



## Moving towards a twin-agenda: Gender equality and land degradation neutrality



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### ABSTRACT

The conceptual framework for Land Degradation Neutrality (LDN) highlights that land degradation in developing countries impacts men and women differently, mainly due to unequal access to land, water, credit, extension services and technology. It further asserts that gender inequality plays a significant role in land-degradation-related poverty hence the need to address persistent gender inequalities that fuel women's poverty in LDN interventions. This paper presents recommendations for moving towards a twin-agenda: gender equality and land degradation neutrality. It first introduces gender dimensions of current global environmental regimes, identifying critical interlinkages between gender equality and women's human rights and land rights with a focus on the Sustainable Development Goals (SDGs) and the United Nations Convention to Combat Desertification (UNCCD). Next, it analyses gender entry points in the LDN conceptual framework, presenting promising gender mainstreaming practices in local efforts to address land degradation. The research methods of content analysis of relevant literature, including official documents of the UNCCD Conference of the Parties (COP); collection and analysis of case studies from different geographies to identify promising gender-responsive practices at country and local levels; and the analysis of the outcomes from a capacity building workshop on gender mainstreaming held during the COP13 in Ordos, China, in September 2017 are used to recommend how gender perspectives can be incorporated into policies, programs and interventions aimed to avoid, reduce or reverse land degradation at local and national levels.

### 1. Land degradation through a gender lens

Land is a life-giving asset and the foundation of every society. Healthy land and soils ensure healthy ecosystems (Keesstra et al., 2016; Laban et al., 2018; Pereira et al., 2017) and a life with dignity for human beings. Yet, the UNCCD (2017d) reports that land is being degraded at an unprecedented pace –at an average of 12 million hectares per year. Rural women and girls tend to be the most impacted because agriculture is central to their livelihoods and their day-to-day activities are tied to natural resources. Hence, when land is degraded and becomes unproductive, women are subjected to even more time-consuming, labor-intensive but unpaid or poorly remunerated work tied to women and girls' household responsibilities including producing food and procuring water (Davis et al., 2015). Despite women's significant

role as environmental stewards, they are often excluded from planning and decision-making with respect to conservation and management of land, including decision-making around soil conservation and other sustainable land use practices, and likely to be excluded from decisions on large-scale land-based investments and infrastructure, development and conservation projects (Mor, 2018). Compounding and increasing vulnerability to land degradation is the fact that discriminatory statutory and customary systems in many societies deny women and girls the rights to own and inherit land (Mor, 2018).

The UNCCD conceptual framework for Land Degradation Neutrality (LDN) highlights that land degradation in developing countries impacts men and women differently, mainly due to unequal access to land, water, credit, extension services and technology (Orr et al., 2017). The conceptual framework likewise asserts that gender inequality plays a

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significant role in land-degradation-related poverty hence the need to address persistent gender inequalities that fuel women's poverty in LDN interventions (Cowie et al., 2018).

Inequality hinders and diminishes women and girls' actual and potential roles in and contributions to avoiding, reducing and reversing land degradation, and improving their livelihoods and that of their families and communities. Empowering women by strengthening and enforcing their rights to access, use and make decisions over their land can generate incentives, security and opportunities for conservation and land management, ensuring its long-term productivity. This paper argues that advancing gender equality and achieving land degradation neutrality work in tandem.

The paper first introduces gender dimensions of current global environmental regimes, identifying critical interlinkages between gender equality and women's human rights and land rights with a focus on the Sustainable Development Goals (SDGs) and the United Nations Convention to Combat Desertification (UNCCD) (Section 2). Next, it analyses gender entry points in the LDN conceptual framework (Section 3), and it presents promising gender mainstreaming practices in local efforts to address land degradation (Section 4). The research methods of content analysis of relevant literature, including official documents of the UNCCD Conference of the Parties; collection and analysis of case studies from different geographies to identify promising gender-responsive practices at country and local levels; and the analysis of the outcomes from a capacity building workshop on gender mainstreaming held during the UNCCD 13th Conference of the Parties in Ordos, China, in September 2017 are used to offer recommendations (Section 5) on how gender perspectives can be incorporated into policies, programs and interventions aimed to avoid, reduce or reverse land degradation at local and national levels.

## 2. Global norms reinforcing critical interlinkages between gender equality, women's human rights and land

Women's rights to land and other productive resources are outlined in a number of international legal and policy instruments<sup>1</sup> including the Universal Declaration of Human Rights, which establishes the principle of non-discrimination on the basis of sex, recognizes the rights to property, food and education, and guarantees women equality and non-discrimination in rights to land and access to natural resources. Secure land rights and natural resources are often a precondition for rural women's realization of other human rights, including economic livelihood, adequate standard of living, housing, food security, education, health, freedom from violence and participation in decision-making at all levels<sup>2</sup>. General Recommendation 34 on the rights of rural women of the Committee on the Elimination of Discrimination against Women (CEDAW) directs State Parties to uphold rural women's rights to land and natural resources, and provides detailed guidance to this end (Committee on the Elimination of Discrimination against Women, 2016).

The Beijing Declaration and Platform for Action<sup>3</sup> (United Nations,

<sup>1</sup> For a detailed discussion of these human rights instruments, you may refer to *Realizing Women Rights to Land and Other Productive Resources* (UN Women & United Nations Office of the High Commissioner for Human Rights, 2013)

<sup>2</sup> UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), Article 14(2) instructs States to facilitate equal participation in and “benefit from rural development” and in, particular, women's right to “equal treatment in land and agrarian reform.” Article 15(2) mandates equal rights to women “to administer property,” and Article 16(1)(h) extends equal rights to “both spouses in respect of the ownership, acquisition, management, administration, enjoyment and disposition of property,” which is interpreted to include land.

<sup>3</sup> Under the 1995 Beijing Platform for Action, governments pledged to remove legal and customary obstacles and cement in law “women's equal access to economic resources, including land ... as a means to further the advancement

1995), and the 2030 Agenda for Sustainable Development and the associated Sustainable Development Goals (SDGs) reinforce a focus on gender equality and the empowerment of women in access and control of natural resources such as land (Fig. 1). The SDGs recognize women's land rights as a catalyst for poverty eradication (Goal 1), food security and improved nutrition (Goal 2), and gender equality and the empowerment of all women and girls (Goal 5) (UNGA, 2015). These benefits can accrue to women when their rights are legally recognized and upheld in their societies. Discriminatory laws, weak or resistant governance, biased social norms and lack of information are among the many barriers to women realizing their rights to access, use, inherit, transfer, control, benefit from and own land, and to having a voice and finding redress in their claims to land (Mor, 2016). Seven targets and six indicators of the SDGs focus on land rights and land tenure security, and three indicators are relevant to women's land rights and land tenure security: indicator 1.4.2 (secure land rights); indicator 5.a.1 (rights over agricultural land); and indicator 5.a.2 (legal frameworks, including customary law, that guarantee women's equal rights to land ownership and/or control over land) (UN, 2018).

In addition, the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (FAO, 2012) emphasize gender equality as a principle, and task States with ensuring equal tenure rights and access to land, independent of civil and marital status.

Among the three Rio Conventions on Biodiversity, Climate Change and Desertification, the UNCCD is the only one with explicit reference to women's roles and participation in the text of the Convention (articles 5, 8, 10 and 19, see Table 1, Supplementary Information). Since its adoption, the Secretariat, Parties and other stakeholders have demonstrated interest and sensitivity to gender equality and women's rights in the implementation of the Convention's mandate. The development of the Advocacy Policy Framework on Gender in 2011; the Namibia Declaration and the Ankara Initiative; a number of decisions adopted by Parties at the 13th session of the Conference of the Parties to the UNCCD (COP13) (Table 2, Supplementary Information); and the high-level gender day events at UNCCD's COPs sessions demonstrate an evolving commitment to gender mainstreaming in the implementation of the UNCCD at all levels.

A major intergovernmental breakthrough was realized at the COP 13, which was held in Ordos, China in September 2017. Parties to the Ordos Declaration pledged “to address the gender inequalities which undermine progress in the implementation of the Convention by pursuing the full and effective participation of both men and women in planning, decision-making and gender-responsive implementation of the Convention at all levels” (UNCCD, 2017e). Supporting the Ministers' pledge are COP decisions with specific gender-related mandates, including the multi-year work-plans for the Convention; the Gender Action Plan (2017); the work of the Science Policy Interface on the conceptual framework for LDN; and the UNCCD 2018-2030 Strategic Framework (Table 2 SI). Objective 2 of the 2018-2030 Strategic Framework calls for improving the living conditions of affected populations so that “local people, especially women and youth, are empowered and participate in decision-making processes in combatting desertification, land degradation and drought” (UNCCD, 2017b). Of relevance from an implementation perspective, are gender-responsive decisions of the workplans and costed workplans, which operationalize the 2018-2030 Strategic Framework (see Table 2 SI).

In a landmark decision, the COP 13 adopted the first Gender Action Plan (GAP) on “gender equality and women's empowerment for the enhanced and effective implementation of the Convention” (UNCCD, 2017c), consolidating earlier efforts and key decisions recognizing the crucial contributions of gender equality and empowerment of women to

(footnote continued)

and empowerment of women and girls.” (United Nations, 1995)



Fig. 1. Ensuring land rights contributes to advance the SDGs. Source: modified from (International Land Coalition, n/d).

the effective implementation of the Convention, and the 2030 Agenda for Sustainable Development. One proposed area of intervention is “to build the technical capacities of UNCCD stakeholders at all levels to design and implement gender-responsive plans and programmes, including in LDN interventions”, which enables its Parties to advance LDN targets alongside GAP implementation.

### 3. Gender analysis in Land Degradation Neutrality

As the implementation of the UNCCD and the SDG 15<sup>4</sup> shifted the discourse towards Land Degradation Neutrality (LDN), the narrative for a stronger consideration of gender equality and women’s rights have become more central. The UNCCD’s *Scientific Conceptual Framework for Land Degradation Neutrality (LDN)* (Orr et al., 2017) encourages the integration of a gender perspective in the design, planning, implementation and monitoring of LDN initiatives, emphasizing inclusivity, participation and gender-sensitivity.

Different entry points of the LDN conceptual framework bring attention to gender inequality and women’s land tenure insecurity. Important principles aim to ensure *gender-responsive land rights and tenure security* in the pursuit of LDN, including assessments on land use decisions; participatory process applications; examination of power and access to information; and application of the principles and standards of the Voluntary Guidelines of the Responsible Governance of Tenure

(FAO, 2012). Further, it recommends the use of FAO’s Gender and Land Rights Database (GLRD), which highlights the major political, legal and cultural factors that influence the realization of women’s land rights throughout the world (Cowie et al., 2018).

The framework also includes guidelines for gender consideration in the design of preliminary assessments establishing recommended practices, such as ensuring that those collecting and analyzing the data understand gender roles and social dynamics; asking questions that are context-specific; including women’s contributions in stakeholder engagements; and allocating financial resources and adequate planning for the development and collection of gender-sensitive indicators and sex-disaggregated data to accurately monitor progress (Cowie et al., 2018).

Despite the aforementioned entry points and guidelines, a report tasked by UNCCD Secretariat to identify gender gaps in the implementation of the first phase of the LDN pilot target-setting (2014–2015) highlighted that while most of the pilot countries have made efforts to ensure gender balance in their LDN target-setting Working Groups, only two out of 14 summary reports from participating countries (Chad and Ethiopia) mentioned women or gender issues.<sup>5</sup>

<sup>5</sup> The report from Chad contained the most extensive inclusion of women, citing in several places the importance of women’s participation and engagement at all stages of the project as well as a goal to increasing income of vulnerable groups such as young women. Ethiopia’s report SWOP analysis identified “limited socio-economic analysis in terms of institutions, customary laws, gender roles, pastoral livelihoods, and encroachment by invasive weeds” as among the challenges to combat desertification. Land Degradation Neutrality

<sup>4</sup> SDG 15: “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”

Governments are the key actors in implementing a *gender-responsive LDN*, starting with the formulation of voluntary targets to achieve LDN at national and sub-national levels by 2030. Moreover, the development of transformative policies and programmes aligned with the principles of LDN, to achieve the nationally determined targets will require a gender-responsive approach to ensure successful implementation and delivery of meaningful multiple benefits to women. To this end, the next section describes promising practices identified through case studies (Table 3 Supplementary Information) for successfully integrating gender perspectives into policies and programmes that can support land degradation neutrality.

#### 4. Promising gender mainstreaming practices in sub-regional, national and local efforts to address land degradation

The case studies summarized in Table 1, and described extensively in Table 3 SI, highlight five critical aspects of gender mainstreaming: enshrining women's rights in law and practice; ensuring women's participation in land governance and decision making; equalizing access, use and control of land; addressing gender roles to empower women; and closing the gender data gap. The case studies exemplify interventions that contribute towards avoiding, reducing, restoring and/or rehabilitating degraded lands. The cases typically employ a combination of complementary strategies and approaches (see Table 3 Supplementary Information).

#### 5. Discussion

The case studies (Table 1) analyzed provide key lessons for addressing gender issues in land degradation efforts:

- As highlighted in the Scientific Conceptual Framework for Land Degradation Neutrality, women's land rights and tenure security are fundamental for achieving LDN. The policies and implementation programs in Ethiopia and Rwanda demonstrate how women's formal rights can support conservation and sustainable land use practices. Secure legal rights to land, especially for women, have been shown to provide multiplier benefits such as greater status and decision-making power within the household, as well as greater likelihood of investing in soil conservation and agroforestry (Landesa, 2017). Where the titling process fails to ensure the protection of women's land rights, women may be less likely to responsibly manage the land for the long-term since their investment is not secure. Women, however, are often excluded from formal titling, even where laws or policies exist. Support for stronger gender sensitive laws and policies and their effective implementation, including addressing the political, legal and cultural barriers to their realization, appears essential to advance the SDG target 15.3 and the new GPA of the UNCCD.
- Community consultation and empowerment, including explicit consultation with women, recognition of gender roles and efforts to empower women, is essential for supporting sustainable land management and livelihoods. As stated in the summary findings from the case study above in the Sahel region, "all efforts to combat desertification must begin and end with local land users, women and men" (Table 3 SI). The Climate Change Adaptation Project in Senegal, Climate Smart Agriculture Project in Uganda and Mainstreaming Sustainable Land Practices project in Jordan demonstrate how gender sensitivity in project planning can help communities restore their land, while also supporting food security and livelihoods. Jordan's project on mainstreaming Sustainable Land Management Practices is an example of gender-sensitive, community-led sustainable land management. It focused on building

local and national capacities and improving income-generating activities, especially for women, the goal being to improve the quality of life for rural communities affected by land degradation. The project evaluation found overall successful restoration and rehabilitation, with critical uptake of agro-ecosystem restoration and reduced erosion practices, which in tandem enabled climate change adaptation and mitigation, and improved biodiversity (IFAD, 2016).

- When gender-sensitive approaches are taken and women are assigned the role of managers of resources, for example, in the case of Senegal, the responsibility to restore degraded lands, and in Brazil, to guard the forest, there can be spillover benefits for women, the community and the environment. With secure land rights, the Senegalese women deployed their agro-ecological approaches that helped in combatting desertification through practices such as water harvesting, agroforestry, use of simple farm ponds, enhancing soil fertility through organic means to improve water holding capacity, changing the way crops are grown and introducing drought-resistant crop varieties. The Bolsa Foresta beneficiaries worked to stop deforestation and, additionally, the empowered women beneficiaries increasingly participated in the formal economy and in decision-making processes. In Uganda, gender-based constraints were identified, including inequitable access to productive resources (e.g., land, tools, seeds, information/knowledge), which limited women's participation and led to inequitable decision-making even while women carried most of the workload. The project designed strategies to tackle gender issues, including prioritizing co-educating farmer groups to enable women to access productive resources through these programs; setting targets for equal numbers of men and women being trained; and promoting climate-smart technologies that reduce workloads for women and increase productivity enabling women to have additional income from selling their own crops.
- There is currently a paucity of systematic, consistent global and national data on the scope of women's land and resources rights and tenure security (IUCN, 2015). While land indicators for SDGs 1 and 5 promote the collection of sex-disaggregated data, those indicators have not achieved Tier 1 status to ensure that countries will prioritize collecting data on women's and men's tenure security. The UNCCD Science Policy Interface has cautioned that if gender is excluded from the analysis of preliminary assessment data (e.g. poorly selected indicators, lack of advanced planning for the disaggregation of data by sex), then findings can be incomplete or misleading (UNCCD Secretariat, 2017a). Kyrgyzstan and Tajikistan evidence the positive effect of staff government training for advancing gender-sensitive data collection, while Guyana exemplifies the positive impact of gender-responsive monitoring and reporting on land degradation, including LDN target setting.

#### 6. Recommendations

At the UNCCD, Parties to the Convention and the Science-Policy Interface (SPI) have not only recognized the complementarity of the twin agenda of gender equality and land degradation neutrality, they have mandated Parties to address gender issues in their LDN programme development and implementation. The LDN conceptual framework sets out recommended practices to integrate a gender perspective in planning and implementation of LDN projects and initiatives, including national target setting (Orr et al., 2017). These range from gender sensitive data collection to engagement of gender experts to refine research methods and incorporate a nuanced context analysis of the factors that undermine women's land rights. Case studies analyzed (Table 1) highlight why their effective implementation is imperative for the success of LDN.

The 2018-2030 Strategic Framework (UNCCD, 2017a) makes a poignant call for improving the living conditions of affected populations and empowering women through participation in decision-making

(footnote continued)

(LDN). (UNCCD Secretariat, 2016).

**Table 1**

Summary of case studies on gender mainstreaming in sub-regional, national and local efforts to address land degradation, categorized according to critical aspect of gender mainstreaming.

Enshrining women's rights in law and practice	
Gender-responsive recognition and documentation of land rights	<p><b>Ethiopia:</b> The land certification and registration process undertaken in the early 2000s increased landowners' likelihood to invest in soil and water conservation measures by 20 to 30 percent. The process mandated the issuance of land certificates in the names of both spouses as joint holders, and the consent of both as a prerequisite to selling or renting land. Such registration and the corresponding security of tenure had a strong positive effect on conservation, maintenance and improvement of plots, which has increased agricultural productivity and contributed to reducing poverty (Gorfu, 2016).</p> <p><b>Rwanda:</b> Legal, regulatory and institutional frameworks implemented in 2006 aimed at increasing land tenure security of vulnerable groups, including women. Women's land rights were protected in land transactions, as land transfer forms require wife and husband agreement and signing of contracts. With their names on land parcels, women were able to use the land as collateral for loans from banks and microfinance institutions (United Nations Human Rights Office of the High Commissioner and UN Women, 2013). After the 2006 land registration programme, registered owners were more than two times as likely to invest in conservation measures than unregistered owners. This included female-headed households, leading to increased incomes and enhanced socio-economic resilience (Byamugisha, 2013; UNCCD CSO Panel, 2017).</p>
Ensuring women's participation in land governance and decision-making	
Gender-sensitive, community led sustainable natural resource and land management	<p><b>Jordan:</b> The programme Mainstreaming Sustainable Land Management (SLM) Practices, 2010-2015, focused on building local and national capacities and improving income-generating activities, especially for women. Elected "local community committees" were encouraged to ensure representation of all targeted community members, with representation of women. Other targeted efforts to engage women included participation in training and entrepreneurship (i.e., income-generating activities and credit). The project evaluation found overall successful restoration and rehabilitation (IFAD, 2016).</p>
Women's equal and meaningful participation in land governance	<p><b>Peru:</b> A local network of nongovernmental organizations helped facilitate targeted interventions in communities. Through capacity development and training of indigenous and rural women on gender equality and land rights, communities of Sierra in Peru successfully amended their laws to mandate women's right of participation and decision-making in the governance of communal lands, including use and control of community land and resources (Hannay, 2016).</p> <p><b>Mali:</b> A Natural Resource Management Project focused on gender mainstreaming ensured the entire project staff was equipped to address gender issues in day-to-day operations, and project development required consultation with local women and women's groups, with the groups having a "women's veto right" (FAO, 2003), p28.</p>
Equalizing access, use and control of land and resources	
Gender-responsive land use and resource management	<p><b>Senegal:</b> The Climate Change Adaptation Project in the Areas of Watershed Management and Water Retention included a capacity-building component of targeted training and workshops on improving gender-sensitive agricultural productivity. Successful practices/actions included improved rehabilitation and restoration of agricultural land and natural resources, as well as positive socio-economic impacts such as women's economic empowerment and focus on kitchen gardens (IFAD, 2016), p.27.</p> <p><b>Niger and Burkina Faso, Senegal:</b> A program focused on the Sahel promoted local land use management that included resource management training, income-generating activities and micro-financing for women. Findings concluded that all efforts to combat desertification must begin and end with local land users, women and men (FAO, 2003), p.24.</p> <p><b>Nicaragua:</b> Nicaragua's case is an example of combining strong legal frameworks, gender-responsive land rights and access to markets for women (Table 3SI). The government instituted a nationwide property regularization plan for comprehensive property titling (International Monetary Fund, 2011), including "land for rural women and titling of properties to female heads of families (UNCCD Secretariat, 2017b). A 2010 national law established a gender equity fund for purchasing land for rural women, paving the way for rural women's land ownership and a measure that will go a long way in helping rectify gender inequality in land ownership and control (Silva, 2016) that are key for sustainable land management and land degradation mitigation.</p> <p><b>Uganda's</b> climate smart agriculture (CSA) project identified gender-based constraints and developed strategies to tackle gender issues. As a result of the project, 212 women and 270 men became CSA farmer champions; CSA and sustainable land management were practiced on 1,500 hectares of land and another 1,500 hectares are under CSA by those who have learned from project beneficiaries; 100,000 agroforestry trees were planted; and the average maize and bean crop yield has tripled in project sites (Muwaya, 2017).</p>
Gender Smart, Climate Smart Agriculture	
Addressing gender roles to empower women	
Women-led restoration of degraded land	<p><b>Senegal:</b> The Feed the Future project allocated parcels of degraded, abandoned land to women and provided training and inputs in exchange for land restoration (UNCCD CSO Panel, 2017). The programme delivered on securing women's land rights, boosting incentives for restoring land and promoting sustainable agricultural practices. Women used a suite of innovative conservation agricultural techniques to make the land more productive and resilient and to sustain low maintenance, micro-nutrient-rich crops. In addition, the crops provide women with nutritious food and a new stream of income (Sanjak, 2016; UNCCD CSO Panel, 2017; USAID, 2015).</p> <p><b>Brazil:</b> The Bolsa Floresta Program, which recognizes women as guardians of forest provides a combination of payments to families, community associations, social development projects and income-generating activities as incentives to avoid deforestation. The monthly payments were issued through bank cards in the name of married women with children to maximize women's role in the family and ensure more efficient spending on immediate family needs (Rival, 2013). The bank cards boosted the confidence and status of beneficiary women and enabled them to access the formal economy and participate in community meetings (Agustsson et al., 2010).</p>
Closing the gender data gap	
Training for gender sensitive data collections	<p><b>Kyrgyzstan and Tajikistan:</b> UN Women trained government staff and civil society to improve gender sensitivity and enhance understanding about laws governing land rights. Village and district-level land specialists were further trained on gender-sensitive data collection to better enable them to respond to rural women's concerns and provide more accurate information to inform policy and implementation reform (UN Women &amp; United Nations Office of the High Commissioner for Human Rights, 2013).</p>

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Table 1 (continued)

Enshrining women's rights in law and practice	
Gender-responsive monitoring and reporting	<p><b>Guyana:</b> The Government of Guyana increased awareness and facilitated the participation of women in UNCCD implementation initiatives. The government participated in UNCCD's global LDN Target Setting Program to stop land degradation through establishing targets for managing land degradation (Government of Guyana, 2017). The programme activities include a National Survey to identify land degradation hot spots with participation from over 205 men and 241 women, identifying and addressing issues arising at the intersection of gender and land use and land management and engaging in gender-responsive monitoring and reporting (Henry, 2017). Gender issues will be considered in mainstreaming sustainable land development and management in Guyana, with support from partners. Particular attention will be made to ensure effective representation of women in decision-making roles during project implementation.</p>

processes to combat desertification, land degradation and drought. Its first Gender Action Plan (GAP) adopted at the COP 13 (2017) mandates building technical capacities of UNCCD stakeholders at all levels in the design and implementation of gender-responsive plans and programmes, including in LDN interventions. A growing number of inspiring best practices at the sub-regional, national and local levels to address land degradation in a gender-responsive manner were presented and discussed in Sections 4 and 5, respectively.

Benefitting from all these intergovernmental mandates, human rights obligations, knowledge and experiences, the following key recommendations are underscored.

#### 6.1. To enhance understanding, and to advance gender-responsive LDN plans and programmes

- Ensure representation of women in Sustainable Land Management (SLM) and desertification, land degradation and drought (DLDD) policymaking and finance strategies including women delegates, women's rights groups and experts and women from affected countries;
- Condition funding for LDN programs (including through the new LDN Fund) and UNCCD-related funding initiatives on integration of a gender perspective in implementation and ensuring outcomes that promote gender-equality and women's and girls' empowerment;
- Develop concrete, practical guidance and tools for designing, implementing, monitoring and assessing gender-responsive LDN interventions;
- Equip female and male delegates of the CCD with technical know-how on gender perspectives and SLM, LDN and DLDD, as well as with the skills and capacity to participate effectively in Convention's meetings;
- Monitor large-scale land-based investments to ensure gender-responsive, socially-responsible consultation and consent by indigenous peoples and communities;
- Conduct regular assessments of how gender inequality and its impacts are addressed in LDN and DLDD implementation plans.

#### 6.2. To include gender considerations in the design of preliminary LDN assessments

- Ensure gender-responsive, socially-responsible consultation and consent by indigenous peoples and communities with respect to large-scale land-based investments that affect them;
- Facilitate women's equal and meaningful participation and leadership in land and natural resource governance, decision-making and in conflict resolution mechanisms addressing land and natural resource disputes through government mandates or otherwise;
- Mandate consultations with rural and indigenous women, women's organizations and other concerned civil society groups, as well as academics, researchers and practitioners in designing sustainable land management, land rehabilitation, land restoration and water management projects and programmes;
- Bolster and resource rural livelihood schemes to teach and

incentivize sustainable land use management, soil conservation and drought proofing through water harvesting, agroforestry and other green economy measures that at the same time strive to empower rural women;

- Implement data collection that is sex-disaggregated and gender-sensitive; and monitor effects of gender mainstreaming policies on all genders to flag policy and programmatic shortfalls for course-correction;
- Sustain awareness-raising and capacity-building for UNCCD focal point ministry staff and those who are engaged in implementing the land conservation / restoration policies at the local and national levels on gender-responsive LDN and gender-responsive implementation of the Convention including the 2017 UNCCD Gender Action Plan;
- Sustain outreach and capacity-building to enhance women's and communities' legal literacy about land rights and to ensure that rural and indigenous women are equipped with skills and new technologies to conserve and manage their land and related resources;
- Fund and conduct larger-scale, longitudinal, comparative or multi-country quantitative studies to build the evidence base on gender-responsive LDN interventions and their impact and outcomes in promoting gender equality, women's empowerment and community resilience.

## 7. Conclusion

The Land Degradation Neutrality Conceptual Framework brings gender equality issues to the center of the LDN work, through its guidelines for gender consideration in *the design of preliminary assessments* establishing recommended practices (see Section 3). Achieving gender equality and the empowerment of women and girls, and realizing women's rights is indispensable to the realization of better outcomes for all the SDGs, including target 15.3 of striving to achieve a land degradation neutral world.

Women's rights to land have to be secured. They need be afforded equal voice in decision-making on land and in land governance to advance sustainable land management. Measures need be put in place to assure them access to financial resources and other assets. When women and men are equally engaged as actors, contributors and beneficiaries of land degradation programmes and interventions, the outcome for the society, the environment and for all citizens are maximized as the contribution of half of the world's population is recognized.

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## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.envsci.2018.08.006>.

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