This synthesis note provides an overview of key findings related to human rights contained in the Special Report on Climate Change and Land released by the Intergovernmental Panel on Climate Change (IPCC) in August 2019. These findings relate to to the importance of human rights, customary Land tenure, gender equality and indigenous and local knowledge.

Introduction

2019 was a year of warnings that life on land as we know it is critically endangered. These warnings, on the pages of scientific publications[1] and the faces of transfigured landscapes, confirm that human activities are fueling a number of interlinked transformations. These transformations include the loss of soil fertility, desertification, the loss of key swathes of biodiversity, and climate change. In the middle of this tipping point year, in recognition of the centrality of land to both climate mitigation and adaptation[2], the IPCC issued its Special Report on Climate Change and Land. The Special Report synthesizes knowledge across disciplines to analyze *how* activities on land, including deforestation, other forms of land-use, and agriculture, are contributing to desertification, land degradation, food insecurity, and climate change; *what* land-based response options can offer for both mitigation and adaptation pathways and *why* approaches that respect human rights, draw on indigenous and local knowledge, and promote customary and gender-equitable land tenure are crucial to getting land-based solutions right. This last point bears repeating: through a robust scientific process, the IPCC, the world's foremost body for scientific understanding of the climate crisis and our options to respond to it, has said that rights-based approaches are the only way forward – a message endorsed by all governments as they unanimously adopted the report in August 2019.

The IPCC has in its public messaging around the report distilled four main messages: "Land is where we live. Land is under growing human pressure. Land is part of the solution. Land cannot do it all."[3] This briefing concisely explains what is meant by each of these statements. It also demonstrates, through a close reading the text of the report, that the report has a clear and constant fifth message, under-appreciated to date: **Human rights are critical to unlock land's potential as a solution.** We hope this briefing is useful for policy makers, human rights advocates, and others concerned with the intersections between rights connected to land and climate change.

Background

In addition to its regular assessments of the science related to climate change, the IPCC also regularly releases "special reports" that explore in greater detail key drivers of climate change and policy response options. The themes of these special reports are decided by all governments. While other IPCC reports have dealt with land,[4] the 2019 special report does so more holistically and in an updated fashion. It examines more holistically the relationships between climate change and food security and goes into great depth on policy responses and enabling frameworks.[5] The report was jointly prepared by all three of the IPCC's working groups that traditionally deal with the physical science basis (WG-1), climate impacts, adaptation and vulnerabilities (WG-2), and mitigation options (WG-3). Consequently the report addresses comprehensively the interactions between land and climate change.

1 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Global Assessment Report on Biodiversity and Ecosystem Services* (2019).

2 Mitigation refers to actions that seek to prevent atmospheric accumulation of greenhouse gases; adaptation to efforts to reduce the impacts of climate change on (usually human) populations.

3 https://twitter.com/IPCC_CH/status/1159709001506066432.

4 Every assessment since the Second Assessment has contained sections on land use, and certain special reports, especially the 2000 Special Report on Land Use, Land-Use Change and Forestry have explored it more closely.

5 MR 83.

Land is where we live

The report's first key message seems obvious, but it forms the starting point for the other conclusions. People rely on land for nearly all of our basic needs, including food, raw materials, and shelter.[6] Many if not most people also have an intangible but no less important relationship to land: It hosts our civic and cultural life as well as our sacred sites, and provides aesthetic inspiration.[7] One attempt to place a value on the various "ecosystem services" that land provides suggests a figure equivalent to total annual global Gross Domestic Product.[8] Climate change and related ecological transformations gravely threaten land's ability to host human life.

Land is under growing human pressure

As humans have grown more numerous and wealthier, our impact on land has intensified. Unfortunately, this intensified impact has led to very clear and damaging trends: the loss of soil fertility, desertification,[9] loss of biodiversity, and climate change.[10] These processes are interlinked. Reduced soil fertility from destructive agricultural practices leads farmers to expand areas under agricultural cultivation, which contributes to deforestation, which feeds into desertification and global climate change.[11] In turn, global climate change shifts climate zones and contributes in many regions to desertification and agricultural productivity.[12] Along with floods, wildfires, and other extreme events, which climate change makes more intense and frequent, these trends are already negatively impacting food security and other rights dependent on land, and will likely continue to do so at an accelerating rate.[13]

Land is part of the solution

Policy interventions in agriculture, forestry, and other activities on land (collectively "land-based responses") hold promise for both mitigating climate change and adapting to it.

Regarding mitigation, the SRLCC concludes that land-based responses will be necessary to achieving the target of limiting warming to 1.5° C or well below 2° C,[14] as agreed to in the Paris Agreement.[15] This brief consciously does not attempt to explain the intricacies of accounting for greenhouse gas emissions from land use and forestry. However, understanding what is meant by "land is part of the solution" requires a basic overview. Land (both soils and organisms living on them) is part of the natural flux of carbon and other greenhouse gases in and out of the atmosphere. On net, land has been and remains a sink—something that takes GHGs out of the atmosphere.[16] However, human activities on land (including deforestation, burning and draining peatlands, application of fertilizers, raising livestock, and more) contribute to climate change—in fact by the rough categorization of sectors used by the IPCC, they are the second largest source

6 Summary for Policy Makers ("SPM") A1.1; Main Report ("MR") 81.

7 SPM A1.1; MR 81.

8 SPM A1.1; MR 81.

9 The SRCCL defines "desertification" as " land degradation in arid, semi-arid, and dry sub-humid areas resulting from many factors, including climatic variations and human activities"; Land degradation in turn is defined as "a negative trend in land condition, caused by direct or indirect human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of at least one of the following: biological productivity, ecological integrity or value to humans."

10 SPM A1.3.

11 SPM A1.6, A2.3; MR 133-135, 183

12 SPM A2, MR 140-148

13 A2.8, MR 442, 450.

14 SPM B.7

15 Paris Agreement art. 2(a).

16 MR 152, 155

of *anthropogenic* emissions.[17] Land can be part of the solution on the mitigation side through policies that protect and enhance land's role as a sink of greenhouse gases, and interrupt the chain of human behaviors on land that contribute to climate change and related environmental problems.[18]

Regarding adaptation, land-based solutions can improve the resiliency of food systems, human habitations, and key infrastructure to the effects of climate change.[19]

The SRLCC compiled a number of land-based responses, and assessed the likely impacts of each on mitigation, adaptation, desertification, land degradation, and food security. Some are deemed to have positive impacts across all categories, while others have no or negative impact on certain categories. Some of the identified options include

- Changing how food is produced, including no-till agriculture and rotational cropping/grazing
- Increased food productivity
- Other practices that enhance soil organic carbon
- Changing diets away from meat and dairy
- Reducing food waste
- Improved forest management
- Reduced deforestation and degradation
- Reduced conversion of peatlands
- Growing crops for bioenergy, accompanied by carbon capture and storage during the subsequent conversion to electricity ("Bioenergy with carbon capture and storage")
- Reforestation and forest restoration.[20]

Response options that decrease pressure on land—including through sustainable intensification of food production, agroforestry, or changing diets, unsurprisingly are assessed as having the largest positive impacts across all challenges.[21] Options that increase pressure on land—e.g. extensive afforestation (growing forest where it wasn't previously) or many forms of bioenergy production—tend to show a negative impact in at least one category.[22]

Land cannot do it all

The more we rely on land-based climate mitigation solutions to deliver the necessary reduction in GHG emissions, the less likely it is that those solutions will have positive impacts on adaptation, desertification and degradation.[23] A key message of the report is therefore the necessity of pursuing other mitigation pathways, including renewable energy, transportation, and transforming the built environment.[24]

Rights-based approaches unlock land's role as a solution

Those then are what the IPCC identified as the four takeaways. However, the report also examines what can enable these land-based responses—what it calls enabling frameworks or decision-

[17] IPCC synthesis report 2014, 47.
[18] MR 58
[19] MR 102-103 553
[20] See summary for policy makers pp. 24-25 for a full list.
[21] SPM B.2.1-2.3
[22] SPM B.3.1-3
[23] SPM B.3.1-B.3.2
[24] SPM B.3, B7.4

making tools.[25] These are meant to represent larger approaches to governance and decision-making that facilitate land playing a role as a solution.[26] The frameworks or tools mentioned in the report include rights-based approaches, reliance on indigenous and local knowledge, strengthening land tenure, and approaches that support women's rights. Each is summarized in turn.

Rights based approaches

The SRLCC repeatedly mentions the importance of rights-based approaches to development, policy-making, and, specifically, the land-based responses to climate change discussed above.[27] Rights-based approaches, the report states, inherently promote greater citizen participation in decision-making, facilitating better choices when faced with difficult trade-offs.[28] Rights-based instruments, for example those that recognize individual or communal land-tenure, promote greater investment in sustainable agriculture and forestry.[29] Finally, and significantly, the report also acknowledges that rights-based approaches focus attention on answering the crucial question of liability for climate damages.[30]

Customary Land tenure

As the report acknowledges, "Much of the world's carbon is stored in biomass and soil on the territories of customary landowners including indigenous peoples, making securing of these land tenure regimes vital in land and climate protection."[31] Customary land tenure regimes (local, often informal systems of rules governing access to and use of a resource system) have evolved to manage forests, rangelands and other common-pool resource systems in locally adaptive, sustainable ways, although they are also susceptible to the pressures of modern population growth, globalization, and climate change.[32] However, domestic legal regimes presently do not formally recognize customary land tenure on the majority of lands over which it applies.[33] Rather than attempting to substitute individual property rights or rely only on stringent registration procedures for community lands, the report acknowledges that official recognition of customary systems of land tenure and other forms of property rights beyond freehold tenure is crucial for encouraging ongoing sustainable management of these lands.[34] Respect for community land tenure also requires partnership with local communities for any land-based climate response measures on their lands.[35]

Gender

Promoting women's rights is, the report states unequivocally, essential to land as a solution.[36] Discrimination against women in access to land and other productive resources or to decision-making processes undermines women's food security, as well as their ability to mitigate and adapt

[25] SPM C.1; MR 103-106, 719-723

[26] SPM C.1; MR 103, 719

[27] MR 106, 287, 439, 754

[28] MR 754

[29] MR 106, 287.

[30] MR 106 ("Rights-based instruments and customary norms are consistent with the aims of international and national human rights, and the critical issue of liability in the climate change problem.")

[31] MR 749.

[32] MR 106, 283-84.

[33] MR 749.

[34] MR 353, 749, 753.

[35] MR Table 7.7

[36] SPM C4.4; MR 104-05, 286, 447, 717.

to climate change.[37] Women are not homogenous; it is necessary to understand how gender intersects with race, class and geography among other variables to clarify the relationship between gender and climate impacts.[38] Nevertheless, in many places, various forms of discrimination against women do increase their susceptibility to climate risk, even as they also often hold knowledge that can enable successful climate mitigation and adaptation.[39]

The report therefore recognizes that "Women's economic empowerment, decision-making power and voice is a necessity in [Sustainable Land Management] decisions." At a broader level, the report suggests how to mainstream gender into land-based climate responses: "Mainstreaming…requires assessments of gender-differentiated needs and priorities, selection of appropriate policy instruments to address barriers to women's sustainable land management, and selection of gender indicators for monitoring and assessment of policy."[40] Finally, the report acknowledges that respecting customary systems of land tenure and promoting women's rights may sometimes come into tension,[41] though it does not attempt to resolve this difficulty.

Indigenous and Local Knowledge

Lastly, the report emphasizes the importance of indigenous and local knowledge ("ILK") to land playing a role as a solution to climate mitigation and adaptation. "Respect for ILK is both a requirement and an entry strategy for participatory climate action planning and effective communication of climate action strategies."[42] This theme obviously dovetails with the importance of respecting customary land tenure but extends beyond it. Beyond the rights of indigenous people and rural populations to control the fate of lands they have traditionally managed,[43] and the general right of all people to participate in decisions that affect the natural environment upon which they depend,[44] the SRLCC argues that land management policies developed on the basis of ILK are more likely to successfully respond to multiple environmental challenges.[45] Finally, the report presents a few thoughts on how ILK and externally developed knowledge (which may have been developed using scientific methods) can work in concert.[46]

The rights of rural women to access land on an equal basis with men, of indigenous and rural populations to have their customary land tenure respected, and of all people to participate in environmental decision-making and have sufficient food are all established within international law and should all be respected regardless of their instrumental value for climate responses. Nevertheless, the IPCC special report is a banner recognition of how ambitious climate action not only will seek to protect human rights from the worst impacts of climate change, but also *requires* rights-based approaches to succeed.

[37] MR 717-718
[38] MR 717-718
[39] MR 717-718, 447-448
[40] MR 718.
[41] MR 718.
[42] MR 747.
[43] UNDRIP art. 32(1); UNDROPP arts. 10, 17
[44] UNFCCC art. 6(a); Aarhus Convention art. 7; Escazu Agreement art. 7.
[45] MR 104, 283-284, 747.
[46] MR 104, 746.