategies do you propose for achieving food security in urban environments, especially for marginalized communities? What policies does India need in the wake of drastic climate change?

SM: The negative impacts of climate change on food and nutrition security includes breakdown of food systems, including crops, livestock, and fisheries, as well as disruptions in food distribution. Global warming, drought, flooding, and extreme weather patterns exacerbate the problems for populations already vulnerable to food insecurity due to factors such as low income, limited physical access to nutritious food, and social discrimination (O'Neill et al., 2022). The situation is further aggravated by weak infrastructure and poor institutional support.

According to Prof. Rattan Lal, with over 815 million people worldwide being undernourished, and approximately 2 billion people suffering from malnutrition, it is imperative that resilient food systems are adopted, food waste be reduced along the supply chain, and local agricultural capabilities be strengthened through home gardening and urban agriculture. **Home gardens combine physical, social, and economic functions around family homes to supplement the household's fresh vegetables and fruits, contributing to balanced diets by adding essential proteins, vitamins, and minerals (Galhena et al., 2013).** They also offer medicinal herbs and physical activity, promoting human health and well-being. Urban agriculture, which involves all forms of food and non-food agricultural production within or around cities, is another innovative strategy that can be adopted (Wagstaff and Wortman, 2015). **Policies could promote outdoor urban gardens and farms, hydroponic or aquaponic systems, rooftop farms, and urban livestock (Little, 2019).** Community gardens, owned and farmed by local members, provide agricultural spaces within city limits for growing food and raising livestock (Corkery, 2004).

Precision agriculture, solar and Internet of Things (IoT) technologies into urban farms can optimize resource use, monitor soil quality, water usage, and plant health in real time, enabling efficient crop management, reducing waste, reducing operational costs and carbon footprints and increasing productivity. Composting organic waste to create natural fertilizers, which can improve soil quality, thereby, reducing dependence on chemical fertilizers and contributing to long-term sustainability.

I am happy to note that **India fares well compared to the rest of the developed world regarding sustainable food consumption patterns**, according to the WWF report 2024, which highlights India's role in protecting the environment, combating climate change, and preserving biodiversity.

It is imperative for India to chart its own course focusing on economic development while addressing climate change. This philosophy is encapsulated in the principle "Mata Bhumi Putroham Prithivyah" (Earth is my mother, and I am her son). These considerations underpin Mission LiFE, a unique initiative announced by India's Prime Minister at the 2021 UN Climate Change Conference, emphasizing upon individual responsibility in the fight against climate change. It should also vociferously advocate for Common but Differentiated Responsibilities (CBDR).

India requires comprehensive and innovative policy responses to tackle the escalating climate crisis. These include **promoting drought-, flood-, and saline-resistant crops; adopting sustainable farming practices to enhance soil health and biodiversity; using drip irrigation, rainwater harvesting, and solar-powered irrigation; encouraging urban agriculture and home gardening; and enforcing policies to prevent over-extraction of groundwater, particularly in states like Punjab and Haryana.** Additionally, soil carbon sequestration can improve soil quality, purify water, and offset carbon emissions. India should also promote energy-efficient technologies in industries and offer tax incentives to companies that reduce carbon emissions.

MS: As we approach the 2030 deadline for the SDGs, recent UN reports indicate significant disparities in progress among countries. In your opinion, what are the biggest barriers to achieving these goals, particularly in relation to sustainable development and climate resilience?

SM: The major obstacles to achieving sustainable development and climate resilience include the half-hearted measures adopted by governments, particularly in multilateral fora. These institutional and governance weaknesses are then reflected within individual countries, and summits like COP often become annual showcases of high-level objectives with limited intent for actual implementation. Funding for climate change adaptation and mitigation is inadequate for many developing and LDCs, which, ironically, suffer the most from historical inequities despite being the least responsible for pollution. Rapid population growth in these countries is exerting immense pressure on natural resources, infrastructure, and social services. Sustainable development is not yet a priority for many, leading to insufficient investment in green technologies and inclusive growth in both the public and private sectors. The transition to renewable energy is hindered by vested interests in the fossil fuel industry and the revenue it contributes to the nations' GDP.

The G-20 Summit under India's presidency brought global attention to the theme "One Earth, One Family, One Future," or 'Vasudhaiva Kutumbakam'. It emphasizes upon the interconnectedness of all life on Earth and the critical need for global cooperation to address the planet's challenges.

MS: The recent COP summits have highlighted the shortfall in climate finance commitments from developed countries. Given the current funding gap estimated at \$100 billion per year, what concrete steps should be taken to hold nations accountable for their commitments?

SM: Today, major countries of the world are also major emitters of GHGs- China, US, India, Japan among others, and hence it is absolutely important for them to be accountable to the warming of the Earth due to their actions. The principle of CBDR and respective capabilities has been the key to international efforts to address climate change. It provides the basis of differentiating among parties and recognizes the principle of equity while acknowledging their responsibility towards sustainable development vis-à-vis their societies' pressures on global environment and the level of their technological and financial resources.

Since the commitments under CBDR are non-adversarial and non-punitive, these are asymmetrically applied. Even the obligations in terms of mitigation and adaptation and finance obligations are not legally binding and are left to the willingness of each party.

Since the time is ticking real fast, we need a global consensus on:

MS: How to support the need for vulnerable countries concerning future losses and damages?

SM: This should be done on a regular basis, with scientific evidence and estimations. The vulnerable countries must furnish transparent data, alongside real budgetary estimates of available resources and the need. **The financial assistance must be phased out in a time-bound manner, and the recipient countries must be fully accountable.** We need to have strong implementation measures for mitigating climate change impact and limit the global temperatures increase to below 20C, which could avoid substantive costs and hardships.

My point here is that all the compliances and implementation must be rigorously applied, while meeting the national goals as well as commitments to multilateral agreements.

It should appear as fair by the countries involved in it. When the countries self-differentiate between themselves, e.g., as LDCs for certain substantive issues like climate finance, timelines and reporting or even for the nationally determined contributions, some inconsistencies arise in terms of support for these including tech-transfers and capacity building, while the overarching support for mitigation and adaptation remains. This inconsistency needs to be addressed.

CBDR remains a sticking point, as does the role of equity (historic vs current responsibility for climate change) and role of each country in climate negotiations. Individual determination of NDCs must have a monitoring mechanism in terms of their fulfillment.

I would like to extrapolate the 2nd principle of Rawls theory of justice here:

- a. Each country must not only have the right to opportunities for development, but should have an effective equal chance as another of similar natural ability. Emissions levels reductions must not be applied without proper assessment of the state of development that a country is in.
- b. The common but differentiated responsibilities are equivalent to the difference principle, on the basis that the “worst-off” must be guaranteed a fair deal, in order to compensate for the historical inequalities and the inequities. All the lenient provisions must benefit the worst-off rather than the best-off.

MS: The World Bank predicts that by 2050, over 140 million people could be displaced due to climate change. What role do you see for international security policies in addressing climate-induced migration? And how can gender perspectives be integrated into these discussions?

SM: Climate-induced migration, or environmental migration, refers to the movement of people who can no longer sustain their livelihoods due to significant environmental disruptions, rendering their places uninhabitable.

Migration driven by climate change is often not a true choice but an act of necessity. As a “threat multiplier,” climate change exacerbates existing vulnerabilities, making it a significant global security issue.

To minimize the potential for conflict, **it is essential to have policies that address the varying impacts of climate-induced stressors on the vulnerable groups.**

International security policies must include adaptation strategies that recognize these differences among socio-demographic groups. Generic solutions may leave some groups behind, contradicting the principles of the Sustainable Development Goals (SDGs).

Moreover, generalized adaptation strategies may fail in regions facing different scales of climatic change and variable local coping capacities. In such cases, migration voluntary or forced, becomes inevitable. Careful planning is needed to ensure that migrating individuals and communities have access to necessary resources to sustain their livelihoods. It is also critical to consider social and cultural issues to prevent potential conflicts between migrants and host communities, who may themselves be struggling with climate change impacts.

Decentralized interventions, like relocating communities to areas offering livelihoods, are crucial for addressing climate migration (Singh, 2019). Global initiatives, such as the Task Force on Displacement, the Global Compact for Migration, and the Cancun Adaptation Framework, highlight climate change as a key driver of migration. They encourage nations to plan for relocations, offer humanitarian aid, and collaborate on solutions. The Nansen Initiative, launched by Norway and Switzerland in 2012, specifically addresses cross-border migration due to natural disasters.

The International Organization for Migration (IOM) urges countries to revise climate policies, differentiating between general and climate-induced migration. By identifying high-risk areas, nations can better coordinate migration efforts (Silchenko & Murray, 2023). Social protection, public-private partnerships, and international support are essential for populations facing sea-level rise, floods, and droughts.

Additionally, it is crucial to recognize the gendered impacts of climate displacement. Women, particularly in vulnerable regions, are disproportionately affected by climate change due to social, economic, and cultural factors. International policies must acknowledge the specific risks women face—such as increased exposure to violence in refugee camps or along migration routes, loss of livelihoods, and limited access to resources during displacement.

Such policies and more must recognize the disproportionate impacts on women and other vulnerable groups while supporting their active participation in developing solutions.

MS: With the ongoing tensions between major powers such as the U.S. and China, how do you foresee these geopolitical dynamics affecting international cooperation on climate change? What strategies should developing nations like India adopt to protect their interests while advocating for sustainable practices?

SM: Global cooperation is essential because climate change knows no borders. While U.S.-China rivalry complicates international responses, it also presents opportunities for enhanced climate action through multilateral efforts. Both countries have historically seen climate change as a key area for cooperation, even amid tensions in other areas. This partnership was vital for the Paris Agreement and subsequent climate negotiations.

However, achieving fair responsibility distribution remains a challenge. The green transition creates winners and losers, further shifting global power balances. In 2022, Beijing suspended formal climate talks with the U.S. due to geopolitical tensions, highlighting that climate cooperation cannot be isolated from broader political issues. The key concern now is not what climate change will do for geopolitics but how geopolitics shapes climate action.

Developing nations like India must balance development needs with global climate responsibilities. **One strategy is to promote a global ban on unabated fossil fuels and phase out subsidies.** Developed nations, as historical emitters, should lead with increased climate finance, green transitions, and halting new fossil fuel projects. India's challenge lies in its reliance on fossil fuels for economic growth, even as it recognizes the urgency of climate action. Investments in clean technologies and energy transitions are critical.

India has shown leadership in global climate action, launching initiatives like the International Solar Alliance at COP-21 in 2015. The goal is to derive 40% of its power from renewables by 2030. **The National Green Hydrogen Policy and domestic policies like Zero Budget Natural Farming and drip irrigation demonstrate India's commitment to reducing emissions.** India is also pushing policies to reduce biomass burning and pollution in industries like brick kilns.

Building resilient cities, improving solid waste management, and aggressive afforestation efforts through public-private partnerships are key strategies. India should also leverage global climate funds to enhance resilience in sectors like agriculture and infrastructure. Achieving net-zero by 2070 requires green growth, renewable energy, sustainable finance, and transformative technology. By strengthening its domestic climate policies, India can lead globally and advocate for Common But Differentiated Responsibilities (CBDR).

MS: In light of recent data showing that women are disproportionately affected by climate change—evidenced by the 2023 Global Gender Gap Report—how should policymakers leverage this information to develop gender-sensitive climate adaptation strategies? Can you provide specific examples of successful policies that have effectively addressed this issue?

SM: Global cooperation is essential as climate change transcends borders. While U.S.-China rivalry complicates global efforts, it also presents opportunities for joint climate action, emphasizing the need for strong multilateral responses. These nations, with the world's most capable militaries, must cooperate on climate issues.

Climate-related disasters like droughts, floods, and rising temperatures disproportionately affect women, especially in poor households. Women, often primary providers, face increased workloads. Studies show that women and children are 14 times more likely to die in natural disasters than men. Given these impacts, gender-sensitive climate adaptation strategies must address social, economic, and cultural inequalities that heighten women's vulnerability.

Despite SDG 13's call for urgent climate action, it lacks gender-focused targets, as do SDGs 6, 7, 14, and 15. Policymakers must empower women as decision-makers in climate policy, integrating their traditional and scientific knowledge to enhance community resilience.

To strengthen climate and gender equality agendas, policies must include Adivasi and Dalit women, feminist experts, and challenge gender norms. Governments should prioritize women's ownership of land, energy, credit, and livestock, while ensuring equal participation in community decisions and violence-free environments. Encouraging shared caregiving is crucial.

Agriculture offers opportunities to build climate resilience. Micro-irrigation systems, capacity-building for women farmers, and promoting energy-saving technologies are key strategies. Raising awareness among both men and women at all levels is critical. In Senegal, women-run baobab powder enterprises have led to greater control over resources and increased incomes, while in Nepal, solar-based irrigation has reduced women's workloads and boosted incomes.

The World Bank's ACCRA project promotes climate-smart agriculture to enhance women's resilience. Gender-responsive agriculture frameworks are vital in this context. Strengthening women's roles in community drought mitigation and policy advocacy will lead to gender-sensitive climate solutions. For instance, Bangladesh's early-warning systems and Kenya's Solar Sister initiative, which involves women in distributing solar products, are successful models of gender-inclusive climate strategies.

In India, the Mahila Housing SEWA Trust provides women in informal settlements with climate-resilient housing, financial literacy, and credit, helping them rebuild after extreme weather events and protect their livelihoods from future climate risks.

MS: Last question in particular for our student readers: If someone wants to see herself/himself in your position in the next five years, what additional skills beyond the usual education would be required in the modern day world? Any additional advice beyond this question?

SM: In this fast-paced world of interdisciplinarity of subjects, one cannot be boxed into expertise in "one" subject. One must be flexible in learning associated disciplines and acquiring proficiency with emerging technologies like AI becomes important. Understanding and appreciating different cultures, languages, and global issues helps in forming international collaborations and adapting to diverse work environments. Time management, self-motivation, and the ability to work independently are necessary for remote work settings, which are becoming more common. It is very important to have mental resilience to handle setbacks and challenges. Building a strong professional network is key. Connecting with peers, mentors, and industry leaders can provide guidance, opportunities, and inspiration. Finally, students must remain ethical, compassionate, authentic and passionate about their journey.

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Dr. Simi Mehta is CEO and Editorial Director, IMPRI Impact and Policy Research Institute. She holds a PhD in American Studies from the School of International Studies, Jawaharlal Nehru University, and was a Fulbright Nehru Doctoral Research Fellow at Ohio State University, USA. She holds a Master's Degree from JNU in International Relations. She represented India in the South Asia Connect program for startup entrepreneurs, at Nexus Startup Hub at the American Center, New Delhi, and was subsequently chosen for the 50-day pre-incubation program at the Center, conducted by the IC2 Institute, University of Texas, Austin.

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