A GI-ESCR Practitioner's Guide

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*This idea of fulfilling all rights within ecosystems' regenerative capacity effectively gives us a human rights-based definition of sustainable development – development that secures all human rights for the current generation within an amount of ecological space that does not compromise the human rights of future generations.*

*Based on this definition, practitioners should consider that all development activities must aim at securing human rights within a sustainable amount of ecological space. The ecological dimensions of rights should be emphasized to ensure each one is secured sustainably.*

# A Human Rights-Based Approach to the Environment and Climate Change:

Content




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# Executive Summary

The present model of global development is unsustainable. The ecological crisis, of which climate change is just one aspect, is a daily reality for millions upon millions, in particular the most marginalized people – those who were not responsible for the crisis in the first place. Nonetheless, international action is lacking, and awareness of the scale of this crisis is yet to cause a transformation of development practice. Without a livable planet, further human development is impossible.

Combining human rights-based (HRBA) and ecological approaches provides a powerful framework of analysis and basis for action to understand and guide development. HRBAs draw attention to the common root causes of social and ecological injustice. Human rights standards and principles then guide development to more sustainable outcomes by recognizing the links between ecological and social marginalization, stressing that all rights are embedded in complex ecological systems, and emphasizing provision for need over wealth accumulation. Together, human rights and ecology give a clearer idea of what development is to achieve – securing all human rights for the current generation within a sustainable amount of ecological space that does not compromise the human rights of future generations.

The intrinsic connections between human rights and ecology are increasingly appreciated and outlined in this guide, providing practitioners with a broad overview of the links between substantive and procedural human rights, development and ecology, including the particular cases of women's, indigenous peoples' and children's rights.

In light of this HRBA to sustainable development, examples are discussed to illustrate the mutually-beneficial effects of projects that combine mitigation, adaptation and human development by taking an ecological approach and reducing the social vulnerability that leaves communities at risk from ecological crises. From small-scale renewable energy to relocation of displaced communities, much work is already underway to combine scientific and local, traditional knowledge in participatory development processes that build sustainable, ecologically resilient livelihoods. However, a more explicit HRBA can give further clarity to these projects anchored in internationally-recognized and respected norms, providing practitioners, movements and community organizations with focal points for mobilization on ecology and climate change.

## Introduction

The scale of the environmental crisis threatening human development cannot be understated. Global society requires an ecological footprint "the equivalent of 1.5 planets to provide the resources we use and absorb our waste" (GFN, 2013). In every area, we are using resources at a rate that cannot sustain our existence in the long-term.

However, the environmental crisis is not only a distant threat, but a daily reality for the most vulnerable and marginalized groups across the globe, particularly in the Global South, who face threats to their lives and livelihoods despite not being responsible, historically or currently, for the crisis. The imperative to correct these injustices while seeking to improve lives has increasingly obvious implications for development and human rights.

Unfortunately, the crisis's ramifications for life, livelihoods and health have not spurred policymakers or practitioners to sufficiently bridge the gap between the fields of the environment, development and human rights. This guide seeks to outline the overlaps between these areas, and argues that human rights-based approaches (HRBAs) provide tools for analysis and inspiration for action to integrate the environment in developmental theory and practice.

Rather than use the term 'environment,' this guide deliberately uses the term 'ecology' to recognize the interrelatedness of living and non-living features of ecosystems, and that our society is situated in and dependent on these complex interconnections. This also recognizes the linkages between particular threats, especially climate change, and the broader ecological crisis we face.

Furthermore, while much has been written on the international dimensions of the nexus between ecology, human rights and development, particularly regarding climate change negotiations, this guide is concerned first and foremost with the local level. This is not to say that that the global framework is unimportant, or not a worthy source of practitioner efforts; rather, this guide aims to outline what can be done here and now to ensure an ecologically and socially just future in the absence of such an enabling international political structure.

## Ecology, development and human rights

Bridging the gap between ecology, development and human rights is increasingly recognized as essential to securing a livable planet and defending, extending and deepening human rights. This is seen in the greater focus on both sustainability and human rights in the "five big, transformative shifts" necessary to replace the Millennium Development Goals (MDGs) suggested by the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda (High-Level Panel, 2013).

But this begs the question – why a human rights-based approach (HRBA) to ecology and development? It is often argued that HRBAs to development generally give a framework for analysis and a set of tools – human rights standards and principles – to guide development. The same applies to ecology and development.

### Understanding social and ecological injustice

The first stage of a HRBA is to analyze the underlying causes of social injustice. If done properly, such an analysis draws attention to the fact that *social injustice* is inextricably bound up in *ecological injustice*.

*Environmental justice* theory recognizes how discrimination and marginalization involves expropriating resources from vulnerable groups and exposing these communities to the ecological harms that result from use of those resources. The theory originated in US studies detailing how pollution and hazards corresponded with areas of poverty and racial exclusion, coining the terms 'environmental discrimination' and 'environmental racism.'

The same analysis applies globally. This is what ecological footprints effectively reveal –wealthy populations living beyond their means "survive mostly on biocapacity… appropriated from poorer countries." (Rees, 2013, p. 306) Marginalized peripheries, largely in the South, serve "locations of enrichment," safely removed and largely in the North, with resources, while becoming "danger zones" for climate change, pollution and global resource price fluctuations (Sachs, 2003, pp. 8-9). 'Climate justice,' in particular, has become a powerful narrative, elevating Southern voices that see climate change as a denial of human rights and development.

Mutually-reinforcing social and ecological injustices in traditional development are illustrated by the structural adjustment programmes (SAPs) of the 1980s. Through promoting export-orientated agriculture, farmers were moved away from subsistence farming. While loss of subsistence products and dependence on 'cash crops' left people vulnerable to commodity prices (Barry and Woods, 2012, p. 391), industrial farming methods contributed to land degradation, increased carbon emissions from fertilizers and long-distance trade, and loss of local knowledge for ecological resilience, which further increased vulnerability and suffering – "a vicious circle… of violations of human rights" (Ksentini, 1994, para. 54).

In such situations, struggles for rights and resource conservation effectively become one and the same. Nurturing functioning ecosystems reduces the vulnerability of marginalized groups; simultaneously, securing these groups' rights to control natural resources they depend on "are the best guarantee that the resources of the poor will not be easily diverted to the rich," making protecting subsistence rights "a central plank of natural and environmental conservation" (Sachs, 2003, p. 33).

**Human rights as priorities for sustainable development**

Any approach to development and human rights that ignores the ecological underpinning of human existence, *or* the power relations and injustices behind the ecological crisis, is therefore ultimately self-defeating. Evidence shows that development activities that "strive to protect and rehabilitate the

**Ecological destruction and human rights abuses go hand-in-hand – Niger Delta**

The Movement for the Survival of the Ogoni People has, over two decades, "explicitly phrased its campaigns in terms of human rights" against Shell's contamination of freshwater supplies and natural habitats in the Niger Delta with the collusion of the Nigerian state. The Ogoni people call for "the right to control of its lands and for the local people (and not the Nigerian state) to decide on *what* sort of development takes place in Ogoniland." Eight of the movement's leaders, including Ken Saro-Wiwa, were executed on trumped-up murder charges in 1995 following collusion between the state and Shell in bribing witnesses (Barry and Woods, 2012, p. 392). Family members would eventually seek redress in American courts, with Shell settling out of court for $15.5 million, while maintaining that this did not represent an admission of liability.

A case was taken on behalf of the Ogoni people to the African Commission on Human and Peoples' Rights against Nigeria in 2002. The Commission found violations of the Ogonis' rights to health (Article 16) and a general satisfactory environment favourable to development (Article 24) given Nigeria's failure "to prevent pollution and ecological degradation", while "failure to monitor oil activities and involve local communities in decisions" violated the Ogoni's right to freely dispose of their wealth and natural resources (Article 21). Violations were also found in the "rights to housing (including protection from forced eviction)" given "destruction of housing and harassment of residents who returned to rebuild their homes," and right to food following "destruction and contamination of crops by government and non-state actors." Nigeria were ordered "to cease attacks" on the Ogoni, investigate and prosecute perpetrators, provide compensation, prepare "environmental and social impact assessments in the future," and "provide information on health and environmental risks." However, five years later, Amnesty International reported little progress in enforcement (ESCR-Net, 2013). A 2011 UNEP report suggested it would take 30 years to clear up pollution in the region, with the Ogoni people still suffering severe health problems (Sotunde, 2013).

By focusing development on all humans' needs and capabilities, rather than the accumulation of wealth, human rights help establish respect for ecological boundaries. Resources are to be directed towards the satisfaction of human rights; anything beyond this is not only meaningless, but self-defeating by destroying the ecological foundation of human rights.

Human rights have therefore been proposed as "minimum moral thresholds" for ecological development that cannot be breached either *directly* (from the physical effects of the ecological crisis) or *indirectly* (through policy responses to the ecological crisis). Human rights guarantee minimum standards for all that cannot be breached in pursuit of aggregate benefits for the majority (Caney, 2010, pp. 73-90), such as 'green economy' programmes that reduce carbon emissions at the expense of minorities' rights. Human rights, and their

corresponding obligations, have been clearly defined, giving direct guidance about what constitutes these minimum standards that should be prioritized in sustainable development.

One key human rights principle is that the needs of marginalized or vulnerable groups be prioritized in development schemes. This *non-discrimination* principle requires that practitioners identify marginalized or vulnerable individuals and groups; address specific needs through "targeted and differentiated interventions;" and tackle underlying power imbalances and structural causes of "differential vulnerability" within and between households (ELAN, 2010, p. 5), while building the ecological resilience necessary to reduce vulnerability and achieve threshold needs (Ibid., pp. 17-18).

Addressing differential vulnerability demands that we recognize that, as well as the interconnectedness between human rights and ecology, different human rights themselves are *indivisible, interdependent and interrelated*. Without addressing the relationships between human rights, we cannot tackle the inequalities behind the ecological crisis or achieve sustainable development. For example, addressing the power relations behind marginalization emphasizes that 'the community' is not treated as homogenous. Women and children in particular suffer if their concerns are subsumed under community leaders'. While National Adaptation Programmes of Action (NAPAs) regarding climate change often prioritise larger-scale agriculture and forestry infrastructure, women in places like Malawi have argued for an equal emphasis on family planning, healthcare and child support services, noting that without these, "they could not make adaptation changes" (Reid *et al*, 2009, pp. 24-25). Just as sustainable ecosystems cannot be achieved at the expense of inequality and social injustice, one right "cannot be bought at the expense of" another (Nicholson and Chong, 2011, p. 132).

By insisting on tackling underlying inequalities and structural causes of vulnerability by addressing *all* human rights for *all* people, HRBAs aim for the *non-retrogression* and *progressive realization* of *all* human rights – sustainable development policy must improve, not impair or limit, human rights, with a particular focus on those who are currently excluded.

Together, these human rights principles – clearly defined standards including minimum thresholds, non-discrimination, indivisibility-interdependency-interrelatedness, non-retrogression and progressive realization – give clearer priorities to development that builds ecological resilience by addressing directly the root causes of ecological and social injustice, vulnerability and marginalization. As well as being just, this prioritization is vital given limited resources – especially with the reluctance of Northern states to recognize their historical and ongoing responsibilities. It also helps "establish common ground" for a more holistic, integrated and less projected-based approach to development and environmental policy (Hall and Weiss, 2012, pp. 359-361). This encourages proactive, preventative "human rights-informed policy decisions" designed to address long-term vulnerability and evaluate different policy initiatives for meeting ecological challenges (Ibid., pp. 364-365).

**Participation and accountability**

HRBAs promote such a proactive policy process by insisting on the active, free and meaningful *participation* of all those affected by the ecological crisis in sustainable development decision-making. Acknowledging participation *as a right*, rather than simply a desirable extra, is not a procedural formality, but an attempt "to increase control over resources and regulative institutions … by those hitherto excluded" (Stevens et al, 2003, p. 85). Exercising participatory control of resources is the key to building ecological resilience and social justice "since neglecting to include intended beneficiaries in key decisions increases the risk that interventions will not match people's priority needs" or be "culturally or ecologically inappropriate" (ELAN, 2010, pp. 5-6). For example, Sen stresses that enhancing civil and political rights can raise ecological awareness and encourage reflection over long-term ecological and social issues (UNDP, 2007b, p. 29). This requires combining the science of ecology with the "nurturing and enhancing" of

traditional, local knowledge for ecological resilience that communities already possess (ELAN, 2010, pp. 5-6).

Human rights also stress *accountability* for duty-bearers towards rights-holders, giving clearer responsibilities for those in a position of power or influence to reduce vulnerability in the face of the climate and ecological crises, while extending these principles internationally to other states and actors. Accountability "is about increasing people's capacity to claim their rights" *and* increasing duty-holders' "capacity to be held accountable" (Ibid., pp. 5-6).

Together, *participation* and *accountability* provide a focal point for community and social movement mobilisation for sustainable development (Andreassen, 2003, pp. 227-230). Ultimately, the goal of HRBAs is "self-mobilisation," rather than 'invited' forms of participation, where people "participate by taking initiatives independent of external institutions to change systems," gaining and retaining control of resources and decision-making (Reid *et al*, 2009, p. 25).

**Summary**

Human rights depend on a having a livable planet. Sustaining an inhabitable planet requires us to respect the interconnectedness between human society and ecology. In turn, transforming development to respect this "ecological embeddedness of all human freedom" (Barry and Woods, 2012, p. 386) requires us to address the inequality and exclusion that lies behind climate change and the ecological crisis. Human rights protect our most basic needs, and human rights principles, especially non-discrimination, insist that we are not treated differently in accessing those needs. Since those needs have a natural basis, no-one can take more over a sustainable share of natural resources without threatening others' rights; and since these resources are linked through ecological processes globally, all natural resources can be seen as part of the commons. If one person or group takes more than their fair share of these common goods, human rights globally are threatened. Human rights therefore demand that we protect these common resources, giving standards and principles for ensuring fair access to ensure our basic needs.

Simply put, existing human rights obligations demand immediate action to address the ecological crisis while developing all human rights, whether we have specific international climate change or other ecological treaties or not. Defending, extending and deepening human rights is thus the best environmental policy.

Based on the idea of the ecological embeddedness of human rights, Hayward suggests that all human rights require an equal, sustainable amount of "ecological space" (essentially, a sustainable ecological footprint) for each human being (Hayward, pp.). This idea of fulfilling all rights within ecosystems' regenerative capacity effectively gives us a human rights-based definition of sustainable development – development that secures all human rights for the current generation within an amount of ecological space that does not compromise the human rights of future generations.

Based on this definition, practitioners should consider that all development activities must aim at securing human rights within a sustainable amount of ecological space. The ecological dimensions of rights should be emphasized to ensure each one is secured sustainably.

## Human rights standards for sustainable development

Recourse to law is not enough, as "human rights mechanisms are only able to respond to a very small percentage" of ecological impacts (Turner, 2014, pp.29-30). The challenge is to integrate ecological and human rights protection into development on the ground, building local capacity and self-sustaining movements among those facing the worst effects of the ecological crisis.

**Substantive rights**

Although a right to the environment has been declared in, among others, the 1972 Stockholm Declaration ("man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a lift of dignity and well-being") and the African Charter on Human and Peoples' Rights Article 24 ("all peoples shall have the right to a general satisfactory environment favorable to their development"), as well as the right to sustainable development in the 1992 Rio Declaration, UN Framework Convention on Climate Change (UNFCCC) and Convention on Biological Diversity (CBD), these rights remain contested. However, existing human rights have clear ecological dimensions.

The ecological dimensions of existing human rights encompass:

1. The *ecological basis* for the right – the ecological processes rights depend on;

2. *Direct threats* to rights from the ecological crisis; and

3. *Indirect threats* to rights from our reactions to the crisis through policy.

Given ecological systems and human rights are interrelated, it is misleading to pinpoint discrete ecological processes or ecological threats for discrete rights. For example, it is reductive to say that the right to food only depends on the provision of foodstuffs by ecosystems, as these foodstuffs require other resources, like water and energy, as well as basic ecosystem processes like nutrient cycling and seed dispersal. Likewise, separating out ecosystem 'goods and services' that support the right to food from those that support the right to life is equally redundant, as the right to life itself depends on the right to food. Similarly, direct threats like sea-level rises caused by climate change cannot be said to threaten the right to self-determination alone, as without this "prerequisite" right (Hall and Weiss, 2012, p. 333), there is no basis for fulfilling others. Indeed, indirect threats from environmental policy, chiefly displacement of people from their land, for example from biofuel production (see below), threaten not just land rights, but rights that depend on land. Equally, threats to the right to work from poorly-planned 'green economy' programmes also threaten all the rights that depend on paid employment.

Thus, rather than pick discrete ecological bases or threats for discrete rights, the following categories of rights and treaty standards are highlighted for practitioners' reference as basic rights with significant ecological dimensions:

- The right to life, liberty and security of person
    - Universal Declaration of Human Rights (UDHR) Article 3 – right to life
        - UN Human Rights Committee General Comment 6 – right to life has "been too narrowly interpreted;" requires "positive measures," especially "to eliminate malnutrition and epidemics"
    - International Covenant on Economic, Social and Cultural Rights (ICESCR) Article 12 – right to health, including "the improvement of all aspects of environmental and industrial hygiene"
- Subsistence rights
    - International Covenant on Civil and Political Rights (ICCPR)/ICESCR Article 1 – right to self-determination ("all peoples may, for their own ends, freely dispose of their natural wealth and resources… In no case may a people be deprived of its own means of subsistence")

- ICCPR Article 47/ICESCR Article 25 – "nothing in the present Covenant shall be interpreted as impairing the inherent right of all peoples to enjoy and utilize fully and freely their natural wealth and resources"
- ICESCR Article 11 – right to an adequate standard of living, including food and water
- ICESCR Article 6-9 – right to work, including "safe and healthy working conditions," and social security

- Land rights
  - ICESCR Article 11 – right to an adequate standard of living, including housing
  - UDHR Article 17 – right to property "alone as well as in association with others" and right not to be "arbitrarily deprived of" property

**Indirect threats to human rights from environmental policy - biofuels**

Some of most obvious indirect violations of human rights come from biofuels. Where biofuel cultivation does not replace existing food production or occur in areas of high biodiversity, it can potentially provide alternative energy sources and diversify agricultural income. For example, early Brazilian sugar production for ethanol largely occurred around Sao Paulo, rather than the Amazon, with "limited environmental impact" (UNDP, 2007b, pp. 143-144). However, large-scale biofuel plantations cause "serious negative repercussions on food prices, ecosystem functions… and local food availability" (FAO, 2012, p. 7), cause "additional water stress and scarcity" (IE, p. 28), and often bring "widespread deforestation and violation of human rights of indigenous people" and small-scale farmers through land acquisitions (UNDP, 2007b, p. 143). Large-scale production primarily benefits investors and elites, with few local jobs created compared with other sectors (De Schutter, 2012). The "scramble to supply" biofuels like palm oil, partly driven by EU biofuel targets, have exacerbated food price crises and had already dragged "30 million people into poverty" and put 60 million indigenous people at risk by 2008 (Oxfam, 2008, pp. 15-16).

Southeast Asian palm oil plantations are responsible for much of the doubling of palm oil production between 1997 and 2005, particularly Indonesia. Despite Indonesia signing a US$1bn REDD+ deal with Norway in 2011, including a two-year moratorium on new forest concessions, 78 per cent of Central Kalimantan alone is already covered by existing palm oil concessions not governed by this moratorium. Pollution from chemicals used in plantations has contaminated nearby rivers (Lang, 2013a). Local NGOs have documented numerous human rights violations concerning land acquisitions, plantation workers' labor rights, and health and other socioeconomic rights of local communities (Institute for Ecosoc Rights, 2013). This includes child labor and debt bondage arrangements, including at plantations certified by the Roundtable on Sustainable Palm Oil (Lang, 2013b). Furthermore, replacing rainforests with monoculture plantations on Kalimantan alone is projected to constitute between 18 and 22 percent of Indonesian carbon emissions in 2020 on current trends (Carlson et al, 2013), with intensive farming methods further increasing emissions (De Schutter, 2008).

The UN Special Rapporteur on the right to food has described current biofuel projections as "not sustainable," suggesting that until further international action is taken, any new investments should only be authorized by states "when its detailed and multi-stakeholder assessment is positive in terms of its implications, both at the domestic and international levels, for the right to food, social conditions and issues related to land tenure" (De Schutter, 2008, p. 17).

## Procedural rights

One of the areas where the clearest links between ecology, development and human rights have been promoted is procedural rights. Three dimensions of procedural rights relevant to environmental policy were recognized in the Rio Declaration's 10th principle: 1) participation; 2) access to environmental information; and 3) access to redress and remedy.

These form the three pillars of the most comprehensive example of procedural environmental rights to date, the 1998 Aarhus Convention initiated by the UN Economic Commission for Europe (UNECE) and binding on the EU, but open to other states. The Aarhus Convention's stated objective (Article 1) is "the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being" through these three pillars.

The Convention defines participation broadly, obliging participation for a list of activities (both new and ongoing) as well as those that have a "significant" environmental effect (Article 6). "Environmental information" covers numerous aspects, including "the state of human health" and "conditions of human life" (Article 2). As well as responding in a timely and affordable manner to requests, authorities are required to take various positive measures to make environmental information freely and accessibly available (Article 5). Furthermore, independent, impartial procedures must be made available to allow those with an interest or those that maintain impairment of the right to challenge the substantive and/or procedural legality of decision-making processes. "Impairment" and "interest" are to be interpreted to afford the widest access to justice, allowing NGOs to bring complaints under certain circumstances. Similar channels must be made available for challenging acts or omissions by private or public bodies that contravene national environmental law.

*Environmental impact assessments and strategic environmental assessments*
One particular procedural device, environmental impact assessments (EIAs), is now increasingly required in development planning. For example, the CBD requires EIAs before certain activities, with the convention's Conference of the Parties (CoP) developing guidelines for including biodiversity in EIAs and more expansive strategic environmental assessments (SEAs), which look at the broad environmental impacts of larger policies, rather than simply particular projects. The World Bank has also adopted guidelines on EIAs. Many cases brought to the Bank's Inspection Panel have alleged inadequate environmental assessments in practice (Sands and Peel, 2012).

While EIAs and human rights impact assessments have developed separately, an integrated approach can highlight the interdependent nature of risks associated with projects. If such impact assessments take into account the normative content of rights, as well the transnational impacts of effects on complex, interconnected ecosystems, they can play a key role in participatory development processes (IE, p. 28). Furthermore, EIAs can allow for recognition of the precautionary principle in development policy where the precise environmental impacts of an activity or initiative are uncertain. A precautionary approach is now required in many areas of international law, and can be used by practitioners, preferably as part of broader EIAs and SEAs, to avoid absolute certainty being required to halt progress in potentially harmful projects. SEAs in particular offer a broader, more holistic approach to environmental policies that can build human rights standards and principles into general policy-making.

## Women's rights

The ecological crisis is a gendered phenomenon. For example, in Sub-Saharan Africa, less resilient and diverse staple crops, heavy reliance on rain-fed irrigation and limited adaptive capacity leaves the region highly-vulnerable to climate change. Reductions in crop productivity will have "particularly dramatic"

effects on women as the primary producers of climate-sensitive staple crops and those who are "often the last to receive food and other household resources." By affecting women's food security and daily workload, "women will have diminished opportunities for other educational, economic, social, and political engagement." The same applies for water as women and girls are often responsible for water collection, which also increases exposure to water-borne diseases. These trends are exacerbated by male urban migration. As Hall and Weiss conclude, development policies "that ignore these realities – for example, by distributing adaptation funding exclusively to male leaders… will likely only reinforce… disparities in adaptive capacity" (Hall and Weiss, 2012, pp. 337-339).

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) Article 14(2) mandates "all appropriate measures to eliminate discrimination against women in rural areas in order… that they participate in and benefit from rural development," requiring participation "at all levels," and access to adequate healthcare (including family planning) and living conditions (especially relating to sanitation and water supply).

**Indigenous peoples' rights**

Areas of high biodiversity and indigenous communities are often found together, as these groups have traditionally been effective stewards of habitats of huge importance to global ecology, including rainforests (Westra, 2007, p. 36). These historical ties to specific areas of land and investment of spiritual importance in natural habitats mean indigenous peoples are more acutely affected by ecological crises, as they are "not able to move freely from… present locations," despite the harm they face, without fundamentally undermining their cultural identity (Ibid., p. 19).

The Arctic Inuit in particular documented the existential threat climate change poses to their way of life in a 2006 petition to the Inter-American Commission on Human Rights, which meticulously and directly links American carbon emissions and the destruction of their traditional home. While the Commission did not find the case eligible for consideration, the petition inspired further international action and sought to change "the international discourse from dry technical discussions to debates about human values, human development and human rights" (UNDP, 2007b, p. 82).

Some of the clearest ecological standards in human rights law relate to indigenous peoples' rights. The 2007 UN Declaration on the Rights of Indigenous Peoples (DRIP) declares indigenous peoples' rights to "maintain and strengthen" their spiritual relationship with traditionally-owned, occupied or used lands, territories, waters and coastal seas and other resources, and to secure them for future generations (Article 25); to "own, use, develop and control… lands, territories and resources" they traditionally own, occupy, use, or have acquired and to "receive legal recognition and protection" (Article 26); to foster "conservation and protection of the environment and the productive capacity of their lands or territories and resources," including the prohibition of storing or disposing of hazardous materials without free, prior and informed consent (FPIC) (Article 29); and "to determine and develop priorities and strategies for the development or use of their lands or territories and other resources," including FPIC before any activities affecting these (Article 32).

FPIC has become a crucial tool is conservation of indigenous habitats. Recent UN-REDD guidelines define 'free' as "consent given voluntarily" without "coercion, intimidation or manipulation"; 'prior' as "consent… sought sufficiently in advance of any authorization or commencement of activities;" 'informed' as "accessible, clear, consistent, accurate, constant, and transparent" information; and 'consent' as "the collective decision made by the rights-holders and reached through… customary decision-making processes," which, crucially, may grant *or* withhold consent (UN-REDD, 2013, pp. 18-20).

Major advances in protecting indigenous peoples' lands have also been made through recognition in human rights courts. In the seminal *Awas Tingni vs Nicaragua* case, the the Inter-American Court of Human Rights extended the right to property (Article 21) to cover indigenous *collective* property. In *Saramake People vs Suriname*, the Court extended this recognition to resources found on indigenous land where they "have a close connection with… indigenous lifestyle" as "without them, the very physical and cultural survival of such peoples is at stake" (Otis, 2012, p. 222). There is a fear that this leaves the door open to the exploitation of 'non-traditional resources,' presenting a "backward-looking construction of indigenous identity" (Ibid, pp. 223-224), but the judgment also requires FPIC where "major" development "may have a profound impact" on indigenous property, effectively allowing indigenous groups to "invoke customary prohibitions to block the project… require that developers respect its customary environmental norms as a condition for approval" or "even negotiate a legal framework to protect the land and resources" (Ibid., p. 226). While simple consultation is the only requirement for less intrusive projects, this must happen "in conformity with indigenous custom" and bear in mind "least prejudicial" implementation regarding indigenous rights (Ibid., p. 227). Thus, indigenous customs of resource management are increasingly gaining legal recognition.

Protections for indigenous peoples are also included in international environmental law, particularly the CDB, which seeks (in Article 8) to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity," while promoting "equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices." The CBD's 2010 Nagoya Protocol, yet to come into force, attempts to strengthen these norms of equitable sharing to avoid traditional knowledge being taken from communities without consent. This traditional knowledge is vital in adaptation to climate change and building ecologically-resilient communities. An example of this is the role of indigenous belief and knowledge systems in protecting the 2,000 year-old rice terraces of the Ifugaos, the Phillipines, a UNESCO World Heritage Site (Campos, 2013).

Environmental policies can also hit indigenous communities, especially REDD projects involving large-scale tree plantations on or near indigenous land. For example, Australia's Kalimantan Forest and Climate Partnership plan to plant 100 million trees and unblock drainage canals built under Indonesia's previous military dictatorship to drain peat swamps for 'mega-rice projects' ignored FPIC, customary indigenous rights and local communities' rights to participation. Activities thus overlooked the fact that "for years the drainage canals have been the way villagers travel to their rubber trees." Opposition to the project resulted in its abandonment after just 50,000 trees were planted (Lang, 2013c).

**Children's rights**

Children, too, have specific needs related to ecological degradation. Up to 175 million children are likely to be affected every year by climate change-related disasters from 2010 to 2020 alone. As Oxfam stresses, "the effects can last a lifetime," with children under three born during droughts in Niger "72 per cent more likely to be stunted" from "severe nutritional deficits." Furthermore, most 'environmental refugees' are expected to be women and children (Oxfam, 2008, pp. 7-8).

Intergenerational equity and the Convention on the Rights of the Child (CRC), particularly requirements for education to ensure "the development of respect for the natural environment" (Article 29(1)(e)), require involving children in planning responses to ecological threats, while children have the right to know about climate change. Meanwhile, "children can be very effective communicators of climate change" given they "often have a better understanding of the science" than adults in local communities (Reid *et al*, 2009, p. 18).

Eight "key interventions" to protect children from climate change have been outlined by UNICEF (UNDP, 2009a, p. 19):

1. Household water supply, sanitation and hygiene;

2. Groundwater recharge and watershed remediation – including rainwater harvesting, run-off catchments, watershed clean-ups, tree planting and restoration of biodiversity;

3. Disaster risk reduction and preparedness;

4. Environmental protection and restoration – such as school and community gardens and clean-up of stagnant water and solid waste;

5. Renewable energy – including clean cooking and heating;

6. General health-related interventions, including improvements to basic public health infrastructure;

7. Community capacity-building – including education for sustainable development; and

8. Social protection and psychosocial support – including preventing dislocation and exploitation of children, and addressing family and individual stress and trauma.

**Summary**

Human rights provide a common framework for illustrating the links between ecology, development, and human life and livelihoods. Existing rights are increasingly reconnected to their ecological foundations, while strong international legal protections exist ensuring access to information, participation and rights to redress in development projects, with specific standards for women's, indigenous peoples' and children's rights.

However, recourse to law is not enough, as "human rights mechanisms are only able to respond to a very small percentage" of ecological impacts (Turner, 2014, pp. 29-30). The challenge is to integrate ecological and human rights protection into development on the ground, building local capacity and self-sustaining movements among those facing the worst effects of the ecological crisis.

## Mitigation, adaptation or development?

Approaches to climate change are usually divided between mitigation (reducing GHG emissions) and adaptation (adapting to the unavoidable effects of climatic changes). This prevention-cure distinction is equally relevant in other areas of environmental policy.

While there are often clear overlaps between mitigation, adaptation and development, the three are not always integrated in practice. Mitigation can seem irrelevant in development as the poorest countries have negligible GHG emissions, while adaptation is usually linked to existing disaster risk reduction (DRR), rather than economic policy. Meanwhile, the scale of the adaptation challenge is daunting. The World Bank estimates adaptation costs of US$75-$100bn per year for the period 2010 to 2050 in 'developing' countries (Hall and Weiss, 2012, p. 325). Nonetheless, current schemes to supply adaptation funds from the North to the South are insufficient. Adaptation financing stood at just US$20-24bn annually in 2013, a figure which includes funding in the North (CPI, 2013). It is also feared current aid budgets will be diverted to natural disaster responses and adaptation as climate effects hit home states (UNDPc, 2007, p. 26).

Given that HRBAs stress the interconnectedness of ecology, livelihoods and human rights, an integrated approach to mitigation, adaptation and development is taken here. Initiatives that aim at continued carbon emissions-driven development are counterproductive, making adaptation more costly and less effective long-term. At the same time, adaptation to climate change and ecological crises is fundamentally about addressing human *vulnerabilities*; as community-based adaptation specialists have said, "whilst development agencies may differentiate between DRR, climate change adaptation, and poverty alleviation, at the household level the issues converge into one complex interrelated problem which boils down to… the security and wellbeing of people's lives, livelihoods, and assets" (Reid *et al*, 2009, p. 15). This is why many adaptation projects "have many similarities to development work… already underway" – for example, sustainable land development "could be viewed as a development project, an adaptation practice, or both." Thus, proactive "adaptation practices are a form of economic and social development, particularly when evaluated against… failure to act and the consequent human, economic, and environmental toll" of the ecological crisis (Hall and Weiss, 2012, p. 323).

There are now an enormous array of adaptation assessment and "screening" toolkits for 'mainstreaming' adaptation in development, "whose proliferation is likely to confuse more than help potential users at the local level" (ELAN, p. 4). A key problem with these is that they generally do not mention human rights, even where they address human rights-related concepts like participation. Even existing community-based approaches (CBAs) to adaptation have been criticised for employing "natural resource-thinking" that overlooks "second-tier" ecosystem goods and services and the interconnections between ecosystems, while ecosystem-based approaches (EBAs) have frequently overlooked social complexity and local power relations (ELAN, p. 14).

The Ecosystems and Livelihoods Adaptation Network (ELAN) has specifically linked human rights to adaptation in its attempts to reconcile CBA and EBA. They define this integrated approach as "adaptation planning and action that adheres both to human rights-based principles and principles of environmental sustainability, recognizing their inter-dependent roles in building resilience of both human communities and ecosystems to climate variability and long-term change" (ELAN, 4). Together, EBAs and CBAs promote compelling arguments to privilege funding for community-led, ecologically-appropriate approaches as alternatives to the exclusionary top-down, "hard" adaptation models that prioritise short-term, high-cost infrastructure, often to the detriment of long-term sustainable development (ELAN, pp. 17-18).

In particular, the focus of HRBAs on the capacities of rights-holders and duty-holders informs adaptive development by recognising that human rights, including collective rights of access to common property resources and rights to participate in decisions concerning these rights, "condition social vulnerability, in that they determine the degree of control of natural resources, and their uses." By encouraging "a framework in which communities can exercise their rights over land and resources, and their responsibility for sound stewardship," HRBAs can give clear, universal standards and principles for incorporating CBAs and EBAs (ELAN, p. 5). By addressing the social and ecological vulnerabilities, and building the resilience and sustainability, of local communities, such approaches effectively achieve mitigation and adaptation as part of human development.

EBAs and CBAs are already combined in practice in activities that are central to human rights-based development, including (ELAN, pp. 8-12):

- Strengthening livelihood sustainability;

- Strengthening ecosystem goods and services to "maintain local safety nets," which are often maintained through traditional and customary laws determining rights of access, such as the Huertas irrigation system in Valencia, Spain, which is among the longest lived common property management arrangements, integrating customary norms and regulations that allow them to "incorporate climatic disturbances" like drought;

- Conserving or restoring coastal wetlands, mangrove forests and/or woodlands;

- Improving grassland/rangeland management;

- Holistic approaches to watershed management;

- Employing "natural solutions" to reducing hazards (e.g. increasing vegetation on steep slopes to reduce the risk of landslides);

- Promoting agro-forestry; and

- Increasing urban vegetation and green spaces.

Seeing mitigation and adaptation in this broader ecological, human rights-orientated context is also helpful. For example, mitigation not only reduces the impacts of climate change; it reduces resource depletion by prioritizing renewable energy, and promotes more efficient use of all resources in production and consumption. At the same time, mitigation that reduces carbon emissions is not always ecological respectful, as all to often seen in the case of biofuels. Meanwhile, a key insight of the ecosystems approach is that reducing "non-climate stressors," such as resource depletion and pollution, improves climate resilience and maintains access to resources people depend upon (ELAN, pp. 9-10).

This integrated ecological, HRBA to development presents an enormous challenge to traditional development, mitigation and adaptation premises, both temporally and spatially.

Temporally, early structural action is vital to address "negative "lock-ins,"" taking care to ensure "adaptations now do not undermine the ability of systems to cope with potentially larger impacts later" (FAO, 2012, p. 14). Human rights are well-placed to assist this by addressing root causes of vulnerability. Well-planned adaptation is ultimately more cost effective long-term – every US$1 invested in pre-disaster risk management in the South can prevent US$7 in losses (UNDP, 2007b, p. 24). Evaluative components also become even more important under a HRBA given that climate and ecological concern has "a very short history" in development practice. This, combined with ever-evolving ecological awareness and increasingly tangible climatic changes, demands ongoing evaluation, learning and improvements. It must be appreciated that ecosystems are subject to change, and may not be able to provide the same resources in the future (ELAN, pp. 17-18).

Spatially, ecosystems, and the interactions between them, do not conform to political borders. Therefore, isolated "local-level interventions may not always be the best." For example, planning across a river basin avoids local "maladaptation," such as where "building a dam to provide a community with water… negatively affects others downstream." Thus, "interventions have the most impact when they are designed and implemented at the lowest appropriate level" (ELAN, p. 4), as this ensures "responsibility, ownership, accountability, participation, and use of local knowledge" (ELAN, pp. 9-10). Conventional, aggregated and largely market-based 'green economy' developments have often ignored this fact. For example, resource trading assumes that 'eco-system services' in one location can be swapped for other aspects of ecosystems elsewhere. This ignores the complex

interactions between and within ecosystems, diminishing the role of particular resources in ecosystems and communities, and thus marginalizing the importance of local knowledge (Gray, 2013, p. 164). The human rights consequences of such commoditization of natural goods were at stake in the so-called "Water Wars" against the privatization of water in Cochabamba, Bolivia in 2000, leading to the recognition of the right to water in the new Bolivian constitution.

Several initiatives that fit with an ecological HRBA are outlined below.

**Small-scale renewable energy and energy efficiency**

Top-down, market-based energy policies generally assume access to existing national grids, overlooking the fact that at least 1.3 billion people globally lack basic electricity access and 2.7 billion lack clean cooking facilities. The UNDP estimates that almost two million deaths annually from pneumonia, chronic lung disease and lung cancer, 99 per cent of which occurred in 'developing' states, are associated with indoor air pollution from biomass and coal cookers (UNDP, 2009b, p. 2). Furthermore, aggregate national approaches often favor large-scale infrastructural developments that are routinely accompanied by human rights abuses and ecological degradation, including biodiversity loss.

Small-scale renewable energy and energy efficiency projects can deliver huge benefits to local communities, particularly those without access to grids. Solar power alone is already used in the South in vaccine refrigerators, water disinfection, pasteurization, water pumps, food driers, electric fencing, wireless internet, phones, radios, cookers and water heating (Freling and Ramsour, 2010). While the benefits of different forms of renewable energy vary, they generally include: clean alternatives to energy-inefficient, unreliable, costly and low coverage centralized grids; reduced household energy costs; reduced reliance on energy imports; and, where combined with local efforts to maximize spill-over effects, jobs and community development (UNDP, 2012). Such projects thus do not contribute to worsening climate change, while benefitting rights to life, health, adequate living standards and work (to name but a few), and building resilience against ecological crises by contributing to universal energy access that is the foundation for other adaptive development initiatives in agriculture and DRR (especially given the need to spread information quickly and widely).

One UNDP-led project in Nepal investing in micro-hydropower generation in remote mountain areas demonstrates that small-scale renewable investments are financially-efficient (delivering US$345 in financial benefits per beneficiary over the installation's lifetime for one-off costs of US$85 per beneficiary). Such projects can easily be scaled-up given returns on investments and increased household income (8 per cent on average). They can result in decreased energy costs over 50 per cent, provided greater income-generating opportunities, improved access to education (given more spent on education per household, improved school facilities and increased capacity to attract teachers), empowered women (through reducing household burdens, and increasing access to information and education), improved health through increased health visits, and fundamentally avoided significant carbon emissions and local pollution (UNDP, 2011, pp. xix-xxii).

At the national level, local initiatives can be assisted through energy efficiency regulations in all sectors, including buildings and appliances – a win–win scenario as they can be implemented at low cost and result in savings over time (UNDP, 2007b, p. 51) – and renewable energy targets. These initiatives can be part of broader green jobs programmes, including support for public transport. As the UNDP suggest, and as a HRBA entails, such programmes should be directed at disadvantaged areas, with a particular focus on expanding access to affordable electricity and reducing reliance on biomass (Ibid.). This is particularly the case in the continuing absence of sufficient international mechanisms for North-South transfers to aid renewable energy. The Kyoto Protocol's Clean Development Mechanism (CDM) has

been criticized for not having desired effects, "especially not [for] the small projects that prevail in the developing world," while being "too complicated… too questionable in terms of net CO2 reductions, and unpredictable in terms of price" (World Future Council, 2009, pp. 2-3). The CDM gives industrialized nations 'Certified Emissions Reductions' that can contribute to their own reduction targets, which has been attacked for allowing such states to avoid their mitigation responsibilities while representing a new form of control of Southern resources by Northern interests (Candiago, 2013, p. 220).

**Small-scale agriculture and agro-ecology**

As the FAO notes, agriculture is "not only… at risk from climate change, it is a major driver of environmental and climate change" (FAO, 2012, p. 4). Mitigation potential in agricultural and forestry is between one third and half of total mitigation under the IPCC's "mid-range" scenario (FAO, 2012, p. 5); at the same time, agricultural adaptation is crucial to securing basic subsistence human rights. Encouragingly, as the FAO also suggests, many of the synergies between mitigation and adaptation are found in agricultural and forestry "of great relevance to rural livelihoods in developing countries" (FAO, 2012, p. 6). Such synergies include (FAO, 2012, p. 9):

- Reducing methane emissions via integrated rice and livestock systems traditionally found in West Africa, India, Indonesia and Vietnam, which also improves irrigation water efficiency, provides new sources of income and improves performance of cultivated agro-ecosystems;
- Reducing nitrous oxide emissions, which also benefits groundwater quality and biodiversity;
- Integrating animal manure waste management systems, including biogas capture and utilization, for reductions of methane and nitrous oxide, which can increase demand for farmyard manure and create income for the animal husbandry sector;
- Restoring land by controlled grazing, which can result in soil carbon sequestration, improve livestock productivity, reduce desertification and provide social security during extreme events, including drought (particularly in sub-Saharan Africa); and
- Practicing agro-forestry, which encourages soil carbon sequestration and improves agro-ecosystem resilience to climate extremes through enhancing soil fertility and water retention.

These practices illustrate the empowering advantages increased ecological resilience can have for communities' basic human rights. Such agro-ecological methods simultaneously build climate and ecological resilience, set agriculture on a low-carbon path, preserve biodiversity and secure farmers' livelihoods.

Agro-ecology has been heavily promoted by 'food sovereignty' movements across the globe looking to reassert control over local food systems. This directs efforts towards small-scale agricultural producers, who remain the largest investors in agriculture globally and directly support the basis subsistence rights of billions. Agro-ecology represents an approach that combines local knowledge with the science of ecology; the UN's International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) stressed the role of low-input, locally-tailored agro-ecology approaches in building ecological resilience and supporting the right to food and energy independence in ways sensitive to cultural rights.

Examples include agro-forestry projects that reintegrate trees into farming systems, responding to the degradation caused through tree-clearing in monoculture industrial agriculture. In sub-Saharan Africa

alone, 65 per cent of land is ranked as vulnerable to degradation. Agroforestry addresses desertification and soil erosion, but also "can help farmers realise greater cash incomes and food security" where trees become an organic source of fertilizer, fruit, animal fodder, fuelwood and timber. In particular, the Malawi Agroforestry Food Security Programme has provided technical assistance and training for farmers regarding agro-forestry, increasing maize yields on average from 1 t/ha on unfertilized land to 2-3 t/ha by integrating tree-fertilizer species" (Kay, 2012, p. 13).

While there is a "time lag" between investments and returns in agro-forestry, governments can assist by ending subsidies for artificial fertilizers and moving support to agro-ecological farming. This move presents "a possible exit strategy from fertilizer subsidies altogether as agro-forestry systems provide the basis for sustainable soil management." Thus, agro-forestry provide long-term socioeconomic and ecological advantages as well as contributing to sustainable human rights fulfillment (Kay, 2012, pp. 13-14).

The quick expansion of Cuban small-scale agro-ecological farming after the fall of the Soviet Union reduced dependence on food, energy and fertilizer imports, increasing yields, employment and ecological resilience, evidencing that a "decentralized, non-hierarchical process of innovation and diffusion based on the 'peasant pedagogy' offers significant advantages over the 'project based' nature of many NGOs… and the 'cyclical mindset' of state authorities." The UN's Special Rappoereur on the Right to Food has recognized these techniques as crucial to securing the right to food long-term (Kay, 2012, pp. 14-15).

Supporting small-scale farming should be part of general reform of food systems to more sustainably ensure the right to food. Such community supported agriculture (CSA) involves linking producers and consumers. Social movements, unions, farmers' networks and other civil society organizations play a central role in these efforts. Governments can support this by reforming subsidies and using public procurement to insist that public institutions use locally-source, sustainable small-scale sources, as seen in Brazil (Kay, 2012, pp. 16-18). Other initiatives include fiscal, tax and tariff policies to prevent reliance on food imports and facilitate local food distribution networks between producers and consumers (Ishii-Eiteman, 2009, p. 696), recognition of tenure security and the right to secure housing (Patel, 2009, pp.669-670), land reform and redistribution where necessary (Rosset, 2001, pp. 25-26), regulating genetically-modified organisms, protecting local knowledge and genetic resources through reformed intellectual property rules, ensuring local and state food policy councils with active participation, agro-ecological education programmes and subsidies for sustainable farming, and potentially use of "local agro-processing" to capture spill-over effects, (Ishii-Eiteman, 2009, pp. 693-696).

Above all, low input agro-ecological production is "more… resilient to climate change" given its "higher level of on-farm diversity." Small-scale producers "have a vested interest in… sustainability" because they rely on production for subsistence. Indeed, productivity is increased under small-scale methods – research in 15 countries found smaller farms were "two to ten times more productive" than larger ones (Rosett, 2011, pp. 26-28).

*Harnessing local knowledge*

Oxfam stress that local communities "already hold much of the knowledge, experience, and resources needed to build resilience" (Oxfam, 2008, p. 18). Key to building climate resilience is building community capacity "with a view to collect indigenous knowledge" (FAO, 2012, p18). In particular, a lack of information hampers adaptation. As the UNDP has pointed out by way of example, sub-Saharan Africa depends on rain fed agriculture, making "meteorological information an imperative for adaptation," yet "the region has the world's lowest density of meteorological stations" (UNDP, 2007b, p. 24).

The importance of "co-learning" between local and scientific knowledge can be developed through various participatory tools, including mental models, seasonal calendars, timelines, community mapping and

modelling, transect walks, ranking, dream maps and drawings, theatre, poetry, songs, participatory video, stakeholder analysis and key informant discussions. For example, Christian Aid has worked with local communities to build climate timelines in Sudan, recording 30 years of extreme weather and temperature changes. This recognises that where data records are not well-kept, memories and local capacity to record their own data should be key focuses (Reid *et al*, 2009, pp. 17-18).

Another example of local capacity-building is WOTR's "agro-meteorology" initiative, using the internet and mobile phones to share localised weather forecasts with farmers in Maharashtra, Madya Pradesh and Andhra Pradesh, India. Combined with detailed water budgeting, this ensures reliable planning in areas where rainfall can "vary within even a kilometer," particularly during monsoon season, and effectively replace or rebuild indigenous knowledge lost under climatic changes and the devaluation of local knowledge. This is part of a broader "adaptive sustainable agriculture" strategy promoting low external inputs, increased land productivity, use of indigenous seeds and reduced costs by bringing farmers together regularly for training and sharing of best practices, which has led to more sustainable farming, increased social solidarity and revitalised interest in agriculture from the younger generation (WOTR and SIED, 2013).

CARE has developed numerous tools for promoting adaptation and rural development in agriculture. This usually begins by using their toolkit for climate vulnerability and capacity assessment (CVCA), which has four elements – climate-resilient livelihoods, DRR, capacity development, and addressing underlying causes of vulnerability – analysed at the national, local and household/individual levels. The results of these are used in Participatory Scenario Planning (PSP) for developing seasonal forecasts, Community Adaptation Action Plans (CAAPs) and Farmer Field Schools (FFS) for promoting co-learning (CARE, 2013).

**Community forest management (CFM)**

Recognising the rights of forest dwellers to land tenure and forest resources is crucial to global climate mitigation and biodiversity preservation given traditional knowledge and long-standing role of these communities in sustainable forest management. Securing forest dwellers' tenure rights effectively conserves large areas of forests from further encroachment.

Forests have featured in international climate policy since 2005 through the UNFCCC programme for "reducing emissions from deforestation in developing countries" (REDD). The initial focus on preventing deforestation has now expanded under 'REDD+' to include "actions that increase removal of carbon from the atmosphere" through sustainable forestry management. Following criticism, social safeguards, and recognition of indigenous peoples' rights, land tenure, participation and knowledge, were added in the 2010 Cancun Agreements and have become mandatory for national REDD+ strategies (AIPP and IWGIA, 2012, p3). However, securing these in practice has been difficult, as FPIC trials have only just begun in some REDD+ projects (Ibid., p.20).

The Climate, Community and Biodiversity Alliance (CCBA) has developed standards for approving land management site-based projects (the CCB Standards) and REDD+ Social and Environmental Standards (SES) that stress combined mitigation, biodiversity and rights-based approaches, including FPIC (CCBA, 2013). Projects should be accredited with these standards and monitored under their provisions.

Harnessing local knowledge, ensuring participation and securing land rights can be combined through community forest management (CFM), which involves devolution of forestry management to participatory local control. Research in 80 forest commons in 10 countries found that "rulemaking autonomy

at the local level is associated with greater forest carbon storage and higher livelihood benefits." CFM successfully defends against deforestation given local knowledge and local interests in managing forests for subsistence; can be easily replicated across the globe without the need for cumbersome bureaucracy; diversifies income, promotes alternative livelihoods and protects the ecological processes on which human rights depend; provides an opportunity for participatory, democratic local development, including the integration of gender equality; and recognizes the traditional stewardship of indigenous and forest communities by formalizing their forest rights (ACCRA Caucus, 2010).

**Social protection and public works programmes**

Ecologically-focused social protection programmes "help people cope with… risks while expanding opportunities for employment, nutrition and education." Public work programmes in particular "provide a measure for protecting nutrition and health, creating employment and generating income when climate shocks lead to a loss of agricultural employment or reduced food availability" (UNDP, 2007b, pp. 178-179).

In India, a national movement for the right to work culminated in 2005's Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which guarantees 100 days of employment at the minimum wage for every rural household (UNDP, 2007b, pp. 178-179). It was rolled out in the most marginalized communities first (Sharma, p. 272). It guarantees the right to work through self-selection (no eligibility or skills criteria) and a demand-based structure (open to any rural households willing to work and based on releasing central funds to local projects where there is demand) with time-bound guarantees of receiving local work and payment, all of which are ensured through legal documentation, and rights to information and disclosure. Evaluations and social audits are conducted at local level by village assemblies (Ibid., pp. 274-275).

MGNREGA achieves mitigation, adaptation and development as workers receive "productive green jobs" focused on climate adaptation, sustainable development and "addressing causes of chronic poverty such as soil erosion, water scarcity and land degradation," including water conservation/harvesting, irrigation improvements, drought proofing, flood protection and rural connectivity (Ibid., p. 275).

Despite problems with its implementation, the scheme has had a number of HRBA-related effects, verified by independent studies and social audits (Ibid., p. 276-286):

- Fulfilling substantive rights
    - Providing skilled and unskilled employment to 52.5 million households;
    - Enhancing income by linking wages to minimum wages, with wages as much as doubling in some states;
    - Increasing water availability;
    - Increasing net irrigated area as well as the gross cropped area "by retaining enough soil moisture and irrigation water for a second (or even a third) crop;"
    - Increasing rural connectivity (through use of ICT) and financial inclusion (through opening bank and savings accounts); and

    - Converging with other social programmes, including the possibility of extending healthcare, training and children's services to participants;

- Women's rights – giving opportunities to women, who made up 48 per cent of participants in 2009-2010;

- Non-discrimination/thresholds – 49 per cent of participants in 2009-2010 came from scheduled castes or tribes;

- Participation and accountability

    - Delivering the programme through village level bodies, giving them control of resources 90 per cent higher than previous employment programmes and involving workers directly in the planning of projects;

    - Training work-site supervisors (with a focus on recruiting women) to monitor payment and working conditions; and

    - Providing ombudsman for redressing grievances, and including independent monitoring and evaluation.

MGNREGA has been described as "an ecological act" (Ibid., p. 278) and shows how a HRBA "can evolve as a platform for social empowerment and sustainable development, mitigating future risks not just by reducing vulnerabilities to economic and natural adversities but also by building resources that empower people to make more equitable and liberating choices" (Ibid., p. 287).

**Migration, displacement and resettlement**

Even with the best mitigation and adaptation efforts, some migration or displacement is likely as a result of the effects of the ecological crisis. Environment-related, particularly climate-related, migration can be seen along a continuum, from relatively-voluntary migration that improves resilience to "trapped populations" that do not have an opportunity to adapt locally or through migration (Where the Rain Falls, 2013). Ultimately, migration should be seen as an adaptation option where other efforts fail.

A particular option for practitioners to consider is planned resettlement – especially for very vulnerable communities lacking the resources to migrate themselves. This particularly requires learning from development-forced displacement and resettlement (DFDR), which has affected 280-300 million people in the last 20 years (Ferris, 2012, p. 14) and where overwhelmingly negative experiences have hit communities forced to resettle after large-scale development projects (Ibid., p. 7).

Ferris suggests that such resettlement will be necessary in areas prone to natural disasters of increasing severity under climatic changes, those whose livelihoods are threatened by "slow-onset" climatic effects, and those who face likely destruction of their state or parts of it, particularly small-island nations (Ibid., p. 4). Planned relocations are already under way or likely to occur with the Carteret islands in Papua New Guinea, Montserrat, Ethiopia, China, the Maldives, and Tuvalu (Ibid., p. 17).

There is a clear "tension between the right of people to remain and the duty of governments to protect life" (Ibid., pp. 12-13). The fundamental risks of displacement and resettlement processes, identified as "landlessness, joblessness, homelessness, marginalization, food insecurity, increased morbidity and mortality, loss of access to common property, and social disintegration," also have clear implications for human rights, with indigenous people particularly vulnerable to these

consequences (Ibid., pp. 15-16). However, DFDR has rarely mentioned human rights concerns (Ibid., p. 17).

Where DFDR has taken a HRBA, it has not only secured livelihoods, but improved them. For example, 190,000 were resettled in China from 2001 to 2004 after the building of the Xiaolangdi dam using an approach that emphasized livelihood restoration, community participation (including of host communities), comprehensive technical studies and "strong government commitment and capacity," particularly financially (Ibid., p. 23).

Ferris suggests a definition of uninhabitable as "when the habitat has been irreversibly changed such that the majority of the affected population could not survive and adaptation strategies have been exhausted or are not feasible" (Ferris, 2013, p. 26). Human rights thresholds could be further used here to give clearer content to what constitutes "could not survive." Based on Ferris's work and the "Preliminary Understandings for Planned Relocation of Populations as a result of climate change" (Ibid.), a HBRA should cover the following:

1. Involuntary resettlement should be a last resort; where unavoidable, its scale "should be minimized" and resettlements should be seen as "fully-fledged sustainable development programs;"

2. If necessary, resettlement should abide by the UN Basic Principles and Guidelines on Development-Based Evictions and Displacement (UN Doc. A/HRC/4/18 (5 February 2007));

3. Resettled communities' human rights must be protected in a non-discriminatory fashion – defining resettled people as "internally-displaced persons" (IDPs) under the 1998 Guiding Principles on Internal Displacement, ensuring the right to be assisted in "finding a durable solution;"

4. Wherever possible and within the challenging unpredictability of ecological processes and climatic effects, long planning periods will be required to ensure participatory and satisfactory resettlement – proactive resettlement plans should aim at least to restore existing rights through finding safe and ecologically resilient land, securing adequate funding in advance, addressing transitional shelter and permanent housing, preserving existing social, economic *and* cultural rights of those to be resettled, and maintaining access to public services. Special attention should be directed at those below rights thresholds in resettled and receiving communities, presenting opportunities as well as preventing further harm;

5. Communities should have a right to petition for preventative resettlement. Where resettlement is otherwise suggested, the right of resettled communities to participate in all aspects of resettlement should be guaranteed, giving people "the opportunity to take charge of their own affairs to the maximum extent and as early as possible" – requiring accessible information regarding the assessment of inhabitability, evidence of the consideration of alternatives, resettlement plans, compensation and alternative settlement options if they opt not to be relocated under the government plan. All processes should include receiving communities. Effective accountability mechanisms and remedies, and support to access them, must be available, including for resolving conflicts between affected communities. While compensation should be available for lost land or property, measures need to be taken to recognize informal, customary land rights and occupancy rights; and

6. The human rights situation should be regularly monitored and evaluated, including by those displaced, and should be developed for responding to the specific conditions experienced by resettled communities, which may require new independent mechanisms with international assistance.

Regarding protecting those forced to move across borders, environmental refugees find themselves in a legal grey area because the 1951 Refugee Convention requires persecution in order to define refugees. One important ongoing project is the Nansen Initiative, led by the Norwegian and Swiss governments, which seeks to build a new global framework for "the protection of persons displaced across borders in the context of natural disasters." This consists of building "standards for the treatment of people displaced across borders regarding admission, stay, status, and transition to solutions," improved international cooperation and solidarity before, during and after disasters; and new operational responses regarding "preparedness, cross-border assistance, solutions, and the respective roles of relevant disaster management, humanitarian, development, and climate change actors." This will begin with a series of sub-regional initiatives to build knowledge on the issues at hand (Nansen Initiative, 2013), which development practitioners can contribute to.

## Conclusion

Numerous participatory development practices are already underway to tackle the ecological crisis. Not all of these yet use human rights explicitly. More specific reference to human rights standards and principles will help 'scale-up' and 'scale-out' these nascent initiatives. Human rights are internationally-recognized standards for human treatment that can provide compelling arguments for political mobilization for climate action. They also represent guarantees that this political mobilization will focus on the most marginalized in societies, avoiding treating local communities as homogenous. There are numerous tools for integrating or transforming development to meet the ecological crisis and climate change; but, without clear reference to human rights, they may find that, in the difficult realities faced by practitioners, they continue the trade-offs and compromises that overlook underlying social and ecological injustices in development practice. Human rights are the best insurance against this.

While there are many tools for helping different aspects of ecological and climate analysis, there is no need to reinvent the key aspects of a HRBA outlined by the likes of Jonsson for UNICEF (Jonsson, 2005) – rather, they should be updated to recognize the ecological embeddedness of human rights and the threat of climate change. An updated version of Jonsson's process can be used by practitioners in planning:

1. Causality analysis – identify immediate, underlying and basic causes of development problems that are understood to reflect human rights violations:
    - Use participatory ecological and climate-related tools (such as CVCA and CRiSTAL) and guides (like CARE's digital toolkits, which provide questions for conducting climate analysis) alongside analysis of marginalization, discrimination and rights violations. Temporally, this must include projecting forward for future ecological/climate-related changes that must be factored into long-term planning. Spatially, such analysis should happen at the lowest appropriate ecological level and take into account the interactions between ecosystems, locally and globally.
2. Pattern analysis – identify key claim-duty relationships in a particular societal context:
    - Key to this will be looking at current local duties related to control of resources, particularly where traditional/customary arrangements exist;
3. Capacity gap analysis – analyzes why rights are not being realized by looking at responsibility/motivation/commitment/leadership, authority, access/control over resources, communication capability, and capacity for rational decision-making and learning

- Resource access/control is key and must identify areas for advocacy and mobilization to realize resource rights. The learning aspect is also particularly important for ongoing evaluation of complex ecological changes;

4. Identifying candidate actions

    - Requires a participatory process and constant referral back to the ecological and human rights causality analysis. Human rights principles are particularly vital here as prioritization tools. Activities should themselves be screened for climate/ecological resilience using EIAs and human rights impact assessments, including specific standards for specific areas, like the CCAs/REDD+ SES for land management, or the suggested relocation standards above;

5. Program design – aggregating up from activities to projects and broader programmes.

Throughout these steps, practitioners should make specific reference to:

- Substantive rights – especially rights to life, liberty and security of person; subsistence; and land;
- Procedural rights – focussing on access/provision of information, participation at all levels and redress mechanisms;
- Women's rights;
- Indigenous rights; and
- Children's rights.

## Resources

### General

- CareClimateChange (http://www.careclimatechange.org/)
- 7th conference on community-based adaptation to climate change (http://www.iied.org/cba7-7th-conference-community-based-adaptation-climate-change)

### Tools and guides

- CARE's digital CBA toolkit (http://www.careclimatechange.org/tk/cba/en/Open_Toolkit.html) and toolkit for integrating climate change adaptation and development (http://www.careclimatechange.org/tk/integration/en/open_toolkit.html)
- Community-based Risk Screening Tool – Adaptation and Livelihoods (CRiSTAL) (http://www.cristaltool.org)
- Ecological Footprint Analysis (EFA) and the Global Footprint Network (http://www.footprintnetwork.org/en/index.php/GFN/)
- FAO's Planning for Community-Based Adaptation to Climate Change tool (http://www.fao.org/climatechange/67624/en/, focussed on agriculture)
- NAPAssess (http://www.sei-us.org/napassess, supports a participatory, consensus-based, stakeholder-driven and transparent NAPA process)
- Red Cross/Red Crescent climate guide (http://www.climatecentre.org/downloads/File/reports/RCRC_climateguide.pdf)
- UNDP – *Gender, climate change and community-based adaptation: A guidebook for designing and implementing gender-sensitive community-based adaptation programmes and projects* (http://www.gender-climate.org/Content/Docs/Publications/A35_undp_Gender_Climate_Change_and_Community_Based_Adaptation.pdf)
- Water Evaluation and Planning (WEAP) system (www.weap21.org)
- WWF Asia-Pacific Climate Witness Toolkit (http://awsassets.panda.org/downloads/climate_witness_tool_kit_1.pdf)

### Knowledge/resource sharing platforms

- Adaptation Learning Mechanism (ALM) (http://www.adaptationlearning.net/)
- Climate and Development Knowledge Network (CDKN) (http://cdkn.org/)
- Climate Knowledge Brokers Group (http://en.openei.org/wiki/Climate_Knowledge_Brokers_Group)
- Eldis Community-Based Adaptation Exchange (http://community.eldis.org/.59b70e3d)
- WeAdapt (http://weadapt.org/)

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