



Environmental Challenges for Women in Rural Areas: Decentralized Governance & Policy Solutions

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ABSTRACT

In rural communities women are the backbone to their communities, responsible for managing natural resources, caring for their families and livelihoods times when there is increasing environmental threats. However, deforestation, water scarcity and climate change have had the most effects on these women, but they have little rights to support or decision making power. Though rural women own the land, possess the wealth of traditional knowledge, they are not really involved in the environmental policy and governance processes. By excluding women from such decisions, their contribution to value of participation in decisions that matter in the sphere of sustainable solutions are devalued and the efforts aimed at mitigating environmental degradation are not efficacious. Accordingly, it is very likely that rural women could voice their opinions on matters that concern the environment within decentralized processes of decision. It transfers the power of decision to local communities and their local rural governments, and enables the local communities to work out solutions based on their context but within a programmatic framework that is appropriate to the locality. With an emphasis on rural women's role in building sustainable communities, this paper investigates at the intersection of environmental challenges, gender inequality and the decentralized governance. Based on this research, rural women must



be empowered as the main agents of sustainability in the face of a rapidly changing world.

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Introduction:

In rural parts globally, the woman is at the very center of nature and survival. For nearly every part of their lives, they grow food, collect water and care for their families on the land. As forests shrink, water sources have dried up and soil has become less fertile, these women find themselves battling challenges growing harder to overcome. In the first place they are hit by the changes in environment and the last to get support. However, rural women represent more than victims of environmental problems. They are resourceful and intimately connected to their environment, as they possess valuable knowledge about how to care for and protect natural resources (Kaushal, R. 2010).^[6] However, their voices seldom count when decisions about policies that will affect their lives are being made. Excluding the use of Off-grid electricity limits their potential, thereby a negative trade off is created between risk and return, which serves as an act of barrier to greater adoption in terms of investment; and it also undermines the effectiveness of environmental solutions.

Decentralized governance is one promising approach to address these challenges. This system empowers local governments and communities to essentially solve problems at the lowest levels: problems most impacted by the people on the local level. When women participate in these processes of decision making, they are able to direct the management of resources sustainably, protecting the environment and building better futures for their families and communities. This is not easy, however. Often, cultural barriers, limited resources, and a lack of political support are in the way. In this article, we discuss how decentralized governance may help ameliorate the environmental problems rural women face. It will explore their challenges, identify what they can contribute and find how to integrate them into the building of sustainable communities. By this, we include rural women at the table, we can build solutions that aren't just good for them, but for the whole ecosystem, and for future generations (Mishra, K., & Kudva, N. 2008).^[9]

Research Objectives:



1. To Evaluate, How Environmental degradation has been specifically explored as to how it affects daily roles and responsibilities of rural women in the resource dependent communities.
2. To assess the potential of decentralized governance structures to resolve gendered impacts of environmental crises in rural locations directly.
3. To explore how traditional ecological knowledge of rural women can be linked to localized policymaking for sustainable resource management.
4. To assess the existing gaps through representation and participation of rural women to local governance and environmental decision making.
5. To build innovative models of decentralized governance through rural women's leadership to create an equitable and sustainable solution to manage environmental crises.

Research Problem:

In rural parts however, it becomes even more serious for women as they face a lot of environmental challenges that are somehow disproportionate to that of the men. Working in the sector of natural resources, they rely quite heavily on natural resources for making a living, and are also very limited in participation in most decision making processes of the sectors. These challenges are further compounded by social and cultural norms existing against women, as well as gender inequality, destined to make women uniquely vulnerable to the consequences of climate change. Although central to the management of natural resources including water, land and energy, women's access to such critical resources is still quite limited, thereby excluding them from being able to adapt to environmental changes and consequently negatively affecting their socio economic well being. Decentralization governance systems to be able closer to localities community in decision making can empower women to participate in environmental decision.

However, most of such systems do not cater to the gender sensitivity and the particular requirements of women in rural areas. However, women's voices often go missing within governance structures and prevailing policies do not sufficiently respond to their voices. Consequently, management of resources becomes ineffective and insufficient adaptive measures are made when dealing with environmental changes. This study seeks to investigate the way that decentralized governance structures can have an answer for the exceptional ecological difficulties looked by ladies in provincial regions. In particular, it



emphasizes the significance of gender sensitive policies to encourage sustainability, resilience and social equity. The findings of the study will reveal existing gaps or lack of policies that inhibit women's participation in environmental governance and will recommend ways in which women can be included in environmental governance. This work will ultimately contribute to shaping more inclusive, sustainable, and equitable environmental policies that incorporate the interests and perspectives of women in rural places.

Review of Literature:

1. **Cook, N. J., Benedum, M. E., Gorti, G., & Thapa, S. (2023). "Promoting women's leadership under environmental decentralization: The roles of domestic policy, foreign aid, and population change". *Environmental Science & Policy*, 139, 240–249:** This article shows how decentralized environmental governance can promote women's leadership in local resource management. It makes the case that it is through decentralisation that rural women can be empowered to lead community based initiatives including forestry and water management. Fostering gender sensitive policies and women's access to decision making processes will enhance the sustainability of environmental practices through decentralization. The analyzed cases from Latin America and Africa are examples of a decentralized system that has established inclusive governance structures. Yet, it also identifies obstacles including insensitive gender norms that are difficult to change and weak political will that impedes gendered equity in environmental leadership. However, the article argues that policies that promote, to some extent, women's involvement in politics may not be adequate, dependent on the socio-cultural barriers that prevent them from being fully involved in governance.
2. **Naiga, R., Ananga, E. O., & Kakumba, U. (2023). "Gendered Participation in Water Governance: Implications for Successful Community based Water Management and Women Empowerment". *International Journal of Rural Management*, 20(2), 255-270:** This study examines the gendered dimensions in governance of water in rural Uganda. It considers the participation of women in community managed water schemes which tend to play key roles in decentralized environmental governance. The research shows that many barriers hinder women from playing a full role in governance processes, however, women who, traditionally, bear responsibility for water collection. Although women have a central role in water management, their role is often marginalized in formal governance structures. The paper underscores the necessity for policies with gender sensitivity that go beyond



promoting women's participation to make their leadership in decision making processes a reality. Through women's knowledge and perspective integration, the study proposes that water governance becomes more equitable and effective and improves the access of resource for all community members. It urges stronger institutional support and community mobilization to support gender inclusive governance.

3. **Coleman, E. A., & Mwangi, E. (2013). "Women's participation in forest management: A cross-country analysis". *Global Environmental Change*, 23(1), 193–205:** This paper offers a comparative assessment of women's involvement in community forestry in different countries and the contribution of women's participation to the forest management outcomes. The models of community based forest management are analyzed and contributions of women's participation on the decision making processes, resource conservation and community development are assessed. Drawing on legal, social norms and institutional support, the authors identify critical factors that encourage or delay women's engagement. The study found that women's participation in forest management positively affects the sustainability and equity of forest management, yet is still accompanied by gender discrimination and resource accessibility problems. The need for policies that promote gender equality in the forest governance is needed to enhance the effectiveness of community forestry initiatives, as highlighted in the article. The study offers a cross country view to understand women participation in forest management and the overall implication for environmental governance.
4. **Imburgia, L., Osbahr, H., Cardey, S., & Momsen, J. (2020). "Inclusive participation, self-governance, and sustainability: Current challenges and opportunities for women in leadership of communal irrigation systems". *Environment and Planning*, 4(3), 886-914:** This article considers the relationship between inclusive participation, self-governance and sustainability in community based environmental management. In particular, it considers water user associations in rural India where women have been increasingly included in decision making in relation to water management. It is found that equitable and sustainable outcomes occur when women are included in governance structures. Involve women, better resource management, less likely to be poor as a community. The article also talks about the predicament of women in taking part fully in governance, limited resources, social norms and institutional barriers. Finally, it emphasizes the need to adopt governance structures which would make governance more inclusive, and allow for a greater participation of women and mainstreaming their needs and concerns for greater participation into the environmental decision making.



5. **Alonso-Epelde, E., Garcia-Muros, X., & Gonzalez-Eguino, M. (2024). “Climate action from a gender perspective: A systematic review of the impact of climate policies on inequality”. *Energy Research & Social Science, 112*:** This is the first systematic literature review on the effect of climate policies on inequality from a gender perspective (based on the PRISMA approach). This study also explores how climate policies influence gender equality and social equity, showing why gender sensitive approaches are crucial in climate action. It examines how various climate policies (such as mitigation and adaptation strategies) impact men and women differently, especially in vulnerable communities. It points to the gaps in current policy and stresses the need to incorporate gender considerations in the climate policy design and implementation. After combing through existing literature, the article gives insight into climate change challenges of combining gender equality and social justice with such a drive.

6. **Das, P. (2014). “Women’s participation in community-level water governance in urban India: The gap between motivation and ability”. *World Development, 64, 206–218*:** This paper investigates why and how women participate in community level water governance in rural India. Although women are essentially the primary users and managers of water resources at the household level, they are not represented in water governance formal structures. The research has revealed the main obstacles which hinder women's involvement, first of all the patriarchal way of life, low amount of education and their undemand for the accessibility to decision-making spheres. The study highlights the importance of gender sensitive policies and practices for women’s participation in water governance; women’s knowledge and experience should be valued and put to use if better and more equitable water management is to be achieved. The research, therefore, advocates for enabling women to take on leadership roles in water governance in order to make water management practices in rural India, more sustainable, and inclusive.

Research Gap:

However, the literature offers tremendous insight into the role women play within decentralized environmental governance, but there still are some missed gaps around how to fully bring women forward and provide for their leadership. In spite of the acknowledgment of women’s critical involvement in managing natural resources, Cook et al. (2023) and Naiga et al. (2023) found that entrenched gender norms and socio-cultural factors usually constrain their involvement in formal governance processes. An in depth analysis on how these norms could actually be put into practice and reformed in decentralized systems is, unfortunately, lacking. The second gap refers to lack of



exploration of institutional mechanisms that foster or discourage women's participation. Imburgia et al. (2020) conducted research which reveals the significance of models of inclusive governance such as those that exist in the supply of water services through water user associations but ignores the institutional support, i.e. legal frameworks and access to resources.

More research should then be undertaken to determine which institutional framework suffices to facilitate gender equality in environmental governance. Moreover, the literature does not holistically report gendered effects of different climate policies, especially in mitigation and adaptation strategies. Alonso-Epelde et al. (2024) and Coleman & Mwangi (2013) call for gender-sensitive climate policies, but there is no empirical evidence on how such policies can be put into environmental governance frameworks. Lastly, the studies have concentrated on these topics, primarily, water governance and forest governance but certainly we still need research on women's role in other environmental sectors such as in land management, in energy, which is as important in the achievement of sustainable development just as it is with water and forests.

Research Questions:

Q-1 In what ways do environmental challenges like water scarcity and soil degradation directly affect the daily life and livelihoods of rural women in India?

Q-2: How can decentralized governance systems be used to enable rural women and enhance environmental sustainability in rural communities?

Q-3 In what ways are rural women excluded from or unable to participate in local environmental decision making processes and how can the obstacles that stand in their way be overcome?

Q-4 What role might traditional ecological knowledge held by rural women play in modern environmental policy making aimed at sustainable development?

Q-5 What is the role of rural women in natural resource management and how can their involvement in management of natural resource contribute to local measures to tackle environmental degradation?

Research Methodology:



This study employed a mixed-methods approach grounded in the analysis of secondary data to examine the environmental challenges faced by rural women and the response of decentralized governance systems. To gain comprehensive insights, the research utilized existing qualitative sources such as previously published interviews, focus group reports, case studies, and government or NGO reports that document rural women's experiences and involvement in local governance. These qualitative materials provided detailed information on the effects of environmental degradation on women's daily lives, their roles in community decision-making and coping strategies. In addition, the study incorporated quantitative data drawn from published surveys, government databases, policy reports, and statistical bulletins to explore the relationship between women's participation in governance and environmental outcomes. The analysis combined thematic review of the qualitative sources and descriptive statistical evaluation of the quantitative datasets. Throughout the research process, careful attention was given to using credible, ethically collected and publicly accessible data. This secondary data-based methodology allowed for a comprehensive and ethically sound examination of rural women's roles in environmental governance and the development of inclusive and sustainable policy insights.

1. Women Role in Natural Resource Management in Rural Areas:

Women in rural areas are vital to natural resource management and conservation as they draw livelihood and most daily responsibilities from the environment. Rural women tend to be the principal users and caretakers of natural resources in relation to sourcing their water and fuelwood and engaging in subsistence farming. They work very closely with the environment, with their tradition ecological knowledge that enables them to manage resources in a sustainable manner. Women take active part in agriculture conservation of soil fertility, selecting drought resistant crops and practicing rotation of crops for high productivity (Ward, A. 2024).^[13] Aside from their function in regulating water supply and irrigation ditches, they are also major stakeholders in water management and sometimes they collect water for household and agricultural use. They are involved in reforestation efforts, fuelwood collection and biodiversity conservation and hence can serve as natural resources stewards.

Nevertheless, gender, in terms of access to land ownership decision making and environmental governance structures, has served to diminish their contributions. Despite these barriers however, women self help groups and community based organizations have been found to be platforms by which rural women address resource related challenges collectively. The women participate in activities like watershed management, afforestation projects and sustainable farming through these groups (Moayed, Sartaj Singh



M., & Hayati, D. 2023). ^[10] There is a need to advocate for women's participation in their local decentralized governance and natural resource management in order to promote sustainable development. Rural women can be empowered to be leaders in environmental conservation, on the community level and beyond, through providing them with capacity building programs along with access to resources, and gender inclusive policies. Active involvement is fundamental in guaranteeing the long term sustainability of natural resources.

2. The Impact of Environmental Policies on Rural Women:

As the lives of the daily responsibilities of rural women is closely linked to natural resources, these ecological policies have a great impact on their lives. How implemented, resource use, conservation and access regulations for women rural women can either empower or marginalize them. Rural women are to have access to opportunities to participate in sustainable resource management through positive environmental policies geared towards afforestation, water conservation and other alternative energy resource. Women led self help groups or cooperatives are encouraged to play active parts in conservation efforts and decision making through programs that support their establishment. These policies can help women become economically independent, less burdened in terms of resource gathering, and also help in achieving gender equality (Ketlhoilwe, M.J. & Kanene, K.M. 2018). ^[8]

Badly designed or restrictive environmental policies, however, may be harmful to rural women. When women alone are affected without viable alternatives being provided by policies that limit access to forests, water sources or grazing lands, this also disproportionately affects women, who are responsible for gathering these resources. For example, women may be required to travel further to obtain basic household needs due to restrictions on deforestation, or wildlife protection laws, thus making the workload more and leaving less time for other activities. Along with many environmental policies, many policies neglect gender disparity in access to resource and/or decision making, excluding women from participating in important governance structures. Policies need to adopt a gender sensitive approach, including women's voices and recognizing their traditional ecological knowledge to create a meaningful impact. (FAO, United Nations. 2022) ^[4] Environmental governance can help preserve ecology and build socio economic power in rural communities by equipping rural women through equitable policies and access to sustainable practices.

3. Strengthening Local Governance to Address Women Environmental Concerns:



Addressing the environmental challenges in rural women's life depends upon strengthening the local governance. Much of their lively hood is anchored on natural resources such as vegetation cover, forests, land and water resources, and they are at the receiving end of problems such as deforestation, water scarcity, land degradation, etc. Inclusive and effective local governance systems can be powerful tools for placing women's environmental concerns and needs high in policy priority and action. It is important to empower local bodies like panchayats etc. in India to take women perspectives into consideration in environmental decision making (Mishra, K., & Kudva, N. 2008).^[9] The traditional ecological knowledge of women can be used as an instrument in managing the resources sustainably. Providing them a platform to express their concerns about diminishing availability of water or decline of forest resources etc. in local governance ensures their participation in local governance. Participation of women in the planning of these activities fosters gender inclusive solutions that can be beneficial to whole communities.

For further greater involvement of women in governance, capacity building initiatives including leadership training for women and awareness building programmes to women rights and environmental policies etc are necessary. Resources and funding allocation for projects that help women meet their environmental needs including clean energy access, community based water conservation and sustainable agricultural practices should also be done through decentralized governance mechanisms (Agrawal, A., Yadama, G., Andrade, R., & Bhattacharya, A. 2006).^[2] But systemic barriers including gender biases, limited representation, and inadequate access to information must be addressed. To empower women to be decision makers, strengthening local governance requires structural reforms and cultural shifts. The prioritization of women environmental concerns, therefore, can enable local governance systems develop resilient communities that coalesced environmental sustainability and gender equity.

4. Traditional Ecological Knowledge and Its Role in Environmental Policy:

Traditional Ecological Knowledge (TEK) represents the accumulated body of knowledge, beliefs and practices of indigenous and rural peoples about their environment, which has been transmitted from generation to generation. Because of their primary connection to natural resources and role in ecosystems, this knowledge is very important to rural women. The integration of TEK into environmental policy is essential for mainstreaming sustainable and culturally appropriate solutions to contemporary environmental concerns (Khandker, V., Gandhi, V. P., & Johnson, N. 2020).^[7] Owing to



their rural women deep understanding of biodiversity, soil fertility, water conservation and seasonal changes, rural women can be counted as an invaluable contributor to resource management. For example, knowledge women have of drought resistant crop and seed preservation is now essential to food security of regions impacted by climate change. Their knowledge of water harvesting techniques and reforestation practices, for example, can provide the basis for policies intended to restore damaged ecosystems.

While critical, the role of TEK often falls underneath the standard's appreciation for formal environmental policies, which are often ruled by science. Web of exclusion, this exclusion limits sustainability of such policies and marginalizes rural and in particular rural women from being included in the decision making and planning processes. This gap can be filled by recognizing and integrating TEK, ensuring that policies are both effective and inclusive. Policymakers must work with them to create platforms for the documentation and validation of traditional knowledge terms and conditions through which intellectual property rights are created for protecting their communities from exploitation (Siedenburg, J. R. 2022).^[12] Innovative solutions for climate adaptation, biodiversity conservation and sustainable development can arise through collaborative governance frameworks that merge TEK and scientific knowledge. When you embrace TEK you can design environmental policies or policies in general to be more holistic, encompassing the possible expertise of rural women.

5. The Future of Rural Women in Environmental Governance:

The potential for rural women's contribution to sustainable development and gender equality from an environmental governance perspective in the future is huge. Rural women are primary users and caretakers of natural resources and as a result have unique insight into the environmental management of natural resources. But their contributions have not been duly recognized in formal governance structures. As rural women's role has become better understood, so too has the challenge of design aspect systems that facilitate their participation as active agents of change. Rural women inclusion can be an idealized problem to be solved within a decentralized governance framework. Women can have platforms to effect changes in environmental policy and allocation of resources through local governance bodies such as panchayats and community resource committees. Secondly, expanding the representation of women in these structures guarantees that they have helped their voices be heard and their traditional ecological knowledge into decision making (Shrestha, G., Joshi, D., & Clement, F. 2019).^[11]



Technology and education will also be transformative. The use of digital tools can also enable rural women access to environmental information and link them to networks of governance and advocacy beyond the rural areas. At the same time, we will help women become educated and their own capacity builders so they can lead in conservation and climate adaptation strategies. This vision also depends on gender sensitive policies. Women participation must be contested and guided by scaling down structural barriers; such as unequal access to land, credit and training opportunities to many women. Thus, by solving these challenges, environmental governance can manage to mobilize the full potential of rural women (Agarwal, B. 2010).^[1] Empowerment, collaboration, and leadership are the way rural women will be involved in environmental governance in the future. This will not only lead to more equitable governance systems but also ensure the sustainability of ecosystems for generations.

Research Findings:

The research showed that rural women are very important in natural resources management and environmental problems solution. With their everyday interaction with the land, the ocean and the agricultural land, they have extensive inborn knowledge of the environment which is critical in responsible use of natural resource. Nevertheless, their contributions remain marginalized in formal governance structures owing in large measure, to systemic barriers including limited access to decision making platforms, inadequate ownership rights and socio cultural constraints. In rural areas, women confront a larger part of the effect of environmental debasement by virtue of water lack, soil denudation and deforestation, which straightforwardly affect their wage and family obligations. While this may seem daunting, rural women have proven to have an incredible amount of resilience, bringing in use innovative methods of coping, like water harvesting, seed preservation and community reforestation.

Furthermore, the study observed that inclusive decentralized governance is a critical enabler for women participation in environmental policy making. As effective platforms for affecting decisions related to resource allocation and environmental conservation, women led self help groups and cooperative models have gained strength. Alongside, it showed that the policies that also entailed the gender-sensitive approaches led to a significant improvement in the contribution that was made by the rural women to the environmental governance. The findings also reveal that it is key to empower rural women with access to education, technology, financial resources, among others, because it enables them to exercise leadership in environmental governance and sustainability of the initiatives. Overall, the study proves



the necessity to create gender inclusive policies which take into account and empowers the role of rural women as catalysts to environmental sustainability and community resilience.

Conclusion:

At the end we can conclude that rural women, though the unsung heroines of the environment, have historically gone unnoticed in governance and policy framework where their contributions are indispensable to environmental sustainability. As stewards of natural resources, they play a critical role, show resilience in the face of environmental challenges, and hold the potential to drive sustainable solutions when given the power to do so. However, rural women achieve their leadership through traditional ecological knowledge and community based initiatives, despite systemic barriers of limited access to land, financial resources, and decision-making platforms. Decentralized governance turns out to be a viable tool to bridge the gap between rural women's contribution to the environment and formal policymaking. Their voices must be amplified through inclusive governance structures and gender sensitive policies in order for their expertise and needs to be used towards resource management strategies. Education, capacity building programs and access to technology empower rural women to play a stronger role in environmental governance which not only helps empower the woman but uplifts her community to a place of sustainability and resilience. Going forward, more woman's lenses should be included in solving environmental policies to get equitable and sustainable development. Rural women must partner with policymakers, local governance bodies, and non-governmental organizations to dismantle systemic barriers and create opportunities for rural women to lead in environmental decision making.

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