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By Clare Bissell
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Restoring more than forests

How rights-based forest restoration can empower communities, recover biodiversity, and tackle the climate crisis

Restoring more than forests: how rights-based forest restoration can empower communities, recover biodiversity, and tackle the climate crisis

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Executive Summary

Ecosystems and communities across the globe are facing the negative impacts of the intensifying socio-ecological crisis: deepening inequality, loss of biodiversity, climate breakdown, and ecosystems that are unable to function properly. The public are also increasingly aware of the far-reaching social, political, and ecological impacts that global temperature rises will have.[1] Scientists warn of ice caps melting, increased extreme weather events, drought, food production failures, and accompanying social unrest. As such, climate breakdown is seen by some as an existential crisis for humanity.[2]

In this context, momentum for forest and land restoration is gathering pace and there is growing consensus that if done right, restoration could not only capture carbon, but also recover ecosystem functions and enhance livelihoods. Restoration therefore appears in several key bilateral agreements,[3] and is treated as a silver bullet for confronting the climate and biodiversity crisis. Most recently the United Nations (UN) has announced the UN Decade of Ecosystem Restoration, which "aims to massively scale up the restoration of degraded and destroyed ecosystems as a proven measure to fight the climate crisis and enhance food security, water supply and biodiversity". This will intensify and accelerate efforts already being made under AFR100, the Bonn Challenge and Initiative 20x20.

Whilst there have been some interesting models for restoration,[4] there is still significant disconnect between ambition, method, and outcome. Firstly, restoration lacks a coherent, agreed definition and guidelines are not adhered to within policy frameworks and financial mechanisms. This means the word 'restoration' can be co-opted by companies and projects that do not benefit ecology, community *and* climate. This is in part due to the prioritisation of projects that focus on "sustainable growth", offsetting or return on investment such as planting fast-growing exotic trees for timber, paper pulp and biofuel production in the global South. Similarly, tree planting initiatives attract disproportionate attention and funding but are often poorly planned and implemented, and therefore have little restorative effect.[5] These large-scale mostly monocultural projects fail to help ecosystems recover and capture carbon,[6] let alone redistribute power or strengthen land and resource rights.[7] In many cases, restoration has become conflated with plantations, which has justified land grabs, the planting of monocultures, further privatisation of national forest reserves, and unsustainable production of commercial forest goods.

Furthermore, current restoration practice does not always address the root causes of deforestation, so even if forest areas are restored, they can be deforested or degraded again.[8] Many 'restoration' initiatives are being led by forestry, conservation or business organisations, which leads to particular approaches and a lack of community participation or consideration of human rights. These are often steeped in a worldview that separates humans from nature, rather than seeing the well-being of both people and ecosystems as inherently interconnected. The restoration trend, therefore, risks endorsing unsustainable forest management and strict protection – both of which can have detrimental impacts on local people – and could take attention and funding away from more important forest issues such as protecting community land rights, promoting participative forest governance, and combatting illegal logging.

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1 https://www.ipsos.com/ipsos-mori/en-uk/concern-about-climate-change-reaches-record-levels-half-now-very-concerned

2 https://www.theguardian.com/environment/2018/oct/09/tipping-points-could-exacerbate-climate-crisis-scientists-fear

3 Including NDCs, Bonn Challenge, REDD programmes, UN Decade on Ecosystem Restoration 2021-2030, The Convention on Biodiversity and Aichi Biodiversity Targets, The New York Declaration on Forests, African Restoration Initiative AFR 1000.

4 See the WRI Global Restoration Initiative, the IUCN Restoration Initiative (TRI), WeForest, International Model Forest Network, Global Landscapes Forum, Global Partnership on Forest and Landscape Restoration, Society for Ecological Restoration for some examples.

5 One particularly striking example of a large-scale tree planting project being poorly managed and causing more degradation is the SADA project in Ghana, see page 36 in this report

6 Research shows that "natural forests are 40 times more effective than plantations for storing carbon"

7 See CLARA 'Missing Pathways to 1.5 degree' executive summary

8 This was a key finding of the New York Declaration of Forests five-year assessment.

Community rights have been widely accepted as fundamental to long-term forest protection and there is now a growing movement to put rights at the centre of restoration. Rights-based approaches have been recognised by both the UN and Global Landscape Forum, two influential institutions in restoration practice.[9] Given the accelerating interest in forest restoration and the historic emphasis on economic gains over just socio-ecological solutions, it is essential that the forest and rights movement becomes more engaged in restoration practice and policy to ensure that rights-based rhetoric becomes reality. We need clarity on what activities are genuinely restorative and a definition of restoration that includes people as part of the ecosystems – this is the gap in knowledge that this report aims to fill.

The report has four sections. **Part One** explores the different definitions and values that underpin restoration practices, discusses how these can be problematic, and presents the rationale behind why a rights-based approach[10] is needed. **Part Two** considers case studies from Ghana, looking at projects that define themselves as "restoration" and analyses which of them will work for the long-term well-being of forests *and* people. Four models for restoration that ensure community participation and ownership are extracted to show how they could be scaled up or replicated. **Part Three** provides a new definition for restoration that is rights-based and includes people as part of ecosystems; and suggests five key rights-based principles that restoration should orient around. Finally, **Part Four** makes recommendations for how international policy and financial mechanisms could be levered to support this definition of restoration that centres people and rights-based practice.

Europe is a global player in the trade, investment and consumption that drives deforestation and the United Kingdom (UK) and the European Union (EU) have promised to take actions to protect and restore forests. The report shows why this must be done in a way that consolidates human rights, land and tree tenure, and forest governance.

Together, the forest movement can change the narrative on forest restoration to recentre it on rights rather than profit. This will strengthen forest governance, community land and resource rights; increase equitable benefits and ecosystem recovery; and ultimately enable humans to reverse the direction of biodiversity and climate breakdown.

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9 Acknowledgement of the importance of rights-based approaches is seen within both the Global Landscapes Forum and the recently published strategy of the UN Decade of Ecological Restoration.

10 See the Overarching Principles of Rights-Based Forest Restoration summary

Photo: Community leaders and A Rocha inspecting the restored forest at Lake Bosomtwe CREMA.

Part One

An Overview of Restoration

This section looks at the global policy context behind the call for restoration, explores what restoration means and the values it is based on, and discusses why definitions matter. It concludes that given the global social, political, and economic drivers of degradation, 'rights-based restoration' (in which people, justice and rights are put at the centre) is the only viable approach.

1.1 The Global Policy Context

Ecosystems and communities across the globe are facing the negative impacts of the intensifying socio-ecological crisis: deepening social inequality, loss of biodiversity, climate breakdown, and ecosystems that are unable function properly.

With climate change mitigation high on the international policy agenda, the sustainable management of land and forest carbon sinks has become a key concern. In 2015, nearly 200 countries came together in Paris to discuss a unified approach to tackling the climate crisis. Smaller, underdeveloped countries and those at risk from rising sea levels, advocated for greater urgency and a more ambitious target of 1.5 degrees. However, the final Paris Agreement committed signatories to keeping the global temperature change "well below" 2 degrees Celsius above pre-industrial levels,[11] a moving target that side-lined the voices of countries most immediately effected. Even so, the Nationally Determined Contributions agreed by each country set the tone for drastically cutting greenhouse gas emissions and enhancing terrestrial carbon stocks. Just three years later, the Intergovernmental Panel on Climate Change (IPCC) 1.5 report (2018) stated that given the slow transition away from the unsustainable 'business as usual' situation, and the still increasing emissions, we are unlikely to meet the 1.5 degree target.[12] This may have a devastating effect as, for example, melting ice can release huge amounts of methane and dying forests release carbon dioxide. Such Scientists suggest that such "natural feedback loops" may mean a temperature increase of up to 5 degrees by 2100.[13]

The IPCC 1.5 report proposed nature-based solutions, whilst the IPCC Land report (2019) emphasised the trade-offs between land and forest functions: between climate change mitigation, ecosystems, biodiversity, and as a resource for people. Support for restoring forests and landscapes[14] is gathering pace within international policy mechanisms, as a vehicle for countering climate change, reversing biodiversity loss and improving the sustainability of rural livelihoods. However, there is a contradiction as, particularly in the global North and emerging economies, societies and markets continue to be organised in ways which exceed planetary boundaries. Whilst international conventions repeatedly issue calls to 'restore' the ecosystems that have become degraded, there is a lack of political will to confront the causes. Restoration cannot curb the impact of climate, ecological and biodiversity breakdown[15] on its own – the emissions need to be reduced, and specifically, we must, with urgency, end our reliance on fossil fuels. Instead of looking at a radical transition to a decarbonised economy however, political figures and corporate actors are actively denying scientific consensus on climate

11 https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

12 https://www.dw.com/en/15c-degree-goal-extremely-unlikely-ipcc/a-42154601

13 https://www.theguardian.com/environment/2017/jul/31/paris-climate-deal-2c-warming-study

14 Restoration is generally accepted to take place within and across entire landscapes, not individual sites, representing mosaics of interacting land uses and management practices under various tenure and governance systems. It is at this scale that ecological, social and economic priorities can be balanced.

15 Environmental legal campaigners call this 'ecocide' and are working for it to be criminalised in international legislation. See: https://ecocidelaw.com/missing-law/

change and proposing to continue 'business as usual' - the extractive, unsustainable use of resources. Disconcertingly, the last five years has also seen an invigoration of far-right ideology which threatens to undo progress made in securing Indigenous land rights and regulating corporations.[16]

One approach that has recently gained is 'Nature-Based Solutions' (NBS). As with the term restoration (see section 2.2), this concept is defined in multiple ways. To name a couple, NBS are:

> *"actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits"*
>
> The International Union for Conservation of Nature (IUCN)

> *"solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions."*
>
> The European Commission

NBS are being promoted as one of the main tools to meet United Nations Framework Convention on Climate Change (UNFCCC) and Convention on Biological Diversity (CBD) targets and they are seen as essential for mitigating the impacts of the climate crisis and achieving the goals set within the Paris Agreement.[17] They have also appeared within recent drafts of the European Green Deal and the Biodiversity Strategies – both for individual countries and for international unions like the EU. NBS aim to capture carbon within ecosystems through restoration-based projects like protecting and enhancing mangroves, forests, coral reefs, upslope vegetation and other green areas.[18] In this way, NBS are seen as being able to meet climate and biodiversity goals simultaneously[19] and have been supported by several large conservation NGOs including WWF, IUCN, Conservation International and the World Resources Institute (WRI). However, NBS has been heavily critiqued as having the potential to greenwash industries and be misused to justify offsetting,[20] which the guiding principles[21] do not rule out. A similar proposal to NBS, and one which could be seen as coming under an NBS umbrella, is Natural Climate Solutions (NCS). While NCS has the potential to bring with it the same problems as NBS, the NCS website states that NCS should not be a substitute for rapid decarbonisation, and that all NCS initiatives should work with the guidance and free, prior informed consent of Indigenous Peoples and other local communities.[22] NCS has been endorsed by smaller conservation NGOs and some rights-based organisations, including several who have spoken critically of NBS.

In March 2019, the UN declared that 2021-2030 would be the UN Decade of Ecological Restoration. The aim is to accelerate previously existing international restoration targets – including the Bonn Challenge, Initiative 20x20 and the African Forest Landscape Restoration Initiative (AFR100) – and restore 350 million hectares of degraded land by 2030.[23] This UN Decade has been launched because the UN recognised that objectives within the 2030 Agenda for Sustainable Development were not possible to realise without stopping the degradation of landscapes and investing in their restoration.

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16 One example is Jair Bolsonaro's record in Brazil, where he took office in January 2019. His administration and the threat they pose to indigenous rights are supported by President Trump. https://amazonwatch.org/news/2019/0318-protecting-indigenous-lands-protects-the-environment.-trump-and-bolsonaro-threaten-both

17 https://www.unglobalcompact.org/take-action/events/climate-action-summit-2019/nature-based-solutions

18 https://www.climatechangenews.com/2019/12/09/nature-based-solutions-matter/

19 The *Nature-Based Solutions for Climate* Manifesto: https://d306pr3pise04h.cloudfront.net/docs/publications%2FNature-Based-Solutions-for-Climate-Manifesto.pdf

20 https://redd-monitor.org/2020/06/26/do-the-four-principles-on-nature-based-solutions-mean-no-offsets/

21 The guiding principles are: 1) Cut emissions; 2) Conserve and Protect existing ecosystems; 3) Be Socially Responsible; and 4) Be Ecologically Responsible. See: https://medium.com/@naturebasedsolutions32/and-also-not-either-or-the-need-to-restore-nature-and-cut-emissions-9ef7cfda17e6

22 https://www.naturalclimate.solutions/the-letter

23 https://www.unenvironment.org/news-and-stories/press-release/new-un-decade-ecosystem-restoration-offers-unparalleled-opportunity

This requires both political and social will through a worldwide effort. As such, the strategy involves three strands of work:[24]

1. Build a Global Movement through education, awareness-raising, engagement, ethical imperatives and financial investments;

2. Generate political will through policy and tax reforms that promote large-scale restoration, and by working with individual political leaders to champion national restoration opportunities; and

3. Build Technical Capacity, by creating toolkits for restoration practitioners, distributing these globally, and offering training. NBS are mentioned throughout the draft strategy and will be supported through the pooling and release of millions in investment funding.

Whilst human rights are mentioned throughout this strategy, given the aforementioned context and current trend in restoration, there is a clear risk that 'restoration' will be co-opted for purposes which further dispossess local people and/or facilitate the overexploitation and degradation of areas under the guise of rehabilitation or offsetting.

1.2 What is restoration?

Despite the prominence of 'restoration' within international reports and policies, there is still significant debate over what it means and therefore which activities count as being 'restorative'. Similar to terms such as 'rewilding' or 'sustainable development', restoration can mean different things to different people. The UN acknowledges that the lack of consensus on a definition for restoration is a key barrier to being able to promote a positive vision for what restored areas can look like for people and ecosystems.[25]

A good place to start in trying to understand what 'good' restoration looks like is to consider the working definitions of restoration used by practitioners and platforms already involved in some form of restoration practice.

i. Convention on Biological Diversity (CBD)

The CBD promotes restoration as an important tool for conserving and enhancing biodiversity. The decision adopted by the thirteenth Conference of the Parties in 2016[26] specified that "ecological restoration refers to the process of managing or assisting the recovery of an ecosystem that has been degraded, damaged or destroyed as a means of sustaining ecosystem resilience and conserving biodiversity" (2016:2). It also states that "restoration needs to be carried out in ways that balance social, economic and environmental objectives, and that the engagement of all relevant stakeholders, such as land owners, and indigenous peoples and local communities, is crucial at all stages of the restoration process especially as regards the participation of women, recognizing that women are powerful agents of change and their leadership is critical in community revitalization and renewable natural resource management" (2016:4).

Many restoration initiatives reference the CBD and other associated international conventions (including the Aichi Targets and Sustainable Development Goals) as part of their ambition and justification. This includes companies whose practice either directly contradicts elements of this statement – e.g. by not engaging fully with all stakeholders – or more subtly by their interpretation

[24] The UN Decade on Ecological Restoration has published a strategy that will be adapted periodically: https://www.decadeonrestoration.org/strategy

[25] Ibid page 21, paragraph 10.

[26] https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-05-en.pdf

of meaning. For example, it is hard to see how a monoculture plantation in a tropical rainforest area could be perceived as meeting this restoration definition. However, if you apply an environmental economist lens, and measure 'ecosystem recovery' through financial metrics and tree cover rather than biodiversity or ecosystem integrity, then plantations can be viewed as restorative in comparison to what was there before.

ii. Forest Landscape Restoration (FLR)

The Global Partnership on Forest Landscape Restoration (GPFLR) has emerged as a leading force behind global restoration efforts. Originally set up by the IUCN, WWF and Forestry Commission of Great Britain, the GPFLR's members now include over thirty international NGOs (iNGOs), private entities, financial institutions and intergovernmental organisations. Together they commit to working according to a 'Forest Landscape Restoration' (FLR) approach. FLR is "the process of regaining ecological functionality and enhancing human well-being across deforested or degraded forest landscapes". In contrast to conventional conservation-oriented restoration approaches, FLR should:

- *Focus on landscapes* - FLR takes place across entire landscapes, not individual sites, representing mosaics of interacting land uses under various tenure and governance systems.
- *Engage stakeholders and support participatory governance* - FLR engages stakeholders at different scales in decision-making regarding land use, restoration strategies, implementation methods, benefit sharing, monitoring and review processes.
- *Restore multiple functions for multiple benefits* - FLR interventions aim to restore multiple ecological, social and economic functions across a landscape and generate a range of ecosystem goods/services that benefit multiple stakeholders.
- *Maintain and enhance natural ecosystems within landscapes* - FLR does not lead to the conversion of natural forests or other ecosystems. It enhances the conservation, recovery, and sustainable management of forests and other ecosystems.
- *Tailor to the local context* - FLR can be adapted to the local social, cultural, economic and ecological values, needs, and landscape history. It draws on science, best practice, and traditional and Indigenous knowledge, complementing existing local capacities and governance structures.
- *Manage adaptively for long-term resilience* - FLR enhances the resilience and diversity of the landscape and its stakeholders over the medium and long-term. Strategies are adjusted over time to reflect changes in climate and other environmental conditions, knowledge, capacities, stakeholder needs, evaluation and societal values.[27]

By working at a landscape scale, FLR believes ecological, social and economic priorities can be balanced. The model is being tried around the world in different types of ecosystems, including one project in Ghana.[28]

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[27] These principles are a condensed version of those found on the website (accessed 2 September 2019): http://www.forestlandscaperestoration.org/what-forest-and-landscape-restoration-flr

[28] See 'Form Ghana' on page 32

iii. Flexible use of 'restoration' by influential iNGOs

Two NGO members of the GPFLR have been particularly prominent in developing restoration theory and practice. Together, IUCN and WRI created the Atlas of Forest Landscape Restoration Opportunities, a global analysis of land that locates areas with restoration potential. This was followed by the development of the Restoration Opportunities Assessment Methodology (ROAM) toolkit which helps countries complete comprehensive, multidimensional (sub)national assessments to ascertain where restoration projects should be pursued.[29]

In their communications, each organisation also uses 'restoration' with alternative qualifying statements. To address the shortfall in current funding trends, the WRI has been working "to make restoration profitable and capable of attracting private investment"[30], describing landscape restoration as "the planting of trees and other vegetation (active restoration), or leaving the land alone to regenerate naturally (passive restoration)."[31]. When reflecting on how restoration targets might be included in climate targets under Nationally Determined Contributions (NDCs), the WRI describes forest restoration as "improving the ecological state of deforested or degraded landscapes through tree-planting and other means".[32] In a similar vein, the IUCN glossary uses the word restoration as part of the definition for 'biological corridors' (restoring habitat that links protected areas or important habitat); 'habitat management' (where restoration may be a goal); 'load capacity' (where restoration might be used to increase it); 'private payment schemes' (where restoration is rewarded with payments); and 'recovery' (restoration of natural processes and populations). The glossary goes on to specifically define "*restoration (of ecosystems):* all of the key ecological processes and functions are re-established and all of the original biodiversity is re-established"; and "*Ecosystem restoration:* recovery of the structure, function and processes of the original ecosystem".[33]

These examples show how 'restoration' can be used to describe a variety of objectives and interventions, which can be moulded to reflect the values and priorities of whichever organisation is leading the restoration efforts. It can also be framed to appeal to different audiences. Therein lies an inherent risk and opportunity: a flexible term can be misapplied or manoeuvred to secure investment.

iv. Society for Ecological Restoration definition:

The Society for Ecological Restoration (SER) asserts that "ecological restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed." To be successful, ecological restoration practice should be *effective, efficient* and *engaging*: effective by establishing and maintaining an ecosystem's values; efficient by maximising the beneficial outcomes while minimising costs in time, resources and effort; and engaging by collaborating with partners and stakeholders, promoting participation and enhancing experience of ecosystems.[34] To achieve this, the SER has compiled a set of International Standards for Ecological Restoration built on eight key concepts.[35] The SER guidelines have been instrumental in collaborative policy work with the GPFLR and leading iNGOs. They are also being endorsed by the UN Decade on Ecological Restoration.

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29 https://www.bonnchallenge.org/what-our-global-restoration-opportunity accessed 30 July 30 2020

30 https://www.wri.org/our-work/project/new-restoration-economy accessed 2 September 2019

31 https://www.wri.org/our-work/project/new-restoration-economy

32 https://www.wri.org/blog/2018/09/aligning-ambitions-case-including-restoration-targets-climate-goals accessed 2 September 2019

33 https://www.iucn.org/downloads/en__iucn___glossary__definitions.pdf

34 Gann et. al. 2019

35 https://www.ser.org/page/SERStandards/International-Standards-for-the-Practice-of-Ecological-Restoration.htm

v. *Restoration within Resource Management*

'Restoration' features within resource management discourse most commonly as a method for ensuring either the long-term utility of landscapes or the recovery of a degraded area following extraction. The following three platforms are pertinent to this case study.

In terms of forest management, the International Tropical Timber Organisation (ITTO) guidelines are particularly important. This intergovernmental body focuses on sustainable forestry, protection of tropical forests, and the expansion and diversification of timber trading. The ITTO develop policies relating to best practice and legality, which includes information about how to restore forests as part of sustainable management. The ITTO describes forest restoration as "the principal management strategy applied to degraded primary forests [which] aims to enhance and accelerate natural processes of forest regeneration in order to re-establish a healthy and resilient forest ecosystem. Forest restoration is perceived in a way that the species composition, stand structure, biodiversity, functions and processes of the restored forest will match, as closely as feasible, those of the site-specific original forest."[36] Depending on individual countries, ITTO guidelines are not always enshrined in legislation, and even when they are, are not always implemented effectively.

In the last two years an important tool for monitoring the supply chains in forestry and agriculture has been developed – the Accountability Framework Initiative (AFI). Led by a coalition of civil society organisations, the AFI "specifies good practices for ethical supply chains, clarifies how companies can use existing tools, and provides new guidance and clarity on topics where it is now lacking. This enables companies to demonstrate progress toward commitments in consistent and credible ways".[37] As part of its glossary,[38] the AFI defines restoration (in relation to environmental harms) as "the process of assisting the recovery of an ecosystem, and its associated conservation values, that has been degraded, damaged, or destroyed." Interestingly, it also points to how 'restoration' can also be used in the context of addressing human rights harms, for example through the restoration of rights, access, and benefits.

A final important area of discussion is the mitigation hierarchy. There are different definitions of this hierarchy, but the biodiversity consultancy proposes a tool which uses biodiversity accounting to minimise the ecological impact of development projects. The four sequential steps are 1. Avoidance; 2. Minimisation; 3. Rehabilitation/Restoration; and 4. Offset. Steps 1-3 are intended to reduce, as far as possible, the 'residual impacts' on biodiversity; whilst step 4 is then used to ensure that by the end of the project there is "no net loss", and perhaps even a "net positive impact". Restoration is described as "measures taken to improve degraded or removed ecosystems following exposure to impacts that cannot be completely avoided or minimised. Restoration tries to return an area to the original ecosystem that occurred before impacts".[39] It draws a distinction between restoration and rehabilitation, where the latter is concerned only with ecosystem function and services. This mitigation hierarchy tool is being used by multiple development projects, including mining and other forms of resource extraction. Conservation organisations partner to provide biodiversity monitoring and baseline data. They make recommendations, and ultimately give further legitimacy to environmentally harmful activities. For exactly this reason, and the danger of offsets giving companies a "license to trash",[40] this mitigation hierarchy has been rejected by several rights-oriented environmental NGOs, including Fern.

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36 ITTO guidelines for the restoration, management and rehabilitation of degraded and secondary tropical forests report

37 See AFI description on https://accountability-framework.org/overview/ (accessed 2 September 2019)

38 Accountability Framework https://accountability-framework.org/definitions/?definition_category=17

39 See https://www.thebiodiversityconsultancy.com/approaches/mitigation-hierarchy/ accessed 2 September 2019.

40 See https://theecologist.org/2013/sep/09/license-trash-why-biodiversity-offsetting-bo-will-be-disaster-environment accessed 2 September 2019

1.3 Why can 'restoration' be problematic in principle and practice?

Through a brief consideration of these definitions and working principles, we see that 'restoration' can be used to mean different things. There are therefore theoretical/philosophical challenges as well as practical challenges.

With regards to theory, there are two key problems:

1. Unclear baselines for what ecosystems should be restored to and who decides; and

2. The potential for romanticised notions of 'wilderness' and 'pristine/primary forest' to perpetuate policies that separate forests from livelihoods. This stems from the western post-enlightenment distinction between 'nature' from 'culture' and the scientific disciplines that have centred on this binary.

To illustrate why framing matters, and to set the scene for this report's case study in Ghana, the following studies highlight how complex West African landscapes have been misunderstood. Since colonial times, narratives blaming local people for land degradation and deforestation have been used to justify privatisation of the commons. Fairhead and Leach's (1996) seminal historiography unearthed deep-seated assumptions and deforestation narratives in Guinea. They found that contrary to governmental and international conservation discourse, local communities were managing tree groves in a way which was enhancing not reducing tree cover. This study was extended with examinations of other West African forests, including Ghana (Fairhead and Leach 1998), where they critique the politicised nature of the deforestation narrative, which has continually been used to justify the privatisation of remaining forest areas. They question the baselines and colonial data sources used for statistical analysis of tree cover, and prompt discussion about whose definitions, perspectives and assumptions are influencing policy as well as what data is being used to justify decisions which disproportionately impact upon rural farmers.

The work of Mortimore and Adams (1999) was similarly foundational. In response to the rise of simplified desertification and local degradation narratives, their four-year study of perceived environmental degradation in the Sahel reported that rural livelihood practices were, again, enhancing agricultural conditions not degrading them. This review, similarly, raised questions about the influence of perspectives, how these are interconnected with perceptions of historical events and conditions, and how policy reflects these misconceptions.

In this example, the Sahel had become synonymous with drought, famine and starvation, and emotive images perpetuating powerlessness and poverty became the dominant form of media representation, despite the Nigerian economy expanding under increased oil exports and the proven ability of rural livelihoods to adapt with unpredictable climatic conditions (Mortimore and Adams, 2001). Meanwhile, Berry's (1993) extensive examination of the political economy of agrarian change in Ghana and Nigeria deconstructed assertions by policy makers and international development actors that farming practices are inefficient and unsustainable. In fact, they are deliberately adaptable and appropriate for the dynamic ecologies they are based within. She proposed that policy be led by local practice, rather than vice-versa.

This ideological context is important because across the world, both degradation narratives and romanticised notions of "nature" have been used to justify the exclusion of people from their land and resources through the creation of national parks, wildlife sanctuaries, forest reserves and most recently "restoration" initiatives in the form of protected areas, plantations, Reduced Emissions from Deforestation and Degradation (REDD+) projects and other schemes (Agrawal & Redford 2009, West and Brockington 2006). The messaging of these projects often involves depoliticising the drivers of degradation – reverting to at least part-blaming local people – which validates ongoing distrust about the local individual or collective ability to manage resources sustainably.

To complicate matters further, as with other types of conservation (Igoe and Brockington, 2014), the way restoration theory has been realised has also been strongly influenced by neoliberal environmental economics. This school of thought seeks to "make nature's values visible" (TEEB) by the imposition of quantitative economic metrics onto ecosystems whose worth can only be partially measured in financial terms. Examples of this approach include natural capital accounting, payments for ecosystem services, biodiversity/carbon offsetting and some forms of ecotourism (Apostolopoulou and Adams, 2017). These also link with another aspect of neoliberal philosophy – the shift from collective responsibility and action, to more individualised responsibility – which encourages personal action, for example offsetting one's carbon footprint, over political structural change. The emergence of these commodifying frameworks and the green-grabbing appropriations that have come with them have been met with extensive critique by political ecologists, practitioners and activists alike (Fairhead et al 2012; Mcafee, 2012).

The stories we tell about the landscape matter because discourses are levered to justify technocratic forest restoration led by external actors (Kansanga et al 2017). Similarly, sustainability narratives are co-opted by mining and forestry sectors to meet regulations within the market economy (Bridge and McManus, 2000).

This leads us to the problems inherent in restoration practice. As illustrated above, restoration lacks a coherent and agreed definition. The guidelines that do exist are not always adhered to within policy frameworks nor supported by financial mechanisms. This is in part because the word 'restoration' is used by companies and projects that are not serving the interests of ecology, community *and* climate – at most, they focus on only one aspect. In addition to the narratives outlined above, restoration discourse prioritises making the business case – it often appears most interested in carbon capture as climate change mitigation, and fast-growing exotic trees for economic timber, paper pulp and biofuel production (ten Brick et al 2012). These initiatives fail to deliver ecological regeneration, redistribution of power in forest governance or land and resource rights. Instead, plantations are conflated with restoration, which can lead to the justification of land grabs, tree monocultures, privatisation of national forest reserves, and unsustainable production of commercial forest goods.[41]

[41] https://www.biofuelwatch.org.uk/wp-content/uploads/A-new-look-at-land-grabs-in-the-global-South-linked-to-EU-biomass-policies.pdf

Photo: Remnant forest trees in the Miro Forestry concession at Agogo with bare hillsides in the background. These hills were at one point forested.

Furthermore, much current restoration practice does not address the root causes of deforestation – meaning that 'restored' areas may suffer the same fate and become re-degraded. Most initiatives that call themselves 'restoration' are being led by companies or organisations who specialise in either forestry, ecology or business – this leads to particular types of 'restoration' and creates a gap in terms of community participation in governance, perpetuating unequitable benefit sharing, and neglecting to assess and manage the ongoing multidimensional drivers of deforestation. This means that restoration risks being a distraction: the trend in ill-defined 'restoration' absorbs attention and funding away from other more important issues such as promoting governance, combatting illegal logging and lobbying around land use change. Tree planting is seen as a silver bullet so it attracts disproportionate attention and funding, despite numerous critics who draw attention to the poor planning and implementation of these schemes.[42] Similarly, 'sustainable' forestry is being marketed as restorative when it includes areas set aside for conservation. This should not be called restoration – it is simply following Forest Stewardship Council (FSC) best practice – yet public-private partnerships doing this are attracting large grants for restoration.[43] The emphasis on the economic aspect means 'good' restoration will not gain traction because other options have far higher economic gain (Molin et al 2018). High-carbon-dioxide-producing countries want to feel better about their excess rather than seek genuine global sustainability and ecosystem recovery. At best this further embeds various unhelpful development narratives, at worst it results in land-grabs. Furthermore, it is not clear which countries would benefit from campaigning for 'good' restoration and which should remain focused on protection. Assessments for restoration opportunities and hurdles do not always consider broader dynamics like human rights, conflict over resources, contradictory land use pressures and other socio-political drivers of change (Menz et al 2013).

1.4 Towards Rights-based Restoration

At present, restoration practice risks falling into the same trap as other conservation projects which see 'nature' and 'culture' as a binary, and neglect to work with local communities on issues like land rights, governance and equitable benefits. If these are side-lined and if restoration practice does not raise the living standard of local people, it not only risks being ethically dubious, but it will also not work in the long-term.

In July 2018, Fern produced a briefing called 'Protect and Restore: how forests can help the EU tackle climate change' making recommendations for how restoration should be operationalised within EU forests. Here, Fern defines restoration as "enabling the recovery of a forest from overharvesting or other degradation. It aims to recover the ecological functionality of the landscape. For this reason, it does not include planting of monocultures".[44] Through this publication Fern was one of the first organisations to denounce the use of monoculture plantations within restoration practice. This was based on scientific evidence and rational logic – even when temporarily putting aside the needs of people and biodiversity, natural forests contain up to forty times more carbon than plantations.[45] For this same reason, academics and practitioners see the amalgamation of restoration with plantations as one of the greatest risks to meeting climate targets. Indeed, they are beginning to acknowledge that "a new definition of 'forest restoration' that excludes monoculture plantations is needed".[46]

Even before the coining of 'Natural Climate Solutions', Fern had worked with other global NGOs campaigning for social and environmental justice under the coalition Climate Land Ambition and Rights Alliance (CLARA) to develop a more holistic approach than current restoration practice offers. In April 2018 CLARA published a briefing offering some overarching principles for 'rights-based forest restoration'.

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42 https://wrm.org.uy/wp-content/uploads/2020/03/WEB_EN_What-could-be-wrong-about-planting-trees.pdf and https://roarmag.org/essays/why-we-cant-just-plantatree/?fbclid=IwAR2Hjc-SiPzUC8QkcypE5pKCEU6zAC7EYe7Xx8fp6PUE4-i8fvh8YiT2tCM

43 This is explored in the case study in Section Two, through two sustainable forestry initiatives: Miro Forestry and Form Ghana

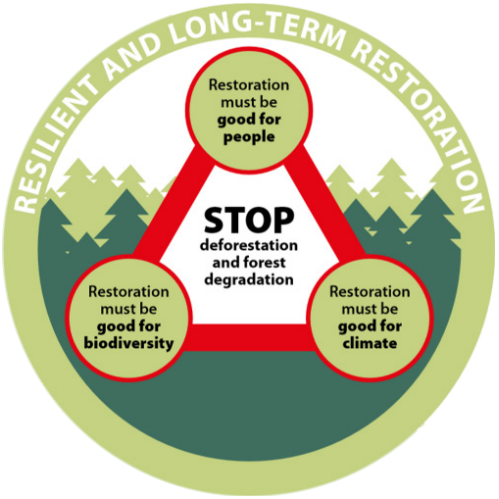
44 Fern briefing note: Protect and Restore: how forests can help the EU tackle climate change

45 https://www.nature.com/articles/d41586-019-01026-8

46 http://theconversation.com/the-scandal-of-calling-plantations-forest-restoration-is-putting-climate-targets-at-risk-114858

This statement considers the problems inherent to current restoration theory and practice. It argues that resilient and long-term restoration should aim to stop deforestation and degradation whilst simultaneously pursuing restorative activities that are good for people, climate, and biodiversity. To do this, CLARA promotes the following key principles which can be applied in different types of forests around the world:

1. Ensure restoration is good for people by:
    - Respecting the rights of local and Indigenous Peoples
    - Responding to local needs
    - Promoting social justice and equality
    - Promoting good governance
2. Ensure restoration is good for biodiversity by:
    - Supporting ecosystems protection
    - Promote environmental co-benefits
    - Support biodiverse landscapes
3. Ensure restoration is good for climate by:
    - Promote strong ecosystems (not plantations)
    - Protect existing carbon stocks
    - Increasing overall climate ambition



The rights-based forest restoration model developed by the CLARA coalition in 2018

In contrast to NBS and the many examples of restoration being co-opted to support market-driven projects, CLARA and Fern assert that it is crucial to address all three of these spheres – not just climate and ecological breakdown, but societal justice as well – if restoration is to work in the long term. The historically persistent omission of people and rights in conservation and climate breakdown mitigation practice justifies a new definition of restoration that explicitly puts these at the centre.

1.5 Purpose of this report

This report takes a critical view of restoration practice and proposed an alternative definition for restoration that centres human rights. The Ghana case study critiques projects which are based on plantations or monocultures and uncovers examples of effective rights-based restoration which might be replicated or scaled-up.

This report affirms that the best types of restoration are locally defined through decentralised governance, driven by the wellbeing of communities and ecosystems rather than profit, and coordinated using a landscape perspective. It acknowledges that the kinds of restoration practices that work best for people and forests are often not in the immediate economic or political interests of governments or international policy because a) they do not provide the substantial financial returns of economically-driven projects and b) they involve a significant shift in resource ownership and decision-making processes. Theoretically, in contrast to some of its current forms, restoration holds the potential for enabling more democratic management and ownership of landscapes, forests and other resources Herein lies the greatest challenge and opportunity: restoration is more than just a distraction from the increasingly pertinent drivers of deforestation; it is simultaneously a feasible vehicle for delivering forest governance, equitable distribution of benefits and sustainable livelihoods. If restoration is implemented with these objectives, it will both protect and enrich the remaining forest ecosystems and the lives of the people within them.

Part Two

Restoration in Ghana

To support the theoretical research underpinning this report, Fern reviewed real life examples in Ghana. Whilst it is important to remember that all successful restoration projects will need to consider different national realities, lessons can still be learnt from Ghana, a country in which Fern has worked with partners for more than a decade.

2.1 Methodology

These case studies are based on a literature review; conversations with practitioners, campaigners and policy-influences from international non-governmental organisations working in restoration; ground-truthing and fact-finding in Ghana through interviews with key stakeholders working for NGOs and governmental bodies; a presentation and discussion with focus groups at the Forest Watch Ghana (FWG) July 2019 General Meeting; and four site visits to different types of restoration projects in the Ashanti, Eastern and Volta regions. The field findings were discussed with Fern's two partner organisations (Civic Response and EcoCare) and these same individuals reviewed this report. Individuals from projects working on restoration within the FWG network were invited to participate, and from these contacts we used chain referral sampling[47] to meet other practitioners. Time and travel were constraints determining the number of interviews that took place. Overall, the research engaged approximately sixty practitioners within Ghana and a further ten from broader forest and conservation networks. The research took place between May-August 2019.

This section begins by explaining why we chose to focus on Ghana, before outlining the different types of restoration currently happening there. We define six overlapping categories and outline several examples for each. Four models for restoration that centre rights are highlighted throughout in text boxes. This extensive review of initiatives is followed by a discussion and analysis to show which approaches will have positive outcomes for forests and people over time.

2.2 Context

Ghana was chosen because our in-country partners had shared their concerns about the increase in plantation-based "restoration programmes" that had secured climate finance ahead of initiatives working to restore natural forests. Secondly, there is very little primary forest left in Ghana and forest loss has been increasing; there may therefore be interest in well-done forest restoration as a sustainable, long-term solution. Lessons learnt in Ghana have the potential to inform other tropical countries with similarly degraded forests.

In 2019 WRI reported that amongst tropical countries, Ghana had the highest rise in primary forest loss, with figures showing an increase of 60 per cent from 2017 to 2018.[48] This is particularly concerning given that only 4.6 per cent (approximately 395,000 hectares (ha)) of Ghana's tree cover

[47] Chain referral sampling is a form of non-probability sampling where participants are encouraged to introduce the researcher to other people who would be interested in the research or be useful as key informants due to their work, experience or position. This might be by direct introduction, referral or contact-sharing (Newing 2011).

[48] https://www.wri.org/blog/2019/04/world-lost-belgium-sized-area-primary-rainforests-last-year

(9.34 million ha) is considered to be primary forest.[49] Furthermore, 70 per cent of the primary forest loss occurred within protected areas, which include government-owned forest reserves, demarcated wildlife zones and national parks. In the lead up to this most recent WRI statistic, Global Forest Watch estimates that Ghana lost 935,000 ha of tree cover between 2001-2017, over half of which occurred in the last five years.[50] These figures point to a trend of increasing tree cover loss despite the numerous government and industry declarations about halting deforestation.

The main causes of deforestation in Ghana are agriculture, timber production (including illegal logging) and mining activities. The advancing cocoa frontier is blamed for most tree loss in the south west. However, whilst these activities directly result in deforestation, they are driven by political decisions, economic markets and social inequality. Too often farmers and local people are assigned disproportionate blame for cutting trees and land use change, when they are usually adapting to outside forces which profoundly impact their livelihoods. Deforestation is known as a complex problem – its multidimensional causes become effects and vice versa – so it is difficult to detangle the drivers of change in a way that leads to holistic, sustainable solutions. Some key factors to be aware of in the Ghanaian context are local governance structures, land and tree tenure arrangements, and gender. These topics also arise as we explore restoration initiatives.

Local governance structures: In Ghana, traditional authorities continue to have significant amount power. Each village and town has a royal family and a group of elders (including a chief and sub-chiefs) who together form the traditional council which makes decisions on behalf of its population about issues such as local land use, timber concessions, development and distribution of land access. Ghana is also split into local governmental authorities by districts and municipalities. These local state authorities are made up of departments with different focus areas – for example, the Ministry of Food and Agriculture (MOFA), environmental services, town planning and so forth – and an assembly of elected representatives from each settlement across the district. For most local issues, the traditional and local state authorities work together, and each has a layer of authority for signing off proposed projects – for example, assigning land to restoration initiatives.

Land and tree tenure arrangements: the ownership of forests and trees in Ghana is inextricable from the ownership of land. Ghana has a customary land tenure system,[51] meaning that land is vested in the traditional elders who are custodians on behalf of the people. Whilst the land is held in common, therefore, decisions affecting land use allocation and distribution are made by the traditional councils, for which there are limited accountability structures. A farmer can get access to land for farming through their family-head. Sometimes crop-sharing arrangements are used instead – where the landowner receives either a third or a half of the profit/yield produced on the land. A farmer can also rent land for a price agreed with the landowner. The tenure arrangement that farmers cultivate their land under alter what crops they choose to grow and influence their management of trees. Many farmers are not able to grow tree crops, for example, because they have a longer lifespan than the tenure arrangement. Furthermore, according to the tree tenure policy,[52] naturally occurring trees are vested in the state[53] whether they are growing within reserve areas or not. If someone plants a tree, it belongs to them. However, in order to harvest it they need to prove ownership which is done through tree registration – a system which is inaccessible for rural communities and cannot be used to secure ownership of naturally occurring trees that have been deliberately left to grow.[54] This means that farmers have no incentive to keep trees on their farms outside of agro-ecological considerations,

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49 FAO, 2015. "Forest cover in Ghana." Accessed through Global Forest Watch on 27th June 2019. www.globalforestwatch.org

50 Global Forest Watch. "Tree Cover Loss in Ghana". Accessed on 27th June 2019 from www.globalforestwatch.org.

51 Customary land is called 'stool land' in southern Ghana and 'skin land' in northern Ghana

52 See the Ministry of Lands and Natural Resources report by Akapme (2016) 'Development of a framework on tree tenure and benefit sharing scheme (legal reform proposals). Final Report'.

53 "Naturally occurring timber is vested in the president in trust for the stools concerned, managed by the Forestry Commission, while pre-existing customary rights are also recognised" (ibid, page 7)

54 Several CSOs involved in this research are working to review the tree tenure policy, because the registration system is limited. Some are pushing for deeper land and tree tenure reform.

because mature trees can be extracted under timber concessions or by illegal loggers. In theory, farmers need to give permission for this to happen, but it often happens without consent. This not only removes the economic benefits from the farmers who nurtured the trees, but also leaves debris, destroys crops, depletes the soil and decreases moisture on the farm. Ownership of forest reserves also resides with customary landowners, although their management and access rights reside with the government. Management of reserve concessions is often contracted out to foreign or national timber companies. There are some areas which are under government ownership – for example, Wildlife or Nature Parks – for which the government has paid compensation to land-owning communities.

Gender: The decision-making around local challenges is still dominated by men who are not always best placed to represent women's needs or priorities. Furthermore, the forestry sector is considered a male profession at both the community and central government levels. Only 7 per cent of managers are women, and across the whole institution only 12 per cent are women. In current forest monitoring forums, there are several barriers to women's participation: many have a lower level of education which comes with a social stigma; and cultural gender roles favour men (often as the head of the household) to participate and 'represent' women rather than women being included. Household roles and childcare responsibilities reduce accessibility for women. Even when women are in decision-making spaces, they have reported not feeling confident, knowledgeable, or articulate enough to speak up or be taken seriously.[55] If governance does not take account of gender differences and ensure active participation of women and other marginalised groups, social inequalities can become further embedded. Despite this, due the matrilineal inheritance system across the south of the country, women do often have rights and access to land and there are examples of projects which have successfully worked with women to enhance their livelihoods, social equity and ability to participate in deliberative governance.

[55] Doreen Asumang-Yeboah from Tropenbos Ghana: Presentation title 'Mainstreaming gender in FLEGT-VPA implementation in Ghana'. Chatham House 29th Global Forum on Forest Governance, 1-2 July 2019

Photo: Forest-farm customary land in Kwahu East, Ghana.

2.2 Restoration in Ghana

There are multiple reasons why restoration projects are undertaken. As outlined in Part One, many draw on understandings of land, ecology and forests that treat people as separate and prioritise economic interests. The type of restoration programmes that are supported, and the type of support available, depends on the political and economic context.

The plethora of Ghanaian initiatives identified as restorative[56] can be clustered roughly into six categories according to the type of organisation leading the project, with each group sharing some common features. These are summarised in Table 1. 'Six Categories of Forest Restoration in Ghana':

Restoration Category	Common features	Names of initiatives and/or delivery organisations
i. Public-led	Managed by the Forestry Commission according to the Ghana Forest Plantation Strategy 2016-2040; integrated with the REDD+ strategy Funded from the public purse Focus on replenishing degraded forest reserves for economic purposes and ecosystem services	Modified Taungya System (MTS) Youth in Plantation Dedicated Grant Mechanism (DGM) Assisted Natural Regeneration Enrichment planting
ii. Ghana-based International Restoration Programmes (iNGO-led)	Led by a partnership between iNGOs and the government Funded by EU, international aid, or private donors Connected to AFR100 Plant mostly indigenous species Do not use monoculture techniques Aims for 'win-win' outcomes for both ecological and livelihood resilience	Regreening Ghana (World Vision and World Agroforestry Centre, also known as ICRAF) One Tree Planted Tree Aid International Network for Bamboo and Rattan (INBAR) IUCN
iii. Local NGO-led	Led by CSOs and NGOs Holistic approach to restoration of landscapes, looking to enhance livelihoods, ecology and quality of life Acknowledge and try to address some of the root drivers of degradation e.g. inequality, resource ownership, governance Work on the small-scale, locally-appropriate Not easily scalable	Community Resource Management Areas (CREMA) projects Weto Landscape Sacred Groves by Accelerated Rural Development Organisation (ARDO) and Greenglobe Ghana A Rocha The Development Initiative Conservation Foundation Save the Frogs Nature and Development Ghana (NDG) Ghana Permaculture Institute

[56] The desk research began by looking for projects using variations on the term 'restoration' in their descriptions – i.e. identifying themselves as restorative. Through interviews with practitioners we found that some of the smaller initiatives deliberately do not use the term restoration because it is often associated with monocrop tree planting.

Restoration Category	Common features	Names of initiatives and/or delivery organisations
iv. Public-Private Partnerships (PPPs), including commodities	Agreements between the government of Ghana and (usually foreign) private companies On-reserve timber concessions managed by commissioned companies in accordance with the Ghana Forest Plantation Strategy 2016-2040 Predominantly monocrop plantation projects in commodity landscapes – cocoa, timber, palm, rubber Market-oriented solutions Concerned with ongoing profitability of economic forests Restoration is generally focused on increasing instrumental value and to some degree ecological integrity	Forest Investment Programme (FIP) Form Ghana Miro Forestry Savannah Accelerated Development Authority (SADA) Cocoa and Forests Initiative (CFI) Cocoa Life Cocoa Promise Olam/Rainforest Alliance Climate Cocoa Partnership Samartex Community Restoration Project
v. Private-led, including extraction	Market-oriented solutions Private plantation projects, usually foreign companies, operating in Ghana under 'sustainable' agriculture and forestry Described as restorative of degraded areas because they increase tree cover and the surface-level productivity of land when it is assessed according to yield and market value, as opposed to livelihoods or human wellbeing frameworks Restoration to increase instrumental value though carbon trading and corporate social responsibility (CSR) to justify exploitation elsewhere	African Plantations for Sustainable Development (APSD) Ghana Ltd Plantations Socfinaf Ghana Vision 2050 Business and Biodiversity Offsets Programme (BBOP) at Akyem Mine
vi. Small Enterprise-led	Led by small to medium sized Ghanaian businesses including local sawmills. Sometimes working in collaboration with CSOs. Restoring forest with the view to ensuring sustainable economic forestry and/or forest-based business (e.g. ecotourism) in the future. Support both local livelihoods and ecological function through small-scale for-profit models.	Portal Forest Estates Ltd Members of the Domestic Lumber Timber Association (DOLTA) Afforestation Volunteers and other localised initiatives by timber traders National Tree Growers Association of Ghana

Table 1. Six Categories of Forest Restoration in Ghana

These projects can also be arranged as a Venn diagram (Figure 1) to show their position in relation to three overarching objectives: **forest governance**, where projects have a specific aim to restore forest(-farm) in off-reserve areas whilst simultaneously securing land and resource rights that enable participation in local decision-making and equitable benefit sharing; **forest cover**, which focuses mostly on forest reserve regeneration and reforesting degraded areas off-reserve, for the combined purpose of timber production and ecosystem services from a broadly economic perspective; and **commodity-driven**, which prioritises making profit from resource exploitation or carbon/biodiversity offsets (timber plantations, agricultural forest landscapes, mineral extraction etc.) and generally uses 'restoration' as a means to this end.

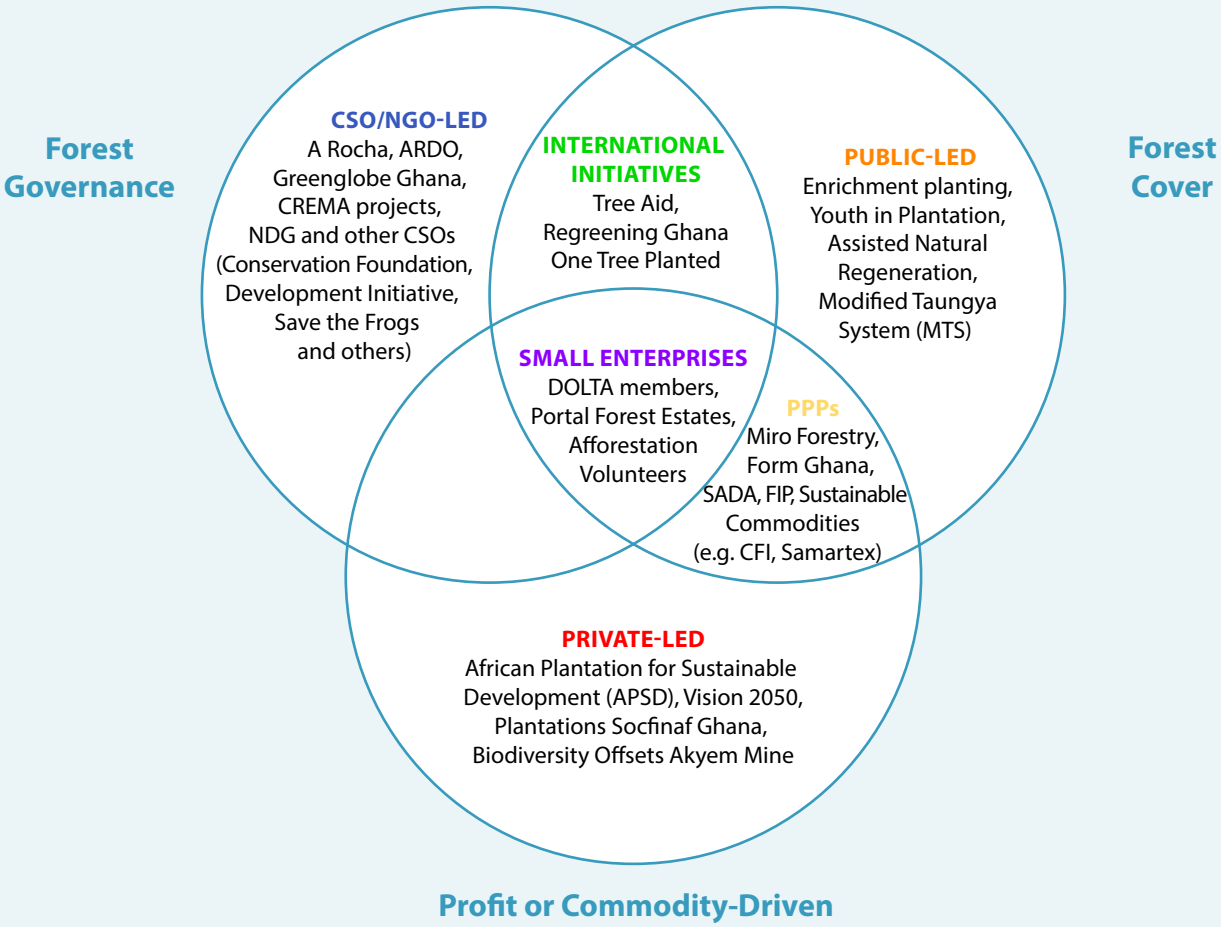

Figure 1. The six restoration categories identified and their corresponding focus – on governance, sustainable forestry or profit.

In order to understand the types of restoration being undertaken and how far each uses a rights-based approach, the following sections summarise some of the projects within each category giving information about the aims, activities, partnerships, funding, benefit sharing, impacts, and governance. Amongst the projects there are four approaches which could be used to create scalable models for delivering rights-based restoration in Ghana. These could also potentially be adapted to other similar tropical forest-farm landscapes. The models are Farmer Managed Natural Regeneration, Tree-growers Associations and Forest Enterprises, Sacred Groves and Cultural Sites, and Community Resource Management Areas. The core activities and benefits of each are summarised in text boxes within this section.

i. Public-led Restoration

These initiatives are managed by the Forestry Commission (FC) according to the Ghana Forest Plantation Strategy 2016-2040 (GFPS), which replaced the 2001 National Forest Plantation Development Programme (NFPDP). The GFPS is aligned with Ghana's Medium-Term Development Plan (GSGDA II), the 40-year National Socio-economic Transformational Plan, the United Nations' Universal Sustainable Development Goals, Ghana's Nationally Determined Contributions and the Paris Agreement (2015). The GFPS is 30 per cent funded from the public purse (through the direct budget, development partners, timber taxes and pensions) and 70 per cent funded from private sector (in debt and equity financing).

This category includes only FC-led initiatives funded from the public purse. Public-Private Partnerships are covered in group iv. There are four restoration-oriented programmes detailed below – the Modified Taungya System (MTS), Youth in Plantation (YiP), Assisted Natural Regeneration and Enrichment Planting – which are directed at replenishing the country's forest reserves for mainly economic purposes. This means that mostly timber trees are planted, a mixture of native and exotic. The restoration generally occurs on-reserves in areas that have been degraded by timber extraction.

Modified Taungya System (MTS): MTS begin in 2002 as a reform of the original Taungya System[57] which was in operation from the 1930s-1980s. Taungya initiatives essentially involve the FC leasing degraded on-reserve land to farmers to replenish the forest with tree planting and grow crops until the canopy closes. The first iteration did not give farmers any rights over the accruing benefits in the tree crops (despite the *landowners* receiving money when timber was logged), nor any power in decision making about the plantations. In the original benefit sharing arrangement, 84 per cent went to public offices (including 60 per cent to the FC), and the remaining 16 per cent went to landowners and traditional authorities. The farmers got nothing. This resulted in some plot management issues – e.g. farmers clearing more land than needed for the tree seedlings they were given in order to make bigger farms; young trees being sabotaged to ensure longer access to the land; and planting crops which were not compatible with tree growth. There were other structural issues too, including inadequate supervision by the FC, insufficient finance, and reports of public officials abusing their power in farm allocation. Overall, it is believed that the original Taungya System not only increased the number of illegally farmed areas, but according to some participants in this research, also catalysed much of the degradation which still pervades forest reserves today.

After its suspension in 1984, farmers requested the Taungya System be reintroduced. Following an eighteen-month consultation involving multiple stakeholders, the MTS was launched in 2002. To improve the model, the FC changed the land access and benefit sharing arrangement. Under the MTS a farmer is granted an area of degraded land. The FC demarcates the area, deciding how many trees and which species will be planted, and provides pegs, seedlings and technical support. The farmer provides all the labour inputs for the first three years – including site preparation, planting, weeding, tending and fire protection – and also has permission to intercrop the trees with food crops until the canopy closes. At this point the farmers stop farming but continue to provide tree maintenance labour (weeding, clearing the fire belt etc.) until the trees are fully grown. Unlike the old system, farmers have a 40 per cent share in the Standing Tree Value. The remaining 60 per cent is divided between the FC (40 per cent), landowner (8 per cent), traditional authorities (7 per cent) and the wider forest-fringe community (5 per cent).

The MTS was designed as a win-win solution – the FC needed labour to restore the depleted forest reserves and farmers needed land as they had exhausted their available arable areas. Teak trees (*Tectona grandis*) were deliberately planted at a 3-metre distance because they were being grown for use as electricity poles. This meant that after three years there was no light to grow crops. It was anticipated that from this point onwards farmers would need regular payments to ensure they looked after the trees until they were able to redeem their value at harvest. However, the FC was unable to advance any payments as no financial institution would provide such a loan due to the associated risk if trees did not reach the point of sale. Additionally, whilst the written contracts are clear, the implementation of MTS was often rushed and under-resourced in FC staff time, which meant that not all farmers received the technical support promised nor understood fully the expectations. The FC has been known to use force to evict farmers from land inside reserves, including those who are part of an MTS agreement if they are deemed to be breaking the contract.

[57] The term 'Taungya' originates from Myanmar, where the concept of leasing forest reserve to farmers for short-term intercropping was first developed. For more history on the original and Modified Taungya Systems, see http://www.fao.org/tempref/docrep/fao/005/y4744e/y4744e10.pdf

Ongoing conflicts between farmers, forestry personnel and other land users (herders, agribusiness etc) are exacerbated by increasing land scarcity. This is caused by infrastructural developments, land grabs and complicated tenure arrangements, as well as unclear forest boundaries and demarcation. Overall, amongst the participants in this research, MTS received mixed views about how well the model has worked for restoration – with the main critiques being the excessive use of exotic tree species which undermine ecological recovery, the long period of farmers providing labour without return, and the limited technical support provided.

Youth in Plantation (YiP): This is an FC programme which recruits young people, especially in rural areas, to work as tree planters. It is being used by the government to complete the GFPS and as part of its climate change mitigation plan. It also contributes to the government's agenda of creating more jobs. Young people are recruited by the District Assembly and trained by the FC. The programme focuses on planting non-native fast growing timber trees,[58] indicating a potential motivation for timber and biomass rather than restoration of ecosystem resilience. There are some indigenous species planted too, in accordance with the NFPDP and Expanded Plantation Programme (EPP).[59] Trees are planted mainly in degraded reserve areas, however, under the EPP it was extended to include some off-reserve private land to ensure districts without degraded forest reserves were still benefiting from the employment opportunities. Off-reserve, the FC plants on land which belongs to schools, churches or other public lands. In these cases, the trees remain public property – "the assumption is that it is public and if the school uses it, it is still public"[60] – so, in theory, if the schools cut the trees with the FC's permission and guidance, they retain the right to use the wood. However, since these public-land plantations are new it is unclear how this will pan out over time. The FC deliberately avoid planting trees on private land due to complications around benefit sharing agreements and land rights. Aside from the temporary youth employment and limited training, there are no other benefits to local people.

Assisted Natural Regeneration (ANR) is a forestry technique used to increase the productivity of forest areas that have been degraded. It can also be used to reforest areas that were previously forest and have been used for other purposes. It aims to work with the forest ecosystem to accelerate recovery of tree cover, primarily by reducing causes of deforestation and the barriers that slow down natural regeneration. This includes fire management, clearance of competitive species, preventing encroachment from other land uses (especially grazing and farming), and soil degradation. It has been promoted by organisations such as the Food and Agriculture Organisation (FAO)[61] and is a technique utilised by foresters globally. In Ghana, ANR is a standard management practice by the FC within its forest reserve areas. Whilst there are some benefits to biodiversity, ecosystem services and increased non-timber forest products (NTFPs), the main purpose is to increase the economic productivity of forests as a timber resource. There are difficulties in the execution of ANR in Ghana due to the lack of capacity within the FC and the multiple drivers of degradation that the forest reserves are subject to.

Enrichment Planting is aimed at improving the ecosystem functions of forest reserves and, as the name suggests, involves deliberate raising and planting out of native tree species to increase tree cover. As with ANR, the reality on the ground in Ghana is that enrichment planting is not always done due to staff capacity and the FC prioritising tackling causes of deforestation – field officers and forest guards spend most of their time preventing illegal logging, farm encroachment and ensuring fire belts are kept tidy, rather than planting trees.

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58 Including teak (*Tectona grandis*), cedrela (*Cedrela odorata*) and eucalyptus (*Eucalyptus spp.*)

59 Including Ofram (*Terminalia superba*), Emire (*Terminalia ivorensis*), Mahogany (*Khaya senegalensis*), Wawa *(Triplochiton scleroxylon),* and Cassia (*Senna siamea*), see: https://www.fcghana.org/page.php?page=291&section=28&typ=1

60 A quote from an FC employee in conversation, July 2019.

61 http://www.fao.org/forestry/19102-0bf30dd3d800687636a5ddc85e409044a.pdf

ii. Ghana-based International Restoration Programmes

This category encapsulates programmes which operate across more than one country, usually being led by an umbrella international NGO, and facilitated on the ground through local civil society organisations (CSOs). In Ghana, they are done in partnership with the appropriate government ministries and are funded either privately through donations or international donor bodies (such as the UK Foreign, Commonwealth and Development Office (FCDO), the EU and various banks). Some uniting features of these programmes are their use of mostly indigenous species for tree-planting, non-monocultural techniques, and their double-edged aim of 'win-win' outcomes for both ecological and livelihood resilience. Three of the main projects are summarised below.

'Reversing land degradation in Africa by scaling up evergreen agriculture' by Regreening Ghana with Trees. This the Ghana-based segment of the broader 'Regreening Africa' programme. Regreening Ghana with Trees is facilitated by a coalition of organisations including World Vision Ghana, Catholic Relief Services, ICRAF Sahel (part of the World Agroforestry Centre), and both local and national Ghanaian Government offices. Funded by the EU, this project integrates food production and land restoration through the promotion of agroforestry with the aim of reversing land degradation in savannah areas. This is designed to mitigate increasing challenges from extreme weather, uncontrolled fire, overgrazing and the decrease in tree cover, biodiversity and soil fertility. At present the project operates in Bwaku West and Garu Tempane districts in the Upper East Region, and Mion district in the Northern Region. Regreening Ghana with Trees uses Farmer Managed Natural Regeneration (FMNR) of trees and shrubs to enable low-cost agroforestry. Activities include introducing FMNR to communities, training farmers in FMNR and agroforestry techniques, and advocating for support of land restoration in policy-making through convening national-level multi-stakeholder workshops. The project will run until 2022, by which point it hopes to have reversed land degradation across 80,000 ha and supported 90,000 households to use more climate resilient livelihood practices. There are ongoing difficulties with the project caused by insecure land tenure, disputes over tree uses and ownership, bushfires, lack of financial resources and unequal gender dynamics. For example, in the local communities there is a desire amongst men to cut shea trees for charcoal production, and this directly impacts women whose livelihoods are based on shea nut collection and processing. Without legal tree ownership arrangements and agreements between stakeholders women (and inadvertently the wider household and community) are more likely to lose out. In December 2018[62] public officials, farmers, NGO representatives and advocates came together in Bolgatanga to discuss these issues and declared their commitments to work collaboratively to overcome them. They hope to register the area under a community forestry arrangement, which would provide the prerequisite for scaling this FMNR model to other parts of Ghana. As such, even despite the difficulties, this project was highlighted by FWG members as being an example of 'good' restoration which endorses rights-based principles including widening participation in decision-making, responding appropriately to local needs and long-term ecological sustainability.

[62] http://blog.worldagroforestry.org/index.php/2018/12/07/call-to-action-more-trees-to-restore-landscapes-and-improve-livelihoods-in-northern-ghana/ accessed 14th September 2019

Model for scaling restoration #1: Farmer Managed Natural Regeneration (FMNR)

Where is this model seen? World Vision's project 'Regreening Ghana' in the Upper East and Northern regions. This model has also been used successfully in other parts of Sub-Saharan Africa (Senegal, Mali, Ethiopia, Kenya, Rwanda, Tanzania, Uganda) and there are similar programmes in South East Asia (Indonesia and Timor-Leste).

What does it involve? This scheme works with farmers to regenerate farmland areas through specific FMNR agroforestry techniques. FMNR identifies and nurtures regrowth from previously cut tree stumps. Tree stumps provide young saplings with extensive root networks and greater recourse to nutrients in dry areas. Trees are pruned and some transplanted to different stumps to ensure as much regrowth as possible. Farmers are trained in these and other natural regeneration techniques, including turning crop residues into fertiliser and animal fodder, training voluntary community fire-fighting teams to tackle bushfires, utilising FMNR-grown trees for household fuelwood, and enabling increased income from diversified livelihoods. They also have a strong focus on supporting the development of local laws to create an enabling environment for good ecological management. World Vision provides a detailed manual for implementing FMNR and the Ghana project summary can be found here.

What are the unique social and ecological benefits? People taking part in the project have reported having greater and more diverse livelihood incomes; more availability of wild food; improved access to sustainable fuelwood and construction timber from their own farms; farms being protected by the trees providing a wind break; increase in shaded areas and aesthetic beauty within town settlements; reduced child labour for animal rearing due to use of FMNR fodder; and asset creation in the form of trees. All these elements have contributed to reducing the pressure on nearby forests, increased soil fertility, prevented soil erosion and increased the number of indigenous trees in both farmland and forests.

One Tree Planted. This is a non-profit organisation that pools money from individuals and corporate social responsibility (CSR) donations to support local reforestation partners in countries around the world. In Ghana, their CSO partners include Community Self-Reliance Centre, Jaksally, Trax Ghana, the Organisation for Indigenous Initiatives and Sustainability, Widows and Orphans Movement Ghana, Centre for Women's Opportunities, and Partnerships for Rural Development Action. One Tree Planted operates as part of AFR100 and is connected to the WRI. The tree planting programmes currently focuses on savannah areas of north-east Ghana, where 30,000 trees are being planted to combat "rapid desertification caused by deforestation and close proximity to the Sahara and Sahel deserts",[63] By improving the health of forests, the aim is to also increase soil fertility, ecosystem services (specifically water), and contribute to more economically and environmentally sustainable livelihoods. The programme creates jobs through the tree nursery and organises educative opportunities for local people. In addition to the work in the north, there are some smaller projects in some parts of Brong-Ahafo, Ashanti, and Central and Eastern regions. The tree species are selected by the CSO partners, however, these are usually mahogany, teak, eucalyptus and rosewood. The organisations involved seek to work closely with traditional authorities and political leaders. Members of FWG had not heard of this initiative, and therefore it is hard to say how successful the project has been on the ground and how far it promotes forest governance or rights.

Tree Aid. This is a UK-based charity that raises money for tree planting projects across several African nations. International development donors include Swedish International Development Cooperation

[63] https://onetreeplanted.org/collections/africa/products/ghana accessed 30th June 2019

Agency (SIDA), the Dutch Ministry of Foreign Affairs, Darwin Initiative, Ecosia, Guernsey Overseas Aid Commission, Comic Relief, and the UK FCDO, as well as private sponsorship from corporations and charitable trusts.[64] Tree Aid works with the same local CSO partners as One Tree Planted, as well as World Agroforestry Centre (ICRAF), Centre for International Forest Research (CIFOR), Great Green Wall partners, FAO and the government. In Ghana, Tree Aid mainly works in the northern dryland areas. It takes a holistic FLR approach, focusing on four interconnecting themes: community natural resource management, enterprise development, forest governance and food and nutrition. Key activities involve tree planting, education on using tree products in household diets, sustainable livelihoods, and water body restoration. One example is the Daka River Restoration Project[65] in Yendi district, which planted 900,000 trees[66] along the riparian buffer zone on the river Daka. This mitigated both the impacts from farming and water erosion on the riverbank, whilst also providing opportunities to local communities to utilise NTFPs. This programme trained 400 farmers in Assisted Natural Regeneration techniques and restored 720 ha of land. To ensure long term sustainability, Tree Aid's local CSO partners established committees to protect the restored areas and manage wildlife. In other areas, the Village Tree Enterprises (VTE) and Forest Trade Associations (FTA) support people to make a living from local trees. To date, the VTE has enabled 1,500 people in northern Ghana to double their incomes using NTFP from baobab, shea and cashew trees. Furthermore, Tree Aid also uses its monitoring and evaluation processes to share best practice with other restoration practitioners and to influence local and national policy. As with Regreening Ghana, FWG members see this project as having potential for replication in other areas and scaling up across landscapes. They consider this to be 'good' restoration.

iii. Local NGO-led Restoration

The projects falling under this category are small to medium size NGOs, some of whom are a part of an international network (e.g. A Rocha Ghana). CSOs, e.g. informal community-based interventions, also fit under this heading. Several of the projects described in this report are part of the FWG network. This platform acts as a watchdog for illegal forest activities, a mechanism through which smaller organisations can collaborate to influence policy, and a professional coalition for supporting each other's work. The NGOs also work in partnership with appropriate governmental ministries, especially the FC and Ministry of Food and Agriculture (MOFA). These projects have the following features in common: their holistic approach to restoration of landscapes, which incorporates enhancing livelihoods, quality of life and ecology; acknowledgement of the root drivers of degradation (inequality, resource ownership/governance and economic pressure) and taking active steps to address them; working on a smaller scale in a locally-appropriate and defined way. Funding for the organisations come from a variety of sources – including donor aid, private donations and partnerships with international NGOs. These projects are seen by larger investors as difficult to scale, even though, as will be demonstrated in the following examples, this is not always the case. These organisations provide some of the best examples of rights-based restoration principles in practice, although this is not the terminology used by them at the time of this research.

Accelerated Rural Development Organisation (ARDO) is a development and conservation NGO based in the Volta Region. It runs several projects which focus on enabling people in rural areas to improve the sustainability of their livelihoods through education and equitable resource management. It has developed a unique model for forest restoration based on protecting Ghana's sacred groves, which have traditional spiritual value. Since the influence of Christianity, the local beliefs and practices have been gradually eroded, which has led to sacred groves becoming degraded. ARDO is using them as a tool to engage local people in conservation and forest restoration. Its flagship programme is called "Enhancing the Resilience of the People of Tafi Mador and Agome on the Weto Landscape in Biodiversity Conservation and Integrated Sustainable Livelihood Enterprise

[64] Including 'Restore Our World', a UK-based charitable trust which also funds Regional Advisory Information and Network Systems (RAINS), see section iii.

[65] Tree Aid 'Update' newsletter, 2018, Issue 9

[66] Tree species include the dawadawa (*Parkia biglobosa*), mahogany (*Khaya senegalensis*), teak (*Tectona grandis*), cashew and mango.

Photo: View of a sacred grove in the Weto Landscape that ARDO is working with the community to protect and restore (photo taken by ARDO project officer, used with permission).

Development". This secured funding from the Global Environment Facility (GEF) under the United Nations Development Programme (UNDP). In this programme, ARDO aims to increase local participation in forest governance and monitoring though engagement, demarcation of sacred groves, education, sharing traditional knowledge, and supporting community action to protect the forest. Benefit sharing arrangements are co-designed by multi-stakeholder groups to ensure that they are equitable. Additionally, local people are encouraged to learn more about NTFP uses, locations and economic opportunities. Sustainable livelihoods are supported through diversification and ecologically-friendly farming practices. Education also offers the chance to raise awareness of broader topics relating to biodiversity, food security and climate change. The multi-stakeholder approach increases the access power of local people to report illegal or unsustainable activities. This approach was highlighted by the FWG members as being a particularly inspiring form of forest restoration due to its collaboration with local people, holistic approach and potential for replication.

Aside from the sacred groves work, ARDO also run other programmes in partnership with the FWG group engaging communities in the Forest Law Enforcement, Governance and Trade (FLEGT) Voluntary Partnership Agreement (VPA) process, ensuring that these protect the forest and share benefits appropriately. This was done with Friends of the Earth, the European Environmental Facility and UNDP. Most recently (July 2019) ARDO have been doing community education on sustainable forest-farm livelihoods including on the effects of and alternatives to excessive use of agro-chemicals, animal rearing, irrigation and cocoa farming. These have been organised into three groups – a women's forum, a youth forum and a general community forum – to ensure differentiated needs are met.

Greenglobe Ghana. Through the FWG network, Greenglobe Ghana were introduced to the work of ARDO and decided to embark on a similar project on the eastern side of the same mountain in Weto. Their project was called "Conserving Biodiversity and Livelihood Enhancement: the case of Saviefe Communities on the Weto Landscape" and uses the sacred grove model. They work alongside the International Partnership for the Satoyama Initiative (IPSI), Volta Region Beekeepers Association, Environmental Protection Agency (EPA), the FC and MOFA. The project is funded by a Community Development and Knowledge Management (COMDEK) grant, which is the IPSI's principal programme supporting landscape restoration across 20 countries, and is administered as part of the GEF.[67] In Weto, Greenglobe Ghana use

[67] https://comdeksproject.com/country-programmes/ghana/

this grant to promote community institutions and participation in sustainable resource management, through the means of biodiversity and ecosystem services restoration. They aim to halt degradation and see a thriving socio-ecological production landscape. As part of the project, sacred groves are set aside for conservation, livelihoods and sustainable agriculture. Communities are encouraged to diversify household income without compromising ecosystem resilience (including beekeeping, rice and vegetable cultivation, livestock rearing, fruit tree orchards and mushroom production). High breed cocoa and coffee species have been introduced as part of the conservation project, which has also increased farmers' incomes. Other activities involve increasing the capacity of traditional authorities, revitalising volunteer fire squads, indigenous tree planting, and reducing the extent of deforestation through landscape management volunteering. A total of 500,000 tree seedlings were grown in two nurseries and planted out in the area. This included cocoa and coffee crop trees as well as indigenous economic trees.[68] A core part of the project has been establishing the community forest management committees which ensure effective, inclusive forest governance and enables the community to increase their self-advocacy in relation to local government authorities.[69] Greenglobe Ghana has also been promoting ecotourism by re-establishing traditional festivals that were lost under the influence of Christianity.

Model for scaling restoration #2: Sacred groves and cultural sites

Where is this model seen? Three CSO-led projects that use this model are ARDO, Greenglobe Ghana and NDG.

What does it involve? Each of these projects use cultural sites and/or sacred groves as the starting point for restoration. These are mapped with communities through participatory methods, in which people share their local or traditional ecological knowledge with the wider community. Once mapped, the communities decide together, through deliberative decision making, how to restore and protect the sacred groves. This is often through different zones. The core forest area is demarcated and either left alone or gently assisted to naturally regenerate. People usually still have access for NTFP, although these rules are location specific depending on the community's decision. Within the surrounding buffer zone, different livelihood techniques are explored to improve yields, diversify income and increase ecological agriculture. These take into account and mitigate risks that might affect both livelihoods and restored forest – including bush fires, illegal loggers and insecure land allocation or tenure. Whilst the examples seen in these CSOs are relatively small, this model is replicable due to it being oriented around culturally significant sites, which every town and village in Ghana has.

What are the *unique social and ecological benefits*? Many of the areas these projects work in have seen traditional practices and beliefs dismantled or neglected – for example, through the increase in religious beliefs or the movement of people over time. Restoring cultural sites and sacred groves enables people to reconnect with the forest ecosystem and knowledge they may have lost.

One cycle of the project has been completed in an off-forest reserve area measuring about 360,000 ha, which encompasses ten traditional authorities/landowners and four Indigenous fringe communities. The unique element to IPSI COMDEK land restoration is the utilisation of participatory land use planning. This did not go well with land-owners initially as there was a fear of alienation from resources, however the process worked through community engagement and education. It is unclear from project reports what this struggle or resolution involved and how far this could be an issue if the project was replicated. Another challenge was ensuring community participation, especially of youths, when there were no immediate income benefits.

[68] These include wawa (*Triplochiton scleroxylon*) and mahogany (*Khaya senegalensis*)

[69] https://satoyama-initiative.org/wp-content/uploads/2018/08/Summary-Sheet_website-min.pdf

Nature and Development Ghana (NDG) works mainly in the Kintampo district, north of Kumasi in the dry savannah zone. Here they are coordinating programmes that seek to protect and restore the cultural and ecological values of the land. NDG are funded by the Austrian government, and some of the money is administered through Ghanaian government ministries. The esteemed Ghanaian professor of African Studies (Professor Kofi Amanor)[70] and a Global Information Systems (GIS) expert (Dr Okopu Pabi) from the University of Ghana partnered on the project. Their involvement was crucial to accessing funding. NDG's main aim is to increase the resilience and sustainability of the savannah dryland area through working with farmers and communities to diversify livelihoods, increase agroforestry and enhance biodiversity. Their work includes documenting sacred grove histories, enabling communities to establish cashew nut agroforestry, training beekeepers, fallow management and tree crop training. NDG carried out a community assessment and became aware of a significant gap – farmers wanted to grow more cashew and shea, but they lacked seedlings and knowledge about how to take care of them. As such, the project set up three tree nurseries with the communities where shea and cashew are cultivated. Furthermore, NDG brought in experts to train farmers to graft the cashew, which increased the success rate of cultivation to 90 per cent and provided them with more seedlings for their farms. The beekeeping also adds value as the bees are natural pollinators for cashew. NDG also carries out education around fallow management, in part to mitigate against land and resource conflicts arising. This involves helping farmers to increase the yield from yam, which is the staple crop locally, ensuring areas are defended against wild fires and soil degradation, and assisting the natural regeneration of trees. Recently farmers showed an interest in growing indigenous economic trees to use as farm boundary markers, as well as dryland reforestation. Some of these will be planted along the rivers to protect water sources.[71]

The project is in the last of its three years. It is considered successful by the multiple stakeholders who are involved, including diverse community members, MOFA, FC, crop practitioners, and university researchers. The project coordinator told us that the farmers "have started asking what next? Other parts of the community [are] interested if there is an extension [to the project]. All the benefits go to the community and the individuals. So it looks attractive." He aims to find a market for the honey to increase the income and ensure long term livelihood sustainability.

A Rocha Ghana focus on sustainable community development, taking a holistic approach which considers ecology, economy and well-being. They support communities to diversify their livelihoods and secure better natural resource management by combining community development with conservation work. It has projects around the country, including several on the edge of Mole National Park in the north, some in the high forest of Western Region, and in villages around the Lake Bosomtwe near Kumasi. These use the Community Resource Management Areas (CREMA) model to do a variety of community-based conservation projects, led by local people and adapted to the ecosystem that is being restored. CREMA is a structure of decentralised local governance whereby local communities commit to ensuring sustainable management of resources whilst simultaneously getting optimum benefits from them.[72]

For this research, we visited the A Rocha restoration initiative at Lake Bosomtwe and interviewed the project lead. Here, twenty-one communities around the lake, across two districts and two traditional areas, are simultaneously restoring the forest area around the lake and improving the quality of the water ecosystem. Land ownership is mixed between family land, communal land, stool land[73] and one forest reserve managed by the FC. Through the CREMA governance system, local communities have been involved in the multi-stakeholder decision-making processes that informed the demarcation of the area into different zones and drafting the bylaws that legislated how they will be managed – the core zone of critical ecological value where no human disturbance is permitted, the buffer zone where

[70] Amanor is renowned for his contributions to the knowledge of customary land and tree tenure in Ghana.

[71] Trees include mahogany *(Khaya senegalensis)*, ofram *(Terminalia superba)*, *Pericopsis elata* (local name unknown), dawadawa *(Parkia biglobosa)* and shea *(Viteria paradoxum)*.

[72] The CREMA model will be summarised in more detail in section 3.3, as a model that could be used to scale up rights-based restoration.

[73] See 2.1 – stool land is the name for customary land tenure that is vested in the chief.

Photo: Local fishermen hang their nets to dry in mango and coconut trees at Lake Bosomtwe CREMA.

sustainable livelihoods are enabled, and the transition zone where most of the local populations live. This has had significant impacts on local fishing and farming livelihoods. The involvement of communities in these decisions has been crucial for their enforcement and success. For example, some areas of the lake were assessed as being crucial for fish populations as spawning sites, so fishing is now disallowed in these locations which disproportionately effects the fishermen living next to them. Similarly, farmers at the lake edge have been supported to alter their farming practices in respect of the CREMA-affirmed bylaw that protects the 50-metre perimeter of water bodies from human activity. However, due to the participatory governance and the positive effect of these changes on farming and fishing livelihoods overall – as will be described below – local communities have been mostly supportive of it.

A Rocha's approach to restoration is one which sees people as a part of the ecosystems – therefore they are not only interested in restoring the forest or lake areas to ecological health but consider people's livelihoods and well-being as equally important. As such, under the leadership of the CREMA platform, the project has undertaken restoration activities that meet needs of both ecology and the community. These include restoring the edge of the lake to protect ecosystem function and stop erosion, improving the soil health and farming livelihoods; planting a belt of coconut trees and indigenous forest trees within the buffer areas, both of which have high economic value to local people; supporting communities to register their tenure of the timber trees so that they can protect them as they grow and receive the benefits when they are sustainably harvested; mixed cropping under young trees; creating a medicinal garden to enable the sharing of traditional knowledge, to give access to free healthcare, and to protect plants that have become rare due to ecosystem damage; planting fruit trees within towns to provide shade, annual income and community food; introducing conservation-agriculture techniques that lower farmer input costs through reducing the use of chemicals, whilst improving yield quality and quantity; and increasing fish populations through protection of breeding areas and the improved water quality from reduced use of chemicals and soil erosion.

In Lake Bosomtwe there have been some negative impacts on the communities. Some people feel like their activities have been restricted, so A Rocha are working with them to think about the future and sustainability in the long term. There have been moments of confrontation when people have not understood why they should follow the new rules. There are prescribed penalties for when people do not abide, and CREMAs can prosecute because it has legal rights and backing. People do report instances of misbehaviour, however, when nothing is done about it, they get frustrated.

The limited resources for enforcement and engagement weakens the whole governance system and forest management processes. "When processes are well followed CREMA is a very good tool for resource enhancement" (A Rocha Project Lead 2019) but there are many things that make it difficult. For example, the representative management committee might organise a meeting but there is no money for transportation as they are not yet empowered to generate their own funding. Similarly, normal monitoring of different parts of the CREMA is extremely difficult because they do not have resources to increase capacity – the roads are not good, there are limited local taxis, and it takes a lot of time which relies on volunteers. A Rocha has also built up CREMAs in the north of Ghana near Mole National Park which are well established and have created mechanisms by which they can generate income to support themselves. This is the ultimate aim for Lake Bosomtwe too. A Rocha's approach is aided by having three offices (Accra, Kumasi and Tamale), which increases accessibility, staff capacity and availability.

A Rocha recognises that by working with local communities as collaborators, and holding trusting relationships with them for years, better outcomes are achieved for people and biodiversity. Working long term in collaboration with the community means that the multi-stakeholder governance programmes can be institutionalised and multiple rights are enhanced This type of restoration is good for people because there is an increase in income from coconuts, more available NTFPs, a future economic income from registered trees, involvement in governance structures, increased fish stocks, clean water and healthier soil for farming. Similarly, it is good for biodiversity due to the increase in tree and plant species, protection of ecologically important areas, and more sustainable livelihoods. This also results in positive outcomes for climate breakdown mitigation as the carbon sinks – including wetland, soil and forest – are more resilient, larger in volume and guaranteed for the foreseeable future.

Model for scaling restoration #3: Community Resource Management Areas (CREMA)

Where is this model seen? A Rocha is coordinating CREMAs in Mole National Park, Lake Bosomtwe and parts of the Western region high forest area. Less well established CREMAs are found across Ghana.

What does it involve? The CREMA model was developed by the Wildlife Division of the Government of Ghana as a tool for enabling community-led conservation in buffer zones of National Parks. The model has evolved and is now being used for other forms of decentralised resource management – including forest and ecosystem restoration, as seen at Lake Bosomtwe. In theory a CREMA can be set up by any individual or group, however, usually they are introduced and led by a CSO. The CREMA provides a framework for establishing effective governance structures for communities to manage their own resources, based around multi-stakeholder dialogue. This representative platform becomes the operational body that develops management plans, drafts bylaws and upholds the constitution. The area in question is assessed and mapped, divided into three zones – core, buffer and transitional – for which different rules are written for how communities can use each area.

What are the unique social and ecological benefits? CREMAs have the potential to mobilise communities and enable them to have genuine governance of their resources. If used in this way, the CREMA provides a framework for communities to assess and enhance both the ecosystems they live within and their livelihoods. This enables communities to protect the forest, hold the authorities to account, check illegal loggers, and assert their political rights within local state and traditional governance structures. CREMAs enable farmers and local communities to become more aware of their rights and has transparency of information so that everyone can participate, increase their knowledge of the resources, and make their own decisions. They also rely on the expertise of the communities rather than outsiders – meaning that restoration can be truly locally-led and relevant for each location. CREMAs can be scaled up – indeed, the REDD+ programme is rolling them out as part of their programme of support – however, their success depends on how effectively they are coordinated in a long-term and genuinely community-led manner.

Civic Response and Ecocare. These organisations are not involved directly in restoration activities, however, they are important contributors to understanding how rights-based restoration can be upscaled due to their interest in addressing gender inequalities, redistributing power and democratising resource management. The focus of their work lies in increasing participation of local communities in decision-making processes and forest governance; improving systems of accountability for institutions and individuals in positions of power, including creating a database to track Social Responsibility Agreements (SRA) between timber companies and fringe communities; and channelling financial support to existing rights-based restoration led by small organisations, local associations and community groups. They have also played a vital advocacy role in the review of Ghana's tree tenure policy and tree registration process. This is still under review and they continue to campaign for trees to be held in the ownership of farmers.

Forest Watch Ghana is a platform of CSOs, NGOs and some representatives from the Ghanaian private sector who meet quarterly to share information about forests and deforestation. Many of the members are involved in coordinating local community initiatives (including ARDO, Greenglobe and NDG discussed above). This platform also offers training to its members in forest monitoring and the use of two new monitoring apps. FWG has connections with other organisations, including those who specialise in the legal aspects of forestry – including ClientEarth and the Ghana Integrity Initiative, an anti-corruption platform – as well as the FC. The FWG enables joint work between CSOs and other sector organisations across Ghana.

iv. Public-Private Partnerships

As indicated under heading i., 70 per cent of the GFPS is funded through the private sector. Much of this is in the form of public-private partnership contracts. These are agreements between the government of Ghana's FC and private companies which fund mainly monoculture plantation projects as concessions with forest reserves. The forest reserves are divided into compartments, which are assigned to different enterprises. These companies and user groups occasionally collaborate to protect the forest – particularly preventing and tackling bush fires. The FC maintains overall protection and management of the forest reserve, and decisions about concessions, roads and other managerial matters remain their prerogative. The FC also controls access to NTFP and issues permits for specific items – so if a community member wants to make a pestle or hunt certain animals, they have to get permission first and must abide by ordinary laws and regulations (e.g. no hunting in off-season). It is the FC's responsibility to deal with farmers who might be encroaching, however concession company staff often also encourage them to leave. Since concession companies take over land with remaining trees, occasionally the FC harvests these with their own timber contractors. There are also a plethora of initiatives working to make Ghana's most profitable commodity supply chains more sustainable and deforestation free. This sub-section summarises these commodity-driven restoration initiatives by summarising efforts being made by the cocoa and timber industries.

Forest Investment Programme (FIP). FIP is a World Bank (WB), African Development Bank (AfDB) and International Finance Corporation (IFC) supported programme which aims to "reduce greenhouse gas emissions from deforestation and forest degradation while reducing poverty and conserving biodiversity". This is the primary REDD+[74] project in Ghana. The objective is to support local communities to restore and protect their forest lands in a way that meets their needs, through establishing CREMAs and Payment for Ecosystem Services (PES) contracts. This is being done through two main projects[75]: *Enhancing Natural Forests and Agroforest Landscapes* (ENFAL) (WB funded) and *Engaging Local Communities in REDD+* (AfDB funded). Activities include tree planting on and

[74] Whilst REDD+ is mentioned in this report due to its association with some of the initiatives that are summarised, the report does not provide a full analysis of REDD+ restoration work in Ghana since it was deemed outside of the remit for this research. REDD+ is tied with carbon trading, which is an inherent problem that Fern has previously discussed in a film and various articles, which can be found here. Visit www.REDDmonitor.org to see recent examples of why REDD does not work. One REDD+ project in Ghana differs from the trend and has made progress on improving the centrality of community rights in their implementation. They have extensive restoration-oriented schemes across Ghana and have recently secured large grants from the Green Climate Fund, more information about this project can be found here: https://www.developmentaid.org/#!/news-stream/post/72925/new-partnership-with-gcf-to-reduce-deforestation-and-carbon-emissions-in-ghana

[75] A third project, 'Building Private Sector Engagement in REDD+' (IFC funded), is discussed under sub-section iv. Public-Private Partnerships.

off reserve; shade tree planting in cocoa and crop areas; plantation projects; enrichment of forest reserves; reclamation work in degraded areas (e.g. after mining or waste-disposal areas); restoring rivers and streams; broader landscape and ecosystem function restoration; and supporting the MTS scheme. ENFAL supports farmers to incorporate trees into their farms, working closely with the COCOABOD, cocoa supply chain, CREMA communities, NGOs and MOFA. It focuses on the high forest zone, aiming to decrease deforestation, improve productivity and increase local participation in forest governance. Another component of FIP, highlighted by CSO participants, is the 'Dedicated Grant Mechanism' (DGM). Unlike the majority of FIP finances which go straight to the government of Ghana, the DGM is distributed directly to communities through an NGO called Solidaridad. This money is supposed to support communities to organise their own restorative-oriented initiatives, usually with local CSOs. There are a few project ideas – including community forestry and plantation – however, there are issues around implementation processes.

Form Ghana. This is a forest plantation management company that specialises in restoring degraded forest reserves and plantation management. Form Ghana works in accordance with international certification boards Verified Carbon Standard (VCS) and FSC. Form International provide technical assistance. Other partners include Wienco Ghana Ltd (a Dutch agricultural company), Form Valuations (wing of the company that specialises in economic side), and Forest Trends offsetting programme, as well as the government of Ghana Forestry Commission. It is funded through a US$24million loan agreement between the AfDB; Climate Investment Funds (CIF) FIP; and the Government of Ghana. As a FIP project, Form Ghana aims to contribute to climate change mitigation through restoring degraded landscapes and increasing carbon storage, with an anticipated net greenhouse gas sequestration potential of around 2.8 million tonnes of carbon dioxide (tCO_2) over 40 years. Form Ghana's focus is plantations over 20,000 ha grown on degraded forest reserves, gaining access to land through the traditional authorities and FC, at Asubima, Afrensu Brohuma, and Tain II reserves. These are all within the transitional forest zone in Brong-Ahafo and Ashanti regions. The nursery is situated in Akumadan. The plantation is 90 per cent teak (*Tectona grandis*) and 10 per cent indigenous species grown from local seeds.[76] There are three main economic outputs – carbon credits, teak timber and investment opportunities. According to Form Ghana, 10 per cent of revenue is shared between the FC, traditional leaders and local communities. Ecologically, Form aims to contribute to ecosystem service recovery, conservation of biodiversity, regulation of water regimes, maintenance of soil quality and limiting of erosion, fire protection and climate regulation – all of which will benefit fringe communities. Form have created 400 full time jobs and 600 seasonal jobs, and they ensure 40 per cent of these posts are held by women. Illegal farmers (mainly landless migrants) within the forest reserves were offered the chance to intercrop the young trees with crops for the first two years before leaving the site. The model works in a similar way to the FC's MTS. In contrast to MTS, however, there is capacity building beyond the period of immature trees – this means that once the tree canopy closes and farming is no longer possible, communities still have livelihood options. Farmers are also supported to grow teak on their own land, and Form has provided technical assistance and inputs.

Professional opinions about Form Ghana vary amongst CSO participants. Trobenbos Ghana were involved in the early stages of Form Ghana's project and have visited the site since. They have confidence that:

> Form Ghana are doing fantastic work. They are restoring a forest reserve in a progressive manner in such a way that communities are highly involved. The communities helped decide which species should be used, so trees were chosen that have multiple restoration potential – in terms of ecology, livelihood improvements and enhancing the current tree cover.[77]

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[76] These include awiemfosamina (Albizia ferruginea), bombax *(Bombax buonopozense)*, emire *(Terminalia ivorensis)*, kokrodua *(Pericopsis elata)*, kusia *(Nauclea diderrichii)*, mansonia *(Mansonia altissima)*, ofram *(Terminalia superba)*, potrodom *(Erythrophleum ivorense)*, watapuo *(Cola gigantea)*, and wawa *(Triplochiton scleroxylon)*.

[77] Extract from interview with Tropenbos Ghana National Project Coordinator on 30 July 2019.

Other participants believe that Form Ghana has economic timber production at its heart and 'restoration' is a tactical after-thought to make the project look better and to tick boxes for investment.[78]

> In terms of larger areas of land - maybe a company doing the plantation make sense because if you have 200 hectares for example, by the time you walk to the centre, it is very far from where people live so it doesn't really suit a model like the MTS. We are talking about a large area, thousands of hectares, of degraded land - how can a few individuals from the communities make this better? Perhaps in this scenario it is better that a company like Form Ghana is doing it. (FWG member in interview, August 2019)

Fern requested permission to visit Form Ghana on two separate occasions and has not yet been hosted. Civic Response report that other CSOs have also been denied access. This raises concerns for those working in advocacy as it makes it difficult to know what is happening on the ground.

Miro Forestry is a UK-based 'sustainable forestry' company. Their operation in Ghana started in 2010, gained FSC certification in 2017, is for-profit, and has been initiated with the financial support of several large investors in the UK (including Fairfund and the UK's development finance institute CDC) and the Luxembourg-based private equity fund, Arbaro Fund.[79] When Miro took over the concession they inherited some trees (exotic and native). The forest reserves were severely degraded after decades of fire damage and Taungya System farming arrangements. They are operating across three forest reserves between Agogo and Mampong. Before securing a permit from the EPA (required for sections over 40 hectares) Miro completed an environmental and social impact assessment. This involves pre-planting assessment locating rivers, areas of cultural significance or community importance (e.g. shrines), and rocky outcrops, as well as testing the soil to see which trees will grow best in each area. They also look at air quality, flora and fauna, and social demographics. One a permit is granted, there is an Environmental Management Plan and quarterly, annual and biannual monitoring reports that enable renewal. These must demonstrate how Miro is managing emerging issues that might impact on the health of the forest or wellbeing of fringe communities. There are also biologically ecology studies taken every five years to assess biodiversity.

Miro does not cut down any pre-standing broadleaf trees when it is preparing the section for planting. They use mostly exotic timber species in areas which were farms. Miro follows the Ghana standards for sustainable forestry, ensuring it preserves riparian zones, conservation areas (usually rocky outcrops or remnant natural forest) and national buffer areas. These areas are where the restoration work takes place through enrichment planting of native emire and ofram trees that encourage natural forest growth. There is one compartment that is only planted with indigenous species. Miro pays ground rent on conservation areas as well as planted forest, which means that in any given concession the 'production rate'[80] is likely to be around 60 per cent. Miro's concession is 18,000 hectares in total, of which 5,000 hectares is conservation zone. They have so far developed 8,500 of the 13,000 forestry hectares, mainly with exotic species like teak, eucalyptus, gmelina, acacia mangen and a few pine trees. These are chosen because they are fast growing and suit specific types of soil. Miro do not use cedrela because it is both fire and wind prone.

Miro has dedicated staff to do monthly community outreach with the many fringe communities and provides community benefits in the form of development and jobs. The programme is called Community Social Responsibility. So far, Miro have built five kindergartens, rehabilitated several town clinics and provided bore holes and drinking wells. The company employs a total of 635 staff plus contractors who do the bulk of the field labour. Approximately 95 per cent of workers come from

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78 This is according to a participant from FWG, however, there was also general consensus to this opinion at the FWG meeting.

79 https://www.arbaro-advisors.com/investments/

80 The director used this term in the interview, to mean economic productivity. This points to the belief that rejuvenated natural forest areas are not deemed 'productive'.

Photo: Teak tree plantation at Miro Forestry.

the local communities. Jobs include mechanics, electricians, tree technicians, nursery technicians, charcoal makers, factory workers, plantation maintenance and community development. Miro is open to hearing feedback from local people through their grievance mechanism and settlement procedure. Common complaints are about drivers in company vehicles going too fast, workers not doing their jobs properly and farmers being moved off the reserve. The company also ensures gender mainstreaming through monthly women's only forums where women can gather to discuss issues, raise grievances and give feedback to the Communities and Social Operations Manager (male). Miro is currently developing a gender action plan, as a requirement from one of the investors. In terms of employment, there are less women employed than men (470 male and 135 female) but the recruitment process is open to everyone. Some jobs are more physical than others and men are more likely to get them. The tree nursery is popular with women and 85 per cent of the staff there are female. Across the company there are only two female managers out of about 15 in total. This is partly due to forestry being a male dominated field.

The main risks to the reserve come from fire. These might be set deliberately by arson, by nomadic cattle herders wanting to encourage grass growth, by farmers clearing their farms, and occasionally by hunters. To prevent fire spreading, Miro spends time creating extensive fire breaks around blocks of the concession – these are 6-10 metres wide and everything is cleared. Even though it is the FC's responsibility to respond to issues quickly, e.g. fire, because of their low capacity Miro often do it themselves because it is their forest which is at risk. In 2018, Miro lost 300 trees to wildfire. Generally, Miro has a good relationship with the FC, who have a strong local presence including at the district office, a rapid response team and forest guards.

In terms of timber products, Miro is making veneer at a factory near Drobonso. This is a new product and is only being sold in Ghana. In 2020 Miro are constructing a plywood factory, which is easier

to market in Ghana for furniture making. They also make charcoal (mainly for export as it cannot compete with local cheap price), fence poles (for the Ghanaian market), and electricity poles (not yet reached production). Of the profit, 20 per cent goes to the FC who then share this with the land-owners and stool according to forestry legislation. In 2020, Miro is piloting an out-growers scheme whereby farmers will plant saplings provided by Miro on their own land. Miro will give farming inputs and technical advice, and buy the trees at the end of the rotation. This will start with exotic species (eucalyptus, teak, gmelina and acacia) but Miro are considering also using fast growing native trees. These out-growers will have to also follow FSC standards. The out-growers will be organised into groups rather than individuals. This scheme has been inspired by the director visiting similar projects in other parts of Ghana[81] and Uganda.[82] Miro grow all their own seedlings and source their seeds through a global platform called Camcore, who do seed research and supply improved variations of exotic trees. Miro aims to have 80 per cent of its trees coming from its own clones in the future.

Staff at Miro believe this approach to forestry, not only its conservation areas, is a form of restoration: "in whatever way you look at it, it is restoration. How else do we bring the forest back? [Ghana] lost a lot of trees because we were harvesting and not planting trees which take 40 or more years to grow back. The FC had to reconsider some of the ways it was doing rehabilitation, and that's when they started to encourage the use of exotic trees like gmelina and cedrela" (Interview with the Director of Miro). The team believe that the previously degraded area has been restored because they are seeing an increase in flora and fauna as well as an improved microclimate. Experts from FWG disagree and differentiate between forestry plantations focused on monocrop economic profit and diverse forest restoration. This is discussed in section 3.1.

Numerous concerns about Miro Forestry were raised in a 2017 report by Civic Response.[83] These include: doubts over Miro ensuring Free Prior Informed Consent (FPIC); farmers being forced to leave their farms and abandon their crops before harvest (due to these farmers being assessed as being illegal occupants of the land and having no rights); inadequate/no compensation for lost crops; ineffective processes for reporting grievances; and no evidence of Miro consulting with stakeholders during its Environmental Impact Assessment, further violating FPIC and EPA guidelines. Furthermore,

> As a result of inadequate due diligence on the acquisition process, there was a conflict between the investors – Ghana Timber Company, and MIRO – over [concession] boundaries. MIRO had entered into portions of land belonging to Ghana Timber Company which were being used by a section of the farmers with permission from the Timber Company. MIRO considered all these farmers as illegal occupants of its new acquired land and therefore destroyed their farms without any prior information and negotiation. (Arthur and Mensah 2017:15)[84]

In 2020, Arbaro (one of the key investors in Miro Forestry) were awarded US$25 million from the Green Climate Fund (GCF) to expand their 'sustainable forestry' plantations across the global South, including at Miro Forestry in Ghana. At the time of their application, the Global Forest Coalition and other NGO allies wrote to the GCF board to recommend they do not invest in Arbaro, presenting grievances raised by local fringe communities in Ghana as evidence of dubious practice around consultation, participation, FPIC and other forms of stakeholder engagement. Forest rights NGOs remain concerned about what the expansion of Arbaro-financed plantations will mean for Ghana and the other countries it works in.[85]

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81 This model has been seen in rubber and oil palm plantations, as organised by Solidaridad, but is not such a common thing for timber.

82 The director went with Miro on a field trip to the timber company Global Woods out-growers project in Uganda to look at timber sharing models there. The Miro out-growers programme was inspired by lessons learnt there.

83 See Civic Response's report 'Assessing Community Consent in Large Scale Land Investments in Ghana'

84 Ibid

85 See World Rainforest Movement leaflet "Arbaro Fund: More money, more conflict?"

Savannah Accelerated Development Authority (SADA)[86] has become a well-known example of how not to do restoration. This was a public-private partnership between the government of Ghana and multiple private companies including the ACICL-AGAMS Group and its subsidiary ACI Construction Company,[87] as well as the plantation company EcoTeck. The SADA initiative was initiated in 2008 under the newly elected National Democratic Congress government. The idea was to create a greenbelt of trees across the northern and upper regions of Ghana to protect the land from increasing desertification and erosion on the southern edge of the Sahel. It also aimed to provide green-based livelihoods and rapidly increase employment through hiring people to clear land and plant trees. The project received 32.4 million Ghanaian cedi (GHC) (approximately US$8 million) of public funding to plant five million trees.[88] Planting began in 2012 and according to FWG experts was mismanaged to such a degree that despite the large financial investment, there is nothing to show for it now.

FWG members explained that vast areas of common land, made available by chiefs without community input through extensive land acquisition, were cleared for tree planting. This included clearing naturally vegetated areas with pre-existing standing trees that were of important economic use to local livelihoods like shea nut and timber trees. Some people used these clearances as an opportunity to cut rosewood and trees to make charcoal, fuelling illegal activities. Despite the project plan of using mixed and mostly indigenous species, monocultures of exotic species were planted since the motivation was economic profit rather than ecosystem integrity. One of the exotic trees, eucalyptus, was an inappropriate choice for a dryland area due to the amount of water it requires and the fire risk it poses. Whilst planting was on off-reserve land, the ownership of the trees was not clear and they were not officially registered as belonging to local people. FWG participants explained that even with the small plantations that remain, it is unclear whether they belong to the government or local people. The companies commissioned to lead the afforestation project hired people chosen by the local political actors on short term, low paid contracts to do tree planting. Too many people were employed for too few jobs, and their job descriptions did not include watering or tending to the young trees (as is necessary for the first three years). Workers complained of not receiving all their pay and were laid off with no notice. Plantation areas were not protected from grazing animals or wildfire. Furthermore, the trees were planted during the dry season where water is very scarce. All these factors, combined with the lack of local ownership over the trees, meant that new saplings were not watered, weeded, or protected from harm. Most of the trees died, leaving areas of land in more degraded states than before the project began. Other trees were pulled up or deliberately sabotaged by farmers whose land they have been planted on, as they were competing with the crops. Communities were intended to benefit from having access to woodlots of acacia to make charcoal and use for woodfuel, however the extent to which these benefits were realised – and whether they outweighed the costs – has not been formerly assessed.

Several participants in this research pointed to the political motivations and constraints that led to this situation.

> SADA had great potential as a good idea but the motivation was wrong. The NDC initiated it just before an election because they wanted to show that they were planting trees and creating jobs, so they could say "look at everything we have done". It was a political move to get votes just before election. They were planting in dry season which meant many trees died. Furthermore they were using eucalyptus which requires a lot of water, and so is not appropriate for the landscapes where SADA was taking place. The government didn't care about ecology or people - it was purely about votes. (Community-Conservation Practitioner, in interview July 2019)

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[86] Information for this section was gathered from interviews and within the participatory workshop at the FWG Annual meeting. There are numerous media reports that confirm these critiques including from Modern Ghana: https://www.modernghana.com/news/458646/gh32m-sada-trees-dead.html and Joy News: https://youtu.be/RA4KJd89fws

[87] https://www.myjoyonline.com/opinion/the-problem-with-sadas-afforestation-project/

[88] The project used eight species of tree: teak (*Tectona grandis*), *Senna siamea, Albizia lebbeck*, mahogany (*Khaya senegalensis*), *Mangifera indica, Anacardium occidentale, Eucalyptus spp.* and *Moringa oleifera*.

> The project was subject to political party agents and boys, people who felt entitled to the power and saw it as their time to chop the money. So, money was paid, seedlings were raised, there was a huge outflow of finances and now there is not one tree to show for it. (Foresty Expert, in interview August 2019)

The Cocoa Industry. As well as being one of the country's most important export crops, cocoa is a main driver of deforestation in Ghana. This is fuelled by poor forest governance and enforcement, the concentration of profit in the processing of raw material after export, the promotion of sun-loving cocoa in agricultural policy, the absence of land use planning and monitoring in off-reserve areas, and insecure land tenure. Furthermore, climate change is making cocoa production unsustainable as temperatures increase and rainfall patterns become unreliable. To counteract this, and to improve corporate reputation, there are many initiatives aimed at maintaining/increasing cocoa yield whilst eradicating deforestation. These include the Cocoa and Forest Initiative, Cocoa Life by Mondelēz International, Climate Smart Cocoa Standard, Olam/Rainforest Alliance Climate Cocoa Partnership, Cargill Cocoa Promise, and numerous REDD+ schemes. Alongside, there are certification schemes, which commodity companies voluntarily sign up to or create based on their own interpretation of 'sustainability'. These increase the market value of end products by creating the perception of ethical consumerism, even though there is no guarantee that the cost of any given sustainability scheme is covered by the company rather than the producer. Some participants in this research argue that these initiatives should not be considered as restorative, as they seek to continue the over-exploitation of resources rather than the recovery of balanced socio-ecological systems. Furthermore, FWG experts believe the Farmer Based Organisations (FBO) associated with these initiatives are oriented to serve the cocoa companies rather than the farmers' needs and priorities, for example the Olam Farmers Association. Instead of being a tool for civic and forest purposes, the FBOs become another way for companies to maintain control over local production.[89]

Fern has been working with other organisations to challenge these models and pursue more holistic solutions. In a 2018 report[90] in partnership with local NGOs and Tropenbos International, Fern made key recommendations to reform the poor governance in the cocoa sector, drawing on lessons from the FLEGT and VPA process. These include:

- a review of legality and appropriate legal reform to bring Ghanaian legislation in line with internationally agreed standards for legal cocoa;
- the implementation of deliberative participatory multi-stakeholder committees (including during the legislative review);
- traceability of cocoa to ensure deforestation-free supply chains and accountability at each stage of commodity production;
- the effective and consistent use of certification which prioritises the wellbeing of people and forests rather than increased yield.

These mechanisms could all be enforced through a 'Multilateral Partnership Agreement on Cocoa' between Ghana and consumer countries, especially by the EU who is the main importer of cocoa. This would contribute significantly to both reducing deforestation in cocoa landscapes and enabling the recovery or restoration of healthy forest ecosystems.

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89 This concern was discussed at the FWG annual meeting in July 2019.

90 Tropenbos International, Tropenbos Ghana, Fern, EcoCare Ghana, and Forest Watch Ghana (2018). Briefing Paper: 'Transferring lessons from FLEGT-VPA to promote governance reform in Ghana's cocoa sector'.

The Timber Industry in Ghana is getting towards the end of a long process to secure a FLEGT license. Based on the bilateral VPA between the EU and Ghana, both FLEGT and VPA aim to ensure that wood entering the EU markets can be shown to be legal according to Ghanaian laws. The VPA action plans have a strong focus on tackling corruption, reducing illegal logging, improving forest governance and securing land rights. They also work to challenge the influence that large timber industry companies have over government forestry policy.[91] As such, these instruments could also support restoration efforts, by scaffolding legal processes, monitoring, governance structures, community rights and keeping timber companies accountable. For example, timber companies pay a timber levy on their logging concessions: a percentage of the standing timber value is paid by timber companies directly to the FC to be used for forest regeneration. However, according to CSOs, this money often ends up being used to fund ordinary forestry activities as opposed to specific restoration of harvested forests, because it ends up being amalgamated with the broader FC budget. If this timber levy was separated and saved, it could form the basis for a restoration fund, which could be directed towards community-led restoration. The FLEGT/VPA process could enable this.

Another area of the timber industry that connects to restoration is the increasing use of tree crop out-grower schemes in the fringe communities surrounding timber company concessions. Two examples are the Samartex Community-based Reforestation Project and the Oda-Kotoamso Agroforestry Project (OCAP) in the Western Region. Here chiefs give land to community members and the neighbouring timber companies provide seedlings so that an agroforestry system can be established which has multiple outcomes over the short-term (basic perennial and fast-growing cash crops), medium-term (slow growing cash crops, e.g. fruit trees) and long-term (timber revenue when trees are harvested). In this set up, 100 per cent of the money from basic crops goes to the farmer, a third of medium crops revenue and a third of the timber profit goes to the chief. The timber companies who provided the seedlings have first refusal in purchasing the trees. Studies show that these schemes have proven popular with local farmers since they provide a guaranteed future income, the option of using the timber for the household, and increase farmer access to loans (Oduro *et al.*, 2018). Furthermore, "the average standing volume of on-farm trees in the study area is 51.9 m^3/ha which is almost twice the national average for the off-reserve areas in the semi-deciduous forests" (Oduro *et al.*, 2018:393), suggesting that out-growers initiatives also increase tree density in farm areas.

v. Private-led Restoration

There are many private plantation projects operating in Ghana under the auspices of sustainable agriculture and forestry. They are sometimes described as restorative because they increase the surface-level productivity of land when assessed according to yield and market value as opposed to livelihoods or human wellbeing frameworks. The first two project examples given below use mass-monocrop cultivation of fast-growing non-native trees to supply specific factory, power plant or export requirements. The third example is a carbon credit scheme which uses both exotic and native species over smaller plantation areas. There are also numerous restoration initiatives being led by extractive industries to attempt to offset the ecological damage caused by mining and other activities. While these are beyond the remit of this report, they would also fall within this category of private-led restoration.

African Plantation for Sustainable Development (APSD)[92] is a private industrial eucalyptus plantation biomass fuel project led by the Norwegian-African Business Association (NABA). It is funded by multiple financiers including the Africa Renewable Energy Fund (AREF) – a pan-African equity fund for developing renewable energy infrastructure – as an initiative of the AfDB that is managed by

[91] For more information see Fern's publications on FLEGT/VPA at https://www.fern.org/development-aid/forest-law-enforcement-governance-and-trade-flegt/

[92] This plantation project has been included in this report because when CSOs were interviewed, ASPD was consistently mentioned as a reference point for describing "restoration". This is why many CSOs do not use the term – 'restoration' is associated with land grabbing monocultural economic projects which harm people and ecosystems., as seen with APSD.

Berkley Energy, contributed to by the CDC[93] and the Belgian investment company BIO.[94] Operating in Ghana since 2007, APSD has secured access to 82,000 ha of off-reserve land[95] in the Brong-Ahafo region for plantation development. They are growing eucalyptus for biomass fuel and approximately 9,000 ha have been established out of the 21,500 ha required for the 60 megawatt biomass power plant, currently under construction. Some of the rest of the area has been given to conservation, riparian areas, rehabilitation and for use by local people for sustainable farming, according to APSD.[96] In the future, the project aims to produce 600 megawatts of electricity, which would need over double the area currently secured (180,000 ha) to produce enough logs to power it.[97] This suggests that APSD have ambitions to significantly expand the plantation area, causing concern about land acquisition.

The APSD project was founded and financed by Erling Lorentzen, a Norwegian who "having witnessed the employment and development benefits of large scale sustainably managed [Aracruz Cellulose] plantations in Brazil, wishes to transfer the benefits of his knowledge to Africa".[98] According to the Environment Justice Atlas,[99] his company's plantations in Brazil are notorious for deforestation, land appropriation from Indigenous groups, and other human rights abuses. Of the 2.4 million tonnes of bleached pulp produced from the 320,000 ha eucalyptus plantations each year, 97 per cent is exported. In Ghana, APSD originally pitched the eucalyptus plantation as a means to supply a biomass-fuelled power station feeding the national grid,[100] increasing the capacity for electrification. The construction of the power plant was scheduled to begin in 2018, but reports from the ground suggest this is no longer happening and there is no evidence of an agreement been signed with the Government of Ghana. Furthermore, the ambition to build a 600 megawatt biofuel plant "is unprecedented in Africa [making it] highly questionable whether domestic bioenergy generation is the true purpose of the plantations".[101] Indeed, CSOs fear that the trees will instead be turned into wood chips and exported to Europe, which would be consistent with the business model Lorentzen operates within Brazil.

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93 https://www.cdcgroup.com/en/our-investments/underlying/apsd/ accessed 14 July 2020

94 https://www.bio-invest.be/en/investments/africa-renewable-energy-fund accessed 14 July 2020

95 This figure is taken from the APSD website and company report 'Forests for the Future: New forests for Africa' (see http://newforestsforafrica.org/wp-content/uploads/2016/03/Session-D-APSD.pdf). Local NGOs put the figure at variable sizes between 20,000-42,000 hectares, suggesting that the company may have more land than it is currently using or communicating about.

96 https://www.berkeley-energy.com/project/apsd-2/

97 https://wrm.org.uy/articles-from-the-wrm-bulletin/section1/ghana-eucalyptus-plantations-for-producing-energy/

98 African Plantations for Sustainable Development 2016 'Forest for the Future; New Forests for Africa' document: http://newforestsforafrica.org/wp-content/uploads/2016/03/Session-D-APSD.pdf

99 https://ejatlas.org/conflict/eucalyptus-plantations-aracruz-celulose-brazil - accessed 18 September 2019

100 https://ghanalinks.org/documents/20181/0/SADA+Districts'+Investment+Opportunities/280a037a-515c-40b8-8b01-d50c9f1a92a2?version=1.1 accessed 18 September 2019

101 https://www.biofuelwatch.org.uk/wp-content/uploads/A-new-look-at-land-grabs-in-the-global-South-linked-to-EU-biomass-policies.pdf

Photo: The APSD plantation of eucalyptus trees (photo taken by Alexandra Benjamin, used with permission).

In addition to concern about the business model, there has been significant controversy around how the company attained the land. A report from USAID claims that local people were informed about the project at various stages. As part of the fire management plan, 84 households were told "they had been farming against government regulations in sensitive conservation areas. These farmers were convinced to relocate once APSD offered to pre-plough a new and larger farm for them in the farm belt".[102] They were asked to not use fire as part of their own land management, and in return were provided with regular free ploughing and a 5 kilogramme bag of rice for the household. However, FWG disputed the means by which this land was attained with evidence that there was no FPIC and inadequate/no compensation – providing payments for the loss of cash crops only, not food crops. Indeed, migrant farmers were treated as 'non-entity holders' and therefore excluded from compensation and re-allocation processes.[103] They assert that various local and national elites worked with ASPD enabling them access to the initial 20,000 ha, taking it away from local people with the justification that they were mainly migrant labourers[104] who were farming "against government regulations in sensitive conservation areas".[105] Local CSOs, farmers and a chief in Atebubu protested the demarcation of land for the plantation, despite access already having been granted. Controversially, this sparked involvement from conservation actors in the planning process, as APSD wanted NGO assistance to secure the land. Initially WWF, through its Global Forest Trade Network (GFTN)[106], facilitated community consultation and subsequently a Ghanaian NGO Nature and Development Foundation (NDF) took over. FWG members felt this involvement legitimised what they considered to be a land grab. NDF reported that their influence was positive and helped to ensure farmers' rights were respected throughout the process – including relocation with equivalent farmland acreage and an agreement that APSD would plough their land annually. NDF believe the consultation was generally good, they also recognise its limitations due to land rights and tenure issues – migrant farmers have few rights to their land, so the likelihood is that a consultation is meaningless for them. However, NDF withdrew association from the project prematurely.[107] An interview carried out for this case study with a community member[108] suggests that they were not consulted at all, and that the land has been appropriated without community involvement:

> Interviewer: The land that the company wanted to use, who did it belong to?
>
> Community Member: It is a farming area, we do shifting cultivation. We were waiting for the government land to be fertile again, but the company wanted to come and plant trees on it and do tree exportation. We were not told [that people were coming to take the land]. The company came straight in and spoke to the chief, who gave them the land to use. The people were very unhappy and we were at war with the chief because he stole our lands.
>
> Interviewer: Did the company pay any compensation for you or did you get any benefits from the programme?
>
> Community Member: No, no one paid any compensation for anyone and no, it has not helped me at all. Even the people that were employed by the company were all sacked. [We've had problems] because our farmlands were being seized from us without us being given anything. So now we struggle to make ends meet. So instead of shifting cultivation now we have only one piece of farmland that we farm on but we have to make big farm on it to ensure we have enough crop to last for two years whilst the land rests.

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102 Report by USAID https://www.land-links.org/wp-content/uploads/2018/05/Investor-Survey-on-Land-Rights_Report-2018.pdf (last accessed 27 July 2020) see pages 36-39 for a case study on APSD

103 See Civic Response's report 'Assessing Community Consent in Large Scale Land Investments in Ghana' pages 13-14

104 Interviews with FWG CSOs

105 USAID report

106 The GFTN connects private companies to governments and communities to create market incentives for responsible forestry – see http://gftn.panda.org/ accessed 8 July 2019.

107 Interview with a participant from NDF, 15 July 2019.

108 Interview with a community member who lives next to the APSD site, May 2019.

This extract indicates that local farmers lacked information about who the company are, what they are using the land for and that best practice around ensuring FPIC was not followed. Furthermore, whilst APSD frames itself as employing a eight hundred (increasing to fifteen hundred) local people "in a severely impoverished part of rural Ghana" and claims to deliver "significant environmental and social benefits in an area which has in the past been decimated by slash and burn farming practices";[109] as of July 2019, many hundreds had been laid off as the labour revolved around planting and nurturing young trees, which have now grown sufficiently to reduce the workload[110] and those who continued to work earned only half of what they made from the land as farmers. These issues have implications for poverty levels.[111] Members from FWG have been trying to carry out investigative research in the communities around ASPD, but they have denied access to the plantation repeatedly. This makes it hard to know what is happening.[112] However, similar issues as those highlighted above were reported in an investigation by the Youth Volunteers for the Environment in March 2020 for the World Rainforest Movement. After conducting interviews with three fringe communities, they found that APSD was presenting a threat to local lives and livelihoods in numerous ways: loss of crop diversity and reduced market value of produce; negative impact on yield and quality due to agrotoxins being used in the plantation leaking into farmland; inadequate protective gear for plantation workers using chemicals; risks of legal prosecution and subsequent costs for breaking rules stipulated by APSD around using fires in the area; loss of access to important water sources for farming and household use due to the enclosure of land; and precarious jobs with low wages (between one to two US dollars a day, minus unexplained deductions every month). Each of these livelihood challenges raise everyday costs, with some having a disproportionate impact on women due to their household roles in cooking and water collection.[113]

APSD remains a part of the WWF New Generation Plantations Platform, which asserts "that well-managed plantations in the right places can help conserve biodiversity and meet human needs, while contributing to sustainable economic growth and local livelihoods."[114] Ultimately, APSD was able to continue with their project, and according to both company and CSO reports this was primarily due to the support from chiefs, politicians and investors.

Plantations Socfinaf Ghana (PSG) is a palm oil and rubber production business venture run by the Socfin Group, a company who specialise in "sustainable tropical agriculture". The Socfin group works in collaboration with globally respected partners - including WWF, Zoological Society London (ZSL) and the Institut européen de coopération et de développement (IECD) – to fulfil its commitments to environmental and social principles.[115] PSG was initiated in 2012 after taking over an abandoned paper pulp plantation originally operated by Subri Industrial Plantation Limited[116] who were funded by the AfDB to grow 5,000 ha of acacia and gmelina trees. The present plantation covers 18,880 ha in Daboase District, Western Region (5,000 palm and 6,000 rubber trees), and a small plantation 22 kilometres away at Manso (1,000 palm trees). PSG claims that the palm and rubber only cover 13,000 ha of the concession, leaving the rest intact to "preserve the area's natural environment".[117] In terms of benefits to the district, PSG has renovated and built new housing, as well as contributed to the social, road, commercial and medical infrastructure. The company provides employment to around 1,900 local people, who can access medical help and use the nearby hospital for free**.** PSG

109 https://www.berkeley-energy.com/project/apsd-2/

110 From an interview with NDF representative

111 Interview with Civic Response

112 APSD was featured in the September 2019 global forest coalition bulletin. They also requested information from the ground. See https://globalforestcoalition.org/forest-cover-59/#fc5902

113 https://wrm.org.uy/articles-from-the-wrm-bulletin/section1/ghana-eucalyptus-plantations-for-producing-energy/

114 https://newgenerationplantations.org/en/ngp/ accessed 18 September 2019

115 Specifically relevant is their commitment to biodiversity: "We protect and/or restore potential animal and plant biodiversity zones" https://www.socfin.com/en/environment accessed 8 July 2019.

116 https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Gov-t-initiates-move-for-establishment-of-Pulp-and-Paper-Mill-29061

117 https://www.socfin.com/en/locations/psg accessed 8 July 2019.

also pays for a school which is attended by 1,000 children, 600 of whom are from the local area. CSOs do not consider the work of PSG to be 'restorative' and instead view it as an economic plantation, however, as with APSD, it is included here because it is sometimes cited as an example of restoration within Ghana.

Vision 2050 Forestry Ghana is a private plantation company that works with Forest Resource Managers (FRMs)[118] to create a network of farmland-based plantations, ranging from 15 to 500 acres, currently operating in 850 communities across Ghana with over 300,000 people. The company was founded in 1998 by Dr Frank Frempong, when he planted 50 million trees through a combination of restoration, agroforestry and afforestation programmes across the south of Ghana (Ashanti, Volta, Eastern and Western regions). He used mainly exotic species like cedrela and teak, however there were some native trees too.[119]. Ten years later in 2008 another 150 million trees were planted.

> *"Our focus is to plant 1 billion [economic timber] trees. So this year we are starting again [in the river basin of the White Volta and parts of Northern Ghana] with another 150 million trees. We are also planting for biodiversity, because Ghana is in bad shape from all the illegal logging and its effects, so we want to contribute to help that. So climate change and biodiversity - we're here to help, we're here to work hard and we know we have a time limit, so we're looking to do it as fast as possible in the next five years to plant 150 million trees and continue to the 1 billion trees." (Project Coordinator, Vision 2050 in interview August 2019)*

The project claims to use sustainable agro-forestry to enable farmers to improve their livelihoods, and to contribute to national efforts towards mitigating climate change and achieving food security by 2050.[120] The exotic timber trees are pruned and sustainably harvested every ten years for timber products – including electricity poles and boards for construction or furniture – whilst waste offcuts are turned into charcoal.

Whilst Vision 2050 works with the EPA governmental department for environmental assessments and permission, it is self-funded through the sale of carbon credits and climate finance. It has been struggling to secure the large grants needed to scale up production, particularly for harvesting of trees and paying farmers carbon credits. The project trains FRMs who receive annual PES for up to ten years, carbon credit payments and educational benefits.

There are several controversial elements to Vision 2050s work, and many FWG members were sceptical about the initiative. Firstly, the company negotiates access to large farmland through traditional councils, and depicts them as wastelands ripe for restoration when in reality they are often being used for farming and other livelihoods by local communities. Farmers are then encouraged to sign up to the Vision 2050 scheme by being provided with tree saplings and told they will get money for the trees every year through carbon credit payments. They enter contracts which pay them 100 GHS per tree over the course of twenty years (equating to under US$1, a year). This price was established in 2008 to account for the company covering input and sapling costs and on the premise that farmers would receive carbon payments. However, these payments have not been secured and farmers have been waiting for twelve years earning very little. Furthermore, the contract includes several layers of small print requiring them to pay annual fees to the company equating to over 100 GHS per farmer, which therefore overrides many of their initial earnings.[121] When the trees are harvested, the farmers are given a percentage of the profit, however, the person interviewed in this research was unable to provide a firm amount, estimating it at 100 GHS per cubic metre. Farmers are encouraged to grow crops within the tree plantations – however, as most of the trees are teak and cedrela planted in

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118 For more information about FRM see https://vision2050forestry.com/timber-plantation/

119 These included mahogany *(Khaya senegalensis)*, onyina *(Ceiba Petandra)*, odum *(Milicia excelsa)*, wawa (*Triplochiton scleroxylon*), and rosewood *(Pterocarpus erinaceus)*

120 https://vision2050forestry.com/vision-mission/

121 The REDD Monitor exposed this in 2017: https://redd-monitor.org/2017/01/24/vision-2050-forestry-in-ghana-the-inequities-of-a-carbon-credit-project/

close proximity, within three years other crops cannot grow. In essence, the farmland areas become plantations, with the farmers taking care of the trees for free or very low payment. To make matters more unfair, at present the company offers no insurance against fire or loss of trees by other means and the contract stipulates that farmers may be required to pay fines if the trees in their care do not make it to maturity and harvest.[122]

FWG CSOs have raised concerns about the lack of FPIC in the way that land is secured. Since Vision 2050 pitches itself as restoration of degraded areas, large swathes of land are secured for tree planting. It is difficult to know how much choice the farmers have in the matter once traditional councils have given the go ahead, nor how far they understand the contracts they are signing given that many rural farmers have low literacy levels. There have been many complaints from farmers about not receiving the money they were promised, however, over twenty years into the project the company continues to feign good intentions and passes the blame to financial instruments. Furthermore, migrant farmers – who typically farm land either through seasonal labouring or by rental or sharecropping arrangements – are inadvertently excluded from the programme as long-term tree crops are rarely permitted in these short-term, flexible land use agreements and reduced crop cycles means less seasonal labour.

Several other controversies surround the Vision 2050 project. In 2018 the director of Vision 2050, Dr Frank Kofi Frimpong, appeared in court over charges of fraud worth over five million GHS collected from investors under false promises of dividends.[123] Prior to this, as early as 2012, farmers within the Vision 2050 initiative complained to police over their lack of carbon credit payments and had their cases referred to the Bureau of National Investigation. Frimpong was arrested, however, investigations were inconclusive since there is no mention of carbon payments within the contract itself, despite these terms being used verbally to attract farmers into the programme.[124] A substantial report (Hashmiu 2012)[125] presents detailed information and critique about these issues. Here he also outlines why Vision 2050 was not included in the REDD+ programme due to its lack of safeguards and effective protocols.

vi. Small Enterprise-led Restoration

The final category for restoration initiatives sits between the five already covered as it has elements of sustainable forestry, forest governance and commodities: restoration led by small enterprises. The research found several examples of small-scale private-led initiatives which respect and enhance human rights and local livelihoods. These companies and networks all contribute to creating tree crop, agroforestry and/or timber livelihoods for local people and provide interesting opportunities for rights-based restoration.

Portal Forest Estates Ltd is based in Ankasa, Bedum in the central region. This estate belongs to Wellington Baiden – bought by his family – and covers 8,800 ha. Twenty years ago Baiden planted 210 acres of trees which he now manages for sustainable timber, agroforestry and local forest enterprises that provide community benefits from year two through to year forty. This approach integrates commercial interests with private interests, restoring biodiversity and human wellbeing simultaneously. It is a certified UN REDD+ pilot led by the private sector that is strongly supported by the community and CSOs due to the multiple benefits it provides – improving local livelihoods, enabling holistic ecotourism, contributing to a good microclimate and generating significant income from the production and sale of essential oils.

The estate has a core area of regenerated natural forest and buffer areas surrounding it that communities have ownership over. In these areas, people cultivate a mixture of essential oil trees, native forest trees and food crops. The community buy-in and forest arrangement helps to reduce illegal logging. The project uses an out-growers scheme, providing local farmers with essential oil saplings to

[122] Ibid and interview data with the Vision 2050 Project Coordinator in August 2019
[123] https://allafrica.com/stories/201811140367.html
[124] https://redd-monitor.org/2017/01/24/vision-2050-forestry-in-ghana-the-inequities-of-a-carbon-credit-project/
[125] https://steps-centre.org/wp-content/uploads/Carbon-Forests.pdf

grow on their land, which is then distilled and sold. The producers get a fair percentage of the profit. The estate also grows some exotic species, mainly cedrela, as this is fast growing, provides a consistent income from door manufacturing, and is not harmful to the soil. This means that a healthy undergrowth is cultivated beneath the cedrela trees, unlike in teak plantations. The company has also built ecolodges and is developing an experiential learning centre to share these agroforestry techniques.

Wellington Baiden is the only private partner to sit on the Ghana REDD+ board. Civic Response assisted in his application to secure pilot funding through Partnerships for Forests and advocate for this project as an example of innovative enterprise-led forest restoration done well.[126]

Domestic Lumber Timber Association (DOLTA) is a private sector organisation of over 3,000 members from across the country representing enterprises within the domestic timber supply chain. This includes small bench sawmills, carpenters, people who cut timber for conveyance and larger domestic timber companies. One of DOLTA's roles is to advocate for smaller companies that are marginalised in decision making and policy formulation, because the government focuses on timber exports rather than the internal aspects of timber trade. It also provides a network for smaller companies to collaborate – recently several members collectively bought a sawmill, which meant that DOLTA supported them to do "backward integration", assisting a retailer to become a supplier.

DOLTA is mentioned in this report because many of their members replenish timber stocks through tree-planting. There are currently no incentives to support timber companies to replant trees so DOLTA relies on its own funds, redistributed between members via membership fees. Furthermore, there are examples of chainsaw operators and farmers moving into collective small-scale plantations, sharing the financial burden this brings, with support from DOLTA. In this way, DOLTA helps reduce pressure on natural forests by using plantation species and by educating members about legality and the VPA. DOLTA believes that plenty of farmers and other workers within the timber industry would plant trees if there were incentives similar to those for rubber plantations, where farmers are given advance funding to cover the first few years of inputs without yield.

> *"This is what we are trying to promote - if we can increase the use of plantation timber, the pressure on the natural forest will be relieved. For every plantation timber brought into the timber market, it is another natural tree saved. Most of the forests have been depleted now, the reserves, we have to replant them. It is important to do so because the population is expanding and we can no longer depend on the naturally produced timber. For the industry to survive, because our livelihood is tied to the forest, we have a part and we believe restoration of the forest is the way to go. Restoration is important, it is the heart of us. Underpinning all that we are doing is restoration. Because if the forest is not restored, if we are not replanting, then we are doomed." (Chief Executive Officer of DOLTA, in interview July 2019)*

National Tree Growers Association of Ghana is an association of tree growers, most often smallholder farmers, who have established plantations on their own land. It is open to individuals, family units and community groups. The association focuses on building capacity for tree planting and solving market challenges to ensure there are economic incentives. The key objective is harvesting wood for income, however some plantations also contribute to restoring fragile ecosystems, protecting water sources and reducing pressure on other forests by providing woodfuel resources. The association support individuals and communities to develop into small and medium sized enterprises (SMEs), with ambitions to enable the establishment of cooperatives that own their own sawmill and process their own value-added timber for market. This means that tree growers get a better price for their products per volume. It costs around US$10,000 for one training programme to enable fifty people to set up their own enterprises. The association recommends the use of mixed exotic and

[126] Information about this project was gathered through an interview with a member of the Forest Watch Ghana platform. The website is currently unavailable: http://www.portalforestestates.org/

native trees – with three exotic trees for every one native tree. When the exotic trees are harvested first, the indigenous species are left standing at around 100 per hectare. The benefits from the tree harvests go mainly to the landowners and farmers according to their arrangement, and a small share goes back into the Tree Growers Association to support it to help other farmers.

Model for scaling restoration #4: Tree-growers associations and forest product enterprises

Where is this model seen? Generally led by CSOs and small enterprise initiatives, tree-growers associations were used across Ghana by NDG, Portal Forest Estates, the National Tree Growers Association and various members of the DOLTA network. Some timber concession PPP initiatives also utilise out-growers as part of their community work.

What does it involve? Farmers are supported with inputs, saplings, training and assistance with tree registration so that they can grow trees on their land. This is usually for timber species, both exotic and indigenous, although it can also be used for other NTFP enterprises, as seen with Portal Forest Estate. The trees are integrated into broader farming livelihoods through agroforestry techniques.

What are the unique social and ecological benefits? Trees on farms and agroforestry techniques provide multiple socio-ecological services, including improving soil health, reducing soil erosion, harnessing moisture, improving biodiversity, forming wind breaks, increasing NTFPs, and providing shade. Trees act as investment assets for farmers, as well as potential material for construction or furniture building. In Portal Forest Estate, forest enterprises are encouraged within buffer areas so that they provide a shield for restored core areas and a solid livelihood for fringe communities. Working in cooperatives increases the sense of community and solidarity, enabling people to be more confident in local organising and decision-making, which supports democratic resource management. They also enable a greater percentage of the profits from timber to be kept within communities rather than captured by companies or shareholders.

Afforestation Volunteers is an initiative run by a local sawmill manager and his brother who owns Wiafe Timber, a timber company in the United States of American (USA). Afforestation Volunteers is based in Kwahu East. The principle is simple: as a sawmill and timber company, the businesses have a vested interest in replenishing trees both on and off reserves so that trees are available for years to come. This is a relatively small operation that the project coordinator runs out of his own pocket supported by his sawmill business.

> *"If you have a sawmill, and you want to process trees, why not plant some yourself? If I have trees I won't buy them from Forestry [Commission], I will just harvest it from my farm, bring it to my sawmill. When the raw material is not there, my business will collapse and this applies to the whole of Ghana. I share seedlings with the community and Forestry because I want there to be more trees in Kwahu and because people can benefit. People want to plant trees but they don't have the money to buy them" (Afforestation Volunteers project coordinator, interview, July 2019)*

Afforestation Volunteers are mainly planting native timber species like ofram, emire and mahogany, as well as some exotic species like teak and cedrela. The coordinator secures land through the local chiefs and landowners, who are keen to support tree planting and have provided extensive lands for this project.[127] He also provides seedlings for farmers to plant on their farms and in their communities. This is combined with awareness raising of issues related to climate change and deforestation through delivering educational tree-planting projects with schools. He gives saplings for free and registers the

[127] He has secured 1,000 acres of stool land whereby the chiefs will get a cut of the revenue when the trees are harvested (circa 20-30%)

trees so that farmers have legal ownership over the trees. He meets these costs from his own pocket because he is confident that in the future he will be able to harvest some of the trees he has provided. Since the trees are registered in farmers' and other local people's names they are also free to keep them as assets or sell them to other sawmills if desired.

"If you plant trees and you take care of them and they don't die, it is more than investing in a bank"
— Afforestation Volunteers project coordinator, in interview, July 2019

Photo: Community members harvest coconuts at Lake Bosomtwe CREMA to sell at market in Kumasi. These trees were planted as part of the restoration project to ensure that livelihoods are enhanced.

Discussion and Analysis of Findings

2.3 What restoration works and for who?

In Ghana the term 'restoration' has been used by a variety of initiatives with contrasting objectives: from forestry companies establishing broadly monocrop plantations, to iNGOs enabling large-scale tree planting programmes; from the profit-motivated 'corporate social responsibility' within commodity landscapes, to the FC's management programmes and concession-schemes in forest reserves; from restoration as a tool for mopping up the degradation caused by extractive industries, to small-scale local enterprises nurturing sustainable forest-based businesses. Conversely, CSOs doing community-led restorative work rarely use the word 'restoration' to describe what they do.

This paradox was discussed at a FWG meeting, where practitioners stated their distrust of many self-proclaimed "restoration" initiatives due to their association with plantations and other activities which FWG members do not believe to be genuinely restorative for either ecological functions or the cultural uses and values of fringe communities. Across the participants, there was a strong opinion that predominantly monocultural plantations and commodity-driven forest recovery should not be considered as restoration. Firstly, they are working mainly for profit and carbon capture. The quality of the latter, and therefore the appropriateness of applying this justification, has been heavily debated and scientists generally agree that monocultures of exotic trees contribute far less to carbon stocks than naturally occurring diverse forests. Secondly, these initiatives offer little biodiversity – with this only being considered within conservation areas of concessions – and few positive outcomes for people – jobs are often short-term and less economically rewarding than previous livelihoods, access to land and forest resources are compromised, safeguards are not always fully or fairly implemented, informed consent is compromised, and governance and local autonomy over resource management for local benefits is rarely integrated. Furthermore, profits accumulated through the plantation and commodity forestry rarely trickle down to fringe communities in meaningful or equitable ways –

"A plantation is a plantation. You cannot say it is restoration. Restoration is about taking something back to a former state; using the species that were there before. Introducing foreign species like teak and eucalyptus, cannot be restoration because they were never there before and they do not support biodiversity. These are economic endeavours to grow trees quickly to sell– this is not restoration. I see restoration as being about more than trees. It is about wildlife and livelihoods. If my forefathers could go into the forest and pick snails and mushrooms, I should be able to do that too. This is why we nurture the native forest. This is restoration."

– A Rocha practitioner in interview, July 2019

rather they are captured by foreign company directors and shareholders.[128] Whilst the land may be seen as being 'restored' from economically unproductive degraded forest into tree cover that produces fast-growing timber, this should not be categorised as 'restoration' since it does not restore the ecosystem, native biodiversity or forest livelihoods. The expansion of plantations for biomass and biofuel production has been well documented and challenged. Many CSOs and academics are calling for the government to take a deeper look at the far-reaching effects of these land acquisitions, including the displacement of both farming and herding communities, and the subsequent conflicts and degradation arising from land scarcity (Schoneveld et al, 2011).[129]

In contrast, rights-based approaches are good for climate, biodiversity and people because ensuring rights addresses the underlying drivers of tree cover loss, which is crucial for protecting forests and restoring their health. These are the only approaches that treat people as part of the forest ecosystem rather than separate to it, and which genuinely benefit communities in meaningful, empowering ways. However, because of the association of 'restoration' with monoculture plantations and commercial commodity landscapes, FWG deliberately distanced their community-based restoration work from the profit-driven schemes that use the term 'restoration' incorrectly.

> *"There needs to be a differentiation between plantation and restoration – Mia plantation, Form, APSD, Socfinaf plantation, Miro – they do what they do for money. They plant exotic trees like teak and eucalyptus on short rotations to harvest for money. For me, as a technical person and forester, restoration means there was a forest area, it has lost its forest and we want to bring back the forest – back into a state that is similar to what used to be there. Not for timber, but to restore to the indigenous ecosystem that used to exist there. Restoration is not plantation." (Forestry expert in interview, August 2019)*

> *"Monoculture plantations of exotic species can never and should never be referred to as restoration because they do not come anywhere near 'restoration' as defined by ITTO, IUCN, and WRI." (Ghanaian civil society advocate in conversation, August 2020)*

It is important to note that plantations *can* be useful in certain situations, especially when they help to provide a local wood supply and take economic pressure off remaining natural forests. However, these initiatives should not be called 'restoration', and should not be able to access funding from global finances that claim to support the restoration of forest ecosystems.

[128] The exception to this is the MTS where communities receive 40 per cent of the stumpage fee, although as described in section XX there are some issues with these payments consistently reaching the farmers.

[129] https://www.ecologyandsociety.org/vol16/iss4/art10/

2.4 Ghana Case Study Analysis

The different kinds of restoration presented in this case study each offer lessons for other practitioners about what works well and opportunities for future development. These are presented in table 2.

Lessons Learnt	Opportunities Arising
i. Public-led Restoration	
• Relationships between farmers and ministerial representatives are key to the success of these programmes on a local level. According to farmers and CSOs, there is collusion between FC personnel and actors which drive deforestation, including a lack of enforcement regarding illegal loggers and timber contractors. This means that the FC is not always trusted to manage the reserves for the good of the community or the nation, and this negatively impacts the FC's relationships with local farmers and land owners. These programmes do not work effectively when there is a lack of trust in either direction. • There are some issues around the longevity of these interventions in terms of mitigating causes of deforestation that might affect newly planted trees. Understaffed FC offices mean resources are tight for preventing damage by illegal loggers, and dealing with fire and land scarcity conflicts (e.g. farmers and herdsmen needing land for different purposes as seen across the transition zone). Furthermore, 'political interference'[130] means that programmes change under different governments and can be used as a method to gain votes during election campaigns.[131] • There is rhetoric in FC literature, particularly the GFPS 2016-2040, around land rights and tree tenure. This acknowledges that rights need to be clear for restoration and/or sustainable livelihoods to work effectively. • Interviews with CSOs confirmed a serious concern with the amount of exotic species that are used within forest reserves, particularly the excess of teak which damages the soil. Only native species restore the broader ecosystem health. The fastest growing indigenous economic trees are emire and ofram which can mature in as little as fifteen years. Interestingly, reserves that are set aside for wildlife rather than forestry do not allow the planting of exotic trees apart from on the fire belt.	• There seems to be political will for community-led forestry and restoration (i.e. through the DGM and CREMA), as well as increasing agroforestry and trees-on-farms. This is also shown through the FC's ongoing policy review of national tree tenure and the drive to make tree registration more accessible. CSOs have played a crucial role in both advocating for this and being involved in consultation/design processes, however they also do not think the current proposals go far enough. There is potential here to coordinate with FWG on policy work which would support communities to keep more trees. • There is room to influence the implementation models and processes – especially since the GFPS will be reviewed after five years (2021) – through amplifying CSO feedback and engaging in policy reviews. This report could feed into the review. • There are specific policy changes outlined in the GFPS strategic objectives which FWG and Fern partners can contribute pressure to and advocate for rights-based restoration principles.

[130] CSOs repeatedly talked about the challenge of 'political interference', showing little faith in the FC having local needs or forest well-being at the heart of their work. CSOs are frustrated with the FC for allowing deforestation to continue and colluding with the actors involved. For example, there have been some high profile cases in the last year disputing the FC's involvement in illegal rosewood harvesting – see https://www.ghanaweb.com/GhanaHomePage/NewsArchive/Forestry-Commission-disputes-BBC-report-on-rosewood-trade-770170

[131] One recent example of this is seen in the SADA tree planting programme, which members of FWG consider to have been a programme of employment and tree-planting deliberately designed to secure votes.

Photo: A farmer looks out from his pineapple farm across a ravine to a forest reserve. Under a similar arrangement as Modified Taungya System (MTS)., he is growing young trees (mainly teak) to reforest this area for the Forestry Commission (FC).

Lessons Learnt	Opportunities Arising
ii. Ghana-based International Restoration Programmes (iNGO-led)	
• The project reports suggest there is effective partnership working between international and local NGOs, with those on the ground being supported to participate and help make locally-relevant decisions. • In each of these cases it is unclear how far the initiatives are *directed* by local communities, whose land the trees are planted on, and who has tenure rights over the land and the trees. There are questions, therefore, about authentic community participation, ownership and forest governance. • International NGOs may be more easily granted money and in larger sums than smaller Ghanaian NGOs applying independently. However, with this comes the risk of the projects being directed by outsider interests, funding requirements and foreign expertise, as well as magnified overheads or costs. • These examples take holistic approaches to restoration that combine ecological and social goals, which are compatible with the rights-based restoration principles. They could be used as models for bottom-up restoration that provide genuine win-win outcomes. The FMNR in particular could be scaled up and used in other regions. • Robust monitoring and evaluation can be used to illustrate the multi-faceted impact of forest and land restoration on community well-being. • Gendered livelihoods, roles and access to decision-making processes must be considered in the planning and delivery of rights-based restoration work. It is not enough to 'level' out access to support or participation, as there can still be gendered impacts that were not factored in.	• There is the potential for Fern and partners to link in with the research aspects and work together to influence national policy (e.g. the use of the timber levy and the review of the GFPS). • These models could be used to scale up restoration in other areas, in a way that diverts financial mechanisms away from plantations and towards rights-based restoration. • There must be robust assessments of how gender affects participation, decision-making dynamics, project outcomes and unintended impacts. These should feed into project design with local stakeholders. Benefit sharing arrangements which favour women could be explored, depending on local norms in managing household economies and expenses.

Lessons Learnt	Opportunities Arising
iii. Local NGO-led	
• Restoration is most effective and holistic when it is inclusive and responsive to local communities. In all the examples led by local NGOs, communities are at the heart of project design and delivery. Furthermore, people are seen as part of the forest ecosystem rather than separate to it. These restoration initiatives are as interested in 'restoring' or encouraging a balanced and healthy relationship between people and their forest ecosystems as they are in the health of the biodiversity. • By ensuring local rights over land are supported, these projects simultaneously ensure the long-term future for the restoration sites they work in. However, there will be continued risks of land appropriation due to the increasing pressure on land, its market value and the way that decisions about land use are made. To counteract this, participatory land use planning, as used by Greenglobe Ghana, could be replicated. • Tree tenure is vital for communities to be able to nurture forest trees on their land. These projects make tree registration more accessible, as NGOs/CSOs can promote the scheme and assist with application processes. The work of advocacy organisations like Civic Response and EcoCare Ghana to improve these systems is of vital importance. • These projects have a significant focus on diversifying and improving livelihoods; training and capacity building within communities to increase their resilience and ability to manage their own resources; appropriate safeguards and equitable benefits; and locally-led restoration activities that make sense to the needs and restraints of the location. This makes these projects holistic and highly adaptable, however it is also this which means they are seen by financiers as "hard to scale up". • Having a governance structure that enables both community leadership and multi-stakeholder engagement is crucial to these projects' success. Their strength lies in the collaboration between different state, local business, CSO, NGO, traditional authority and community actors, whose combined skills and resources far outweigh any one sector's efforts. There are some issues around workload and sustainability of governance structures without NGO/CSO support, which could be rectified by increased financial support. • The main challenge to these projects is funding. NGOs/CSOs spend excessive time trying to raise relatively small amounts of funding to support these community-based initiatives, and much of the finance which could be channelled to these projects is instead invested in plantation-based projects (see Public-Private Partnerships).	• These projects offer models for rights-based restoration which could be either replicated in other places or scaled up. Several projects use sacred groves and cultural sites as the starting point for restoration, and CREMA provides a rigorous governance structure template which can be adapted and used by anyone. • Many of the CSOs and NGOs that are instrumental to these projects are a part of FWG. This provides collective strength and accountability structures. Together these organisations can apply pressure on policy-makers and access funding through partnership work. Fern can support this by amplifying FWG knowledge and recommendations in its advocacy work at the EU level. • Local communities are also best placed to monitor unsustainable or illegal practices happening in the forests nearby and to be the first responders to a scene (for example, putting out wildfires before they spread). This information is already being collated through the FWG monitoring platforms. Investing in these locally-led restoration initiatives will increase the capacity of community monitoring and help to address causes of deforestation.

Photo: Local communities at civil society led projects use trees for non-timber forest products. These seeds have important medicinal qualities and can be sold at markets.

Lessons Learnt	Opportunities Arising
iv. Public-Private Partnerships (PPPs) (including commodities)	
• The PPPs presented here have all successfully secured multi-million dollar investments from climate finance schemes. Most trees being planted are exotic species in monoculture plantations. There was consensus amongst FWG participants that these initiatives should not be considered restoration and that plantations should be open about what they do by calling it plantation or sustainable forest management. • The examples described are mostly within on-reserve areas, where exotic species are seen as restoring forest cover and the economic productivity of forest reserves. These projects have conservation areas within their concessions that restore natural forest. However, since this is often less than 10 per cent of the area and number of trees being planted, these should also not be considered as restoration. • Some PPPs are more sustainable than others, however, there are mixed views from forestry experts about how far communities are consulted and included. Information is difficult to get hold of when companies restrict the visitations of advocacy organisations. • There are very few benefits to local communities in comparison to the profits that companies make from the plantations. Benefits sometimes include employment, opportunities to grow trees as tree crop out-growers, and company-funded local development in infrastructure. However, there are also reports of local people being dispossessed of their land, conflicts between company staff and local farmers, low wages and job contracts being ended prematurely without full pay. • The involvement of the state means that projects are subject to political dynamics. Some may be initiated at strategic moments to gain public approval. Contracts and commissions are given to private companies who may not know anything about restoration or forestry, or those whose expertise is based on foreign forestry practice and whose motivation is profit. These are not always implemented well.	• Plantation company out-grower projects supporting farmers to grow tree crops are popular with local people. If coupled with a rights-based approach that ensured land and tree tenure stability, this could be a key aspect of restoration in off-reserve areas. This same idea could be used with smaller timber and sawmill operations, to enable greater economic outcomes for the local area rather than profits being exported. • PPPs secure large investment from climate finance sources. It may be possible for smaller CSO/NGO-led restoration projects to piggy-back on or partner with these to redirect some of the funding towards community-centred approaches, especially for buffer areas of farmland around forest reserves. The FIP DGM is one mechanism. • Opportunities surround the timber levy as this could be used to fund community-led rights-based restoration through a similar scheme to the FIP DGM. Fern could work with CSOs to advocate that the Forestry Commission create a separate restoration fund, the design of which could be a collaborative process involving multiple stakeholders.

Lessons Learnt	Opportunities Arising
v. Private-led (including extraction 'CSR')	
• Similarly to PPPs, corporate private-led initiatives offer few benefits to local communities, often revolve around monoculture plantations that do not restore ecosystem integrity or resilience, and focus on the economic returns that are captured by the company. • Land appropriation is a common theme as companies seek permission from landowners and traditional councils for their initiatives, promising jobs or income to local people which are rarely delivered. This sometimes leaves people worse off as they lose access to the land they were previously making livelihoods on. • These initiatives are supported by climate finance and/or development investors, often under the guise of improving quality of life for local people and restoring land.	• It's hard to see any opportunities within this approach since the profits are captured by private companies and shareholders, and both local people and the ecological systems are negatively impacted overall. • The use of the term 'restoration' for these kinds of initiatives undermines other more holistic efforts and are seen by CSOs as giving restoration a bad name.
vi. Small Enterprise-led	
• These initiatives provide good examples of how out-grower programmes can enable local people to reap benefits from planting trees on their farms. Their strength lies in building cooperation, community ownership and increasing accessibility for smallholders. • Success is dependent on securing tree rights for farmers through tree registration and access to domestic timber markets. • Cooperatively-owned production equipment for value-added timber increases the revenue for farmers and tree owners.	• Creating buffer zones with community-led tree enterprises around restored natural forest areas offers a replicable model that could be used within other approaches, and shares similarities with some of the CSO-led initiatives. • Incentives or advance payments for farmers nurturing trees would enable more people to take part in out-grower programmes.

2.5 Which restoration projects in Ghana take a rights-based approach?

During the participatory workshop, FWG members came up with two key questions that should be considered when deciding whether a project is rights-based restoration or not:

1. Is it rights-based?

2. Is it ecologically, economically and socially sustainable?

When viewed with these questions in mind, the initiatives within this case study can be positioned on a matrix according to how their values, methods and priorities align with these two scales (see figure 2). By colour-coding the projects according to the categories used throughout this report, patterns emerge around which types of restoration projects and therefore funding channels are oriented towards a rights-based restoration approach and which are not. In the diagram below, those driven primarily by commodities and based predominantly on planting monocultures of exotic species, are all found within the weak rights and weak sustainability quarter. Those which include people's well-being, livelihoods and redistributed power through governance structures are situated in the top left strong rights and strong sustainability quarter. This diagram visualises what forestry experts already knew to be the case – that the best forms of restoration ensure good outcomes for

climate, biodiversity and people simultaneously. These same initiatives provide several models that could be used to scale up rights-based restoration (see text boxes in 2a).

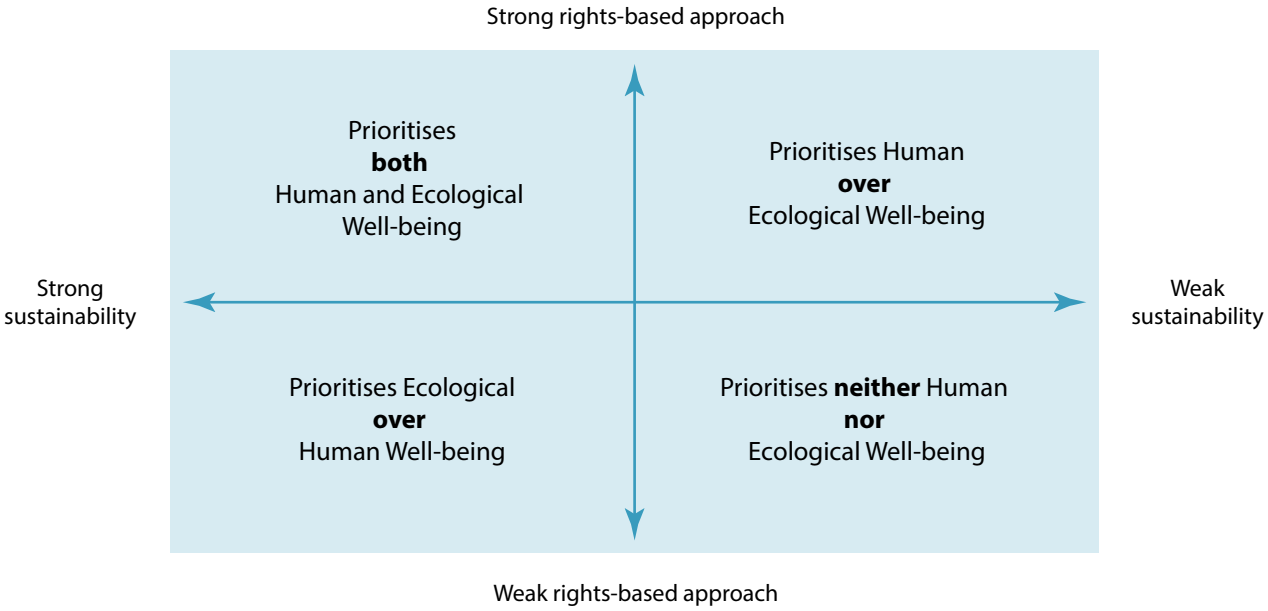

Figure 2. How restoration projects prioritise different outcomes depending on their approach to sustainability and rights.

Figure 3. How a selection of the restoration initiatives compare according to rights and sustainability. The colour key shows what categories they come under. The four models for scaling restoration highlighted previously are all taken from projects in the top left area of the diagram.

Part Three

Restoration in Definition and Practice

3.1 Defining Restoration

A major critique of restoration is the lack of consensus in definition, the separation of people from ecologies, and the absence of rights-based approaches within the guidelines that already exist. These are discussed in depth in Part One. As summarised by the UN in their Decade of Ecological Restoration strategy document:

> The complexity of ecosystem restoration has prevented global organisations and governments reaching consensus on a definition of ecosystem restoration, what terminology to consistently use, and what scientific principles to adopt for restoring ecosystems effectively. This has prevented the global community mapping out a clear ecosystem restoration vision for the future, with detailed goals and targets for individual ecosystems. It has also prevented leaders working on different global challenges that would benefit substantially from large-scale ecosystem restoration initiatives (such as climate change, biodiversity, food security, water security, poverty and human health) speaking about the global ecosystem restoration opportunity in an integrated manner.[132]

This statement appears within an annex, and no definition is offered in the main strategy. However, the document repeatedly refers to the importance of human rights, participatory governance, multi-stakeholder engagement, equitable benefit sharing, and fair land tenure in its ambitions. Indeed, "realising the human rights of all people, including for example the local communities and indigenous peoples living in many of the ecosystems requiring conservation and restoration, will be central to all activities of the UN Decade".[133]

To move beyond rhetoric, it is vital that institutions define restoration and follow guidelines for genuinely restorative activities that improve outcomes for humans and ecosystems. Therefore, this report offers a definition for rights-based restoration that centres people, and provides five rights-based principles for putting this into practice:

> **Rights-based Forest Restoration** is designed, governed and implemented with the communities who best understand the local reality. Recognising that ecological and social well-being are connected, it increases forest biodiversity and secures local community rights. Restored forests should be more resilient to climate change and increase carbon absorption.

This definition is extrapolated from the principles for rights-based restoration, which view people and their livelihoods as part of forest ecosystems. It specifically addresses the absence of people and rights in other definitions. To ensure projects take an ecologically appropriate approach, this definition and the following rights-based principles should be used in conjunction with the SER International Principles and Standards for the practice of Ecological Restoration.

[132] Page 21, paragraph 10 in the strategy document published in

[133] Ibid, page 1, paragraph 2

3.2 Principles for Rights-based Forest Restoration Practice

As explored in Part One, the are many existing frameworks and principles for restoration practice. However, many fall short of protecting or enhancing human rights because of the malleability of undefined restoration and the influence of economic forces. In response to this problem, this report distinguishes rights-based forest restoration as an alternative approach that ensures good outcomes for forests, climate and people. Drawing on patterns emerging from the Ghanaian case studies, it recommends the following five rights-based principles are used in conjuction with the SER ecological principles above: gender equity; secure land and tree rights; pursue social justice through participatory governance and planning; ensure equitable benefits and safeguards; and develop a long-term socio-ecological approach.

i. Gender Equity

Several of the projects covered in this report have measures to reduce gender inequality included in their programme design, including initiatives which do not fit within the rights-based approach that this report advocates. For example, Miro Forestry had a strong awareness of gender, and ensure their employment statistics capture data about gender to ensure that women are given equal opportunities to secure jobs. They also hold women-only focus groups where grievances can be raised. As honourable as these efforts are, the positive benefits for women of these plantation-based programmes are essentially limited to employment; and even within this there remain many social barriers to women being able to apply for or accept jobs – including responsibilities in the home and gendered social roles. The CSO projects take a more holistic approach. Most of these community-led restoration initiatives involve women at all levels – supporting women to take up roles in governance structures, holding women's groups, training women in decision-making processes, and providing coaching to build confidence in negotiating with traditional authorities on land or tree tenure issues.

These interventions respond directly to findings from forestry, conservation and development studies that have highlighted the disproportionate impact that deforestation, privatisation of forest and uneven development have on women's livelihoods in rural areas (Rocheleau and Edmunds, 1997). For forest-dependent communities, this is most noticeable in the loss of access to or abundance of NTFPs, exacerbated farming vulnerabilities, increased labour time for (majority) women's household tasks (e.g. the collection of firewood and water), and the impact all these have on augmenting intersectional social inequalities (Elias *et al.*, 2017). When it comes to forest restoration initiatives, practitioners have found that when women are not included in planning and delivery, the positive outcomes are skewed against them – for example, trees that are important to women's livelihoods are less likely to be included as men may prioritise timber species.[134] Women are often the direct stewards of forests and other natural resources, as well as being the primary collectors and users of NTFPs, yet are far less likely to have recognised land rights.[135]

The growing awareness of gender within restoration work is partly due to the international policy focus on addressing gender injustice and the inclusion of gender mainstreaming within investment criteria by many funding bodies. A recent publication by CIFOR makes recommendations for ensuring women have equal participation, that their views and priorities have equal significance and influence over strategic directions, that any negative impacts or positive benefits are equally shared, and that participatory processes are used to ensure FPIC and impartial grievance procedures.[136] Whilst these opportunities and safeguards can also be applied to other marginalised or disadvantaged groups (as discussed in the following headings), this report recommends that rights-based restoration

[134] https://www.iucn.org/news/forests/201803/gender-specialist%E2%80%99s-view-responsive-forest-landscape-restoration

[135] https://www.thegef.org/news/multi-stakeholder-dialogue-gender-and-environment-held-advance-55th-gef-council-meeting

[136] See CIFOR's Framework for Gender-Responsive FLR

acknowledges specific gender inequalities , and therefore takes a gender-responsive approach from conception to evaluation of restoration initiatives. Instead of the "do no harm" mantra of a gender-sensitive approach, being gender-responsive enables projects to "do better"[137] by actively ensuring women's knowledge, rights and lived experience of social inequality are taken seriously at every stage of project design and delivery. Being gender-responsive goes beyond being sensitive to gender differences and instead intentionally addresses gendered norms, roles and inequalities in households and communities.[138] This approach to gender is also endorsed by the GEF,[139] one of the core funders of CSO-led rights-based restoration projects.

ii. Secure Land and Tree Rights

Land and tree tenure rights came up as key themes within all the examples of restoration covered by this report. Forestry experts were unanimous in their belief that the land and tree tenure system posed the greatest risk to CSO-led restoration efforts and that therefore rights-based restoration must prioritise securing land and tree rights.

This report has illustrated that projects which enhance local rights have the best outcomes for local people, as they form the basis from which equitable benefits and participation in planning and governance can take root. Having secure rights improves the negotiating position of local people with other stakeholders, many of whom have more layers of power through their access to resources and political influence. Numerous studies and practitioner experts confirm that securing the land and tree tenure rights of local people is fundamental to the long-term success of restoration, community forestry and community-based natural resource management (Appiah et al 2015, Olden and Wainwright 2019, Pearce 2016). Similarly, it has repeatedly been shown that farmers in forested landscapes are more likely to nurture naturally occurring trees and plant new ones on land where they have secure tenure (Danquah, 2015; Oduro *et al.*, 2018). In Ghana, where trees belong to the government unless registered, tree registration is a key incentive and enabler for people to plant and nurture trees on their land or in common community areas.

Some key principles:

- Communities' rights to land should be protected by law. If international organisations want to support restoration work, they should include "advocacy for tenure rights recognition in national law" to their ambitions and work with local advocacy organisations with expertise in land rights..
- Forest restoration and land use planning must complement local livelihoods and food security, not compromise them.
- Processes should provide security of tenure to both land and trees, not only in places where deliberate restoration actions are being taken but also in surrounding areas. This means that restoration will be embedded in livelihood creation, rather than separated from it.
- Rights-enhancing actions should be determined through participative deliberation (see iv.) to ensure they are locally led and relevant.
- Rights-enhanced approaches must recognise the inequality experienced by women, different ethnic groups, pastoralists, young people and other minority groups and ensure interventions that mitigate these dynamics.

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137 Senay Habtezion 'Gender and REDD+' – a policy brief by UNDP and the Global Gender and Climate Alliance

138 See the UNFCCC definition of 'gender-responsive' on page 8 in the 'Toolkit for a Gender-Responsive Process to Formulate and Implement National Adaptation Plans (NAPs)'

139 https://www.thegef.org/news/new-policy-gender-equality-gef

iii. Pursue social justice through participatory governance and planning

Forest governance has been shown to be key for protecting and restoring forests (Pearce 2017)[140] and this is echoed in the report findings: the projects which ensure representative, deliberative and inclusive governance structures enable the best outcomes for people and forests.

Restoration should be community-led with participation at every level and defined by local people so that it is ecologically and socially relevant. This could be done through participatory planning that involves multiple stakeholders. Multi-stakeholder platforms should be strengthened as places that enable information and resource sharing, as well as openness to ensure scrutiny, accountability and informed governance decision-making. Decisions should be made through democratic dialogue and informed deliberation. Different opinions and expertise should be aired and discussed, enabling the whole governance group to find consensus. This type of governance is slower than other forms; however, CSOs and community groups have repeatedly shown that it pays off (Pearce 2017).

Participatory structures need take account of social power dynamics – for example, by being gender responsive, aware of different groups of people who may be more marginalised from decision-making spaces (young people, specific ethnicities, those with learning and physical disabilities, older people etc) and able to adapt to ensure their inclusion and equal voice. This means working to create a culture of diversity and respect for different life experiences, knowledge and views.

Some key principles for putting participatory governance and planning into practice include:

- Communication via meetings, local radio station updates, town announcements etc – that allows people within different layers of the governance structure to keep up to date, and which also enables accountability and transparency of processes. Communication also forms the basis for conflict resolution and deliberative decision-making.

- Processes for learning from practice – ongoing reflection on how things are going and regular evaluations.

- Financial transparency and accountability.

iv. Ensure equitable benefits and effective safeguards

Formalised structures for equitable benefits and safeguards were another strong feature of rights-based restoration initiatives. In the examples of ARDO, A Rocha, NDG and the small forest-based enterprises, local people not only received a fair percentage from timber harvests, but were also supported to make livelihoods within the regenerated forest that both supported its ecological restoration and restored the healthy relationship between people and the ecosystem. These livelihoods included NTFPs, tree crops, farming bush rats, increasing farming yield through agro-ecological methods (see section v. below), and establishing community-based small-scale production of goods that increase trade values of raw products (for example, cassava processing). Another strong theme was increasing and stabilising market opportunities and finding ways to make these more accessible – for example, at the A Rocha led CREMA in Lake Bosomtwe the community grow coconuts on communal land, these are harvested by designated people from the village, someone else transports them to the Kumasi market in bulk and then the income is shared. This arrangement guarantees a good price for the coconuts and makes the market accessible to the whole community rather than limited to those who have transport or financial resources.

[140] Fern's 'Return of the Trees' report gives many examples of this from around the world

Equitable benefits rely on effective safeguards and internal governance structures (see iii.) that ensure collective revenue management. Safeguards include:

- Ensuring FPIC at every stage of planning and delivery;
- Fair compensation when people's livelihoods are negatively impacted, although this should first be minimised as far as possible;
- Ensuring wide and diverse participation through alleviation of social inequalities that stop some from being able to take part in governance platforms;
- Instituting grievance processes that are impartial and lead to genuine change;
- Just enforcement and accountability structures.

These processes should be established through inclusive and participatory governance structures so that restoration is community-defined and led. Pathways to both equitable benefits and effective safeguards need to be gender responsive (as in i.); rights-affirming (as in ii.); power conscious in their design (see iii.); and multi-dimensional to ensure they are not purely economic, but sensitive to cultural, social and ecological values and dynamics.

v. Develop a long-term socio-ecological approach

Finally, the rights-based restoration initiatives all took a long-term, socio-ecological approach. They view people as a part of forest ecosystems and look for ways to integrate ecological principles with sustainable livelihoods. They did this by enhancing land rights and governance structures – enabling communities to manage their own forests – which, when constituted, also help protect the forests and communities from profit-driven corporate enterprises that are looking for degraded land.

Taking an ecological approach means focusing on restoring ecosystem integrity and the health of biodiverse landscapes, rather than plantations. It protects and enriches what is left, both on and off the reserve, to enable the regrowth of natural forest (or the most restorative option)[141] and the forest-based livelihoods of communities. There were examples from multiple restoration categories – including CSO-led, NGO-led and small enterprise-led – that incorporated agroforestry, tree-growers

[141] In areas where ecosystems have been degraded so far and/or where climate change has altered the feasibility of restoring the original ecosystem, the SER recommends selecting an alternative ecosystem that is "the most restorative option" informed by different types of knowledge (traditional, local and scientific)

Photo: Different stakeholders working together at Lake Bosomtwe CREMA. Forest restoration works when it is designed, implemented and governed by communities as part of multi-stakeholder groups.

associations and tree-based livelihoods into their frameworks. The SER provides eight guiding principles for delivering 'ecological restoration' that protects biodiversity, improves human health and wellbeing, increases food and water security, and supports climate change resilience.[142] Similarly, the principles of forest landscape restoration are useful here as they seek to strengthen resilience across landscapes over time to enable ecological functionality and human wellbeing.

Some key principles for taking a long-term, integrated socio-ecological approach include:

- Connect fragments of remaining primary or secondary forest, because the size of a restored area is of importance for how the forest functions as an ecosystem – in particular its ability to home certain species, improve biodiversity, prevent soil erosion, and retain water.

- Be aware of genetic, age and species diversity of trees, thereby making the forests more resilient to drivers of deforestation, wildfires and climate change, especially when compared to monoculture plantations.

- Use ecologically and culturally appropriate tree species for replanting. This should be guided by local and traditional ecological knowledge, through participatory planning. Choosing trees that have multiple benefits makes agroforestry and diversified livelihoods more possible and improves ecosystem integrity. Many native trees provide important NTFPs like nuts, seeds, medicines and fruit. Exotic trees can be useful when planted in small amounts for specific purposes – for example, cassia (*Senna siamea*) acts as an effective fire belt to protect other trees and/or crops and makes quality charcoal; neem *(Azadirachta indica)* is found throughout Ghana and has important medicinal and pesticidal uses; and teak is economically valuable as a fast growing timber tree.

- Consider the use of woodlots for specific tree types – for example, having small areas in communities set aside for fast-growing timber species (teak, emire, ofram) and/or fast-growing fuelwood and charcoal species (cassia and locally preferred indigenous trees). Useful exotic trees can be integrated with native species in ways that ensure ecological resilience across the landscape (i.e. not monoculture plantations).

- Protect water sources through planting trees that prevent them drying up, addressing soil erosion and managing the use of agricultural chemicals.

- Incorporate fire protection techniques to reduce the risk of fire damage to restored areas and people's livelihoods. This can include creating fire belts, planting fire resistant trees and using traditional methods of managed burning to remove seasonal debris.

- Ensure local access to restored areas and dedicated community-managed forest areas to enable stewardship.

- Create governance structures that enable community involvement in decisions about logging concessions and development projects. Negotiate terms that prioritise the wellbeing of the forest and fringe communities rather than private profit.

- Connect restoration initiatives with planning departments to ensure the long-term viability of the restored forest area.

- Trees within farms need to benefit the farmers who nurture them and be protected from illegal/legal loggers, charcoal makers and wildfires.

[142] SER International Principles and Standards for the Practice of Ecological Restoration, Second Edition

We have collated some key resources which can be used by practitioners to improve their awareness and implementation of these principles. They focus on ensuring restoration is good for both people and biodiversity, which in turn will also enable landscapes to adapt to climate change and contribute to mitigation efforts.

Key Principle	Resources for Practitioners
1. Gender Equity	• A free e-course by GEF and UNDP on 'Gender and Environment' • CIFOR's publication 'Gender Matters in Forest Landscape Restoration: A framework for design and evaluation' • IUCN's publication 'Gender-Responsive Restoration Guidelines' • The Earthscan Reader on Gender and Forests – book available for free download here
2. Secure Land and Tree Tenure Rights	• ClientEarth's 2020 'Toolkit for enabling laws on community forestry' provides legal guidance for ensuring land rights by identifying key questions that can be used by decision-makers as they develop and review community forestry laws • ClientEarth's 2019 report 'Communities at the heart of forest management: how can the law make a difference?' which provides guidance on developing legal frameworks and conducting legal reforms • Rainforest Foundation UK's The Mapping for Rights Methodology: A new approach to participatory mapping in the Congo Basin this tool enables forest communities to map their land, resources, cultural sites and contribute to the transparency of companies operating in concession areas. This could be used in other tropical forested countries.
3. Pursue Social Justice through Participatory Governance and Planning **4. Ensure Equitable Benefits and Effective Safeguards**	• Governance structures toolkits are often available from in-country NGOs and governmental Forestry Departments • WRI's 'Assessing Forest Governance' offers multiple useful documents including a comprehensive set of indicators to assess the current governance structures and a Guidance Manual toolkit for practitioners • CIFOR's Practical Guide for using Collaborative Land Use Planning offers practical tools for doing collaborative land planning with communities • Transparency tools and forest monitoring – international platforms: FLEGT Watch, Forest Link, Global Forest Watch – In Ghana: Civil Society-led Independent Forest Monitoring (CSIFM)/ Ghana Timber Transparency Portal
5. Develop a Long-Term Strategy for People and Ecosystems	• Society for Ecological Restoration E-Learning Course: Overview of the Practice of Ecological Restoration • Follow the eight principles for ecological restoration as laid out in the SER handbook • IUCN has collated several Forest Landscape Restoration tools which support initiatives to take an FLR approach

Part Four

Levering Policy and Financial Support for Rights-Based Restoration

This report illustrates what community-led, rights-based restoration looks like compared to projects which use the term restoration to justify monoculture plantations, land appropriation and extraction. It recommends that policy and climate finance support a rights-based approach by scaling models oriented around community management of forests and participatory forest governance. In so doing, it recommends that sustainable forest management, monoculture plantations, and conservation projects that violate community rights or displace livelihoods are not funded with restoration funding.

Restoration must always be context specific and take account of different forest ecologies, the local and national socio-economic situation, agricultural and livelihood systems, and human rights. When restoration prioritises economic returns for investing companies and financiers, it often fails to restore forest resilience and ecosystem integrity, and simultaneously neglects to uphold human rights. Shifting the global policy narrative towards rights-based restoration will ensure restoration is genuinely good for forests, the climate *and* people. With this in mind, the report offers the following four recommendations.

Recommendation One: Policies and funding bodies should prioritise rights-based approaches to restoration by distinguishing between different types of forest landscape projects and redirecting support to rights-based restoration models

A plethora of policies use the term 'restoration', often without clarity of definition.[143] Policy makers need to understand that restoration is used to describe a range of different approaches to forest landscape projects. Many of these approaches fall short of restoring natural forest, biodiversity and resilient carbon stocks. This has led to monoculture plantations, sustainable forestry and exclusionary conservation all receiving funding under the label of restoration.

This report finds that rights-based forest restoration has the best outcomes for people, forests and climate. Therefore, policy and funding bodies should prioritise restoration initiatives that operate according to the principles outlined in this report. Given that many policies and funders do not yet define what they mean by restoration, we propose they adopt the following definition to enable increased support to rights-based approaches:

> **Rights-based Forest Restoration** is designed, governed and implemented with the communities who best understand the local reality. Recognising that ecological and social well-being are connected, it increases forest biodiversity and secures local community rights. Restored forests should be more resilient to climate change and increase carbon absorption.

[143] Policies and conventions that use the term restoration without definition include: the UNFCCC and CBD targets; the European Green Deal and EU Member State Green New Deals; the EU Biodiversity Strategy; DEVCO's development policy and Forestry Policy Note; the EU communication on stepping up action to protect and restore forests; Nationally Determined Contributions (NDCs); and National Action Plans. These documents often refer to Nature-Based Solutions, a concept that also lacks definition in its use of 'restoration'.

This definition is based on the principles for rights-based restoration, which view people and their livelihoods as part of forest ecosystems, and should be used in conjunction with the SER International Principles and Standards for the practice of Ecological Restoration.

By using the definition provided, policies and funders will be able to make clear distinctions between different types of forest landscape projects and therefore target national and international support to rights-based forest restoration. Initiatives that are led by for-profit companies and that prioritise forestry companies benefiting from the economic output of land from timber products (i.e. plantations of exotic species) should not be eligible for restoration funding, or funding for climate change mitigation, biodiversity or sustainable development. Finance should instead be redirected to support the scaling up of initiatives that align with the rights-based forest restoration criteria.

Some specific recommendations for the inclusion of this definition within significant policies are provided in the text box below.

How can EU policymakers implement Recommendation One?

- The EU Communication on stepping up action to protect and restore forests

This Communication should adopt the rights-based forest restoration definition and criteria for investment. For example, the EU External Investment Plan could be levered to support "producer countries in the conservation of existing forest cover and regeneration of forests" (see Priority 4, page 13-14) in accordance with rights-based forest restoration principles. Similarly, the Communication commits the EU to transform commodity supply chains, including investing in agroforestry and agroecology, for products like cocoa, coffee and palm oil (see Priority 2, page 9). These initiatives could also commit to a rights-based forest restoration approach.

- The EU Forest Partnerships Policy

This policy should adopt the rights-based forest restoration definition when promoting reforestation and ecosystem restoration in its forest partnerships with appropriate partner countries and support existing rights-based restoration initiatives to scale up their efforts. We recommend that this applies to countries whose forests have already been heavily degraded and depleted by logging, for example, Ghana and Côte D'Ivoire. For the countries which still have extensive forest cover, like the Congo, prioritising protection through community-led forest management or rights-based conservation is preferable.

- EU Biodiversity Strategy

As part of the EU's actions to protect and restore the world's forests, "particular attention will be paid to the restoration of degraded land, and the protection and restoration of biodiverse areas with high ecosystem services and climate mitigation potential" (section 4.2.3, page 22). We recommend that this policy adopts the rights-based forest restoration definition and uses the suggested frameworks as its investment criteria for any restoration work being supported in tropical countries. This will ensure positive outcomes for biodiversity, the climate and people.

- Nationally Determined Contributions (NDCs), National Adaption Plans (NAPs) and Nature-based Solutions (NBS)

As governments review their NDCs, NAPs and increasingly look to NBS in their implementation strategies, countries with degraded forest areas should adopt the rights-based forest restoration definition. This would lever NDCs targets, NAPs and corresponding international climate finance to support rights-based approaches, and ensure that NBS initiatives do not compromise human rights.

- The EU's role within International Policy

The EU should use its position internationally to advocate for the wider adoption of the rights-based forest restoration definition and practice, specifically within COP26 and as the UN Decade of Ecological Restoration commences in 2021.

Recommendation Two: Restoration projects should be led by national experts in community forestry and forest governance, in partnership with civil society and communities

In accordance with the definition provided, restoration initiatives should be led by national community forestry experts and multi-stakeholder groups working together through deliberative forest governance platforms. Restoration is location and ecosystem specific and there are a plethora of small NGOs and CSOs who are already working on appropriate, holistic projects. As specified in Recommendation One, these models can be supported and scaled up.

Multi-layered CSO platforms (from local, to regional, to national) should be strengthened and trusted to lead on rights-based restoration strategies. Communities should be represented at every level of decision making and local governments should be brought on board as part of the multi-stakeholder approach. This will help to ensure the long-term viability and sustainability of restoration projects. Already existing CSO-led platforms should be strengthened and financially supported to ascertain what kinds of restoration are suitable for which areas, coordinate with practitioners to share models of best practice, offer training in rights-based approaches and become channels for adequate funding to reach small CSOs.

Recommendation Three: Restoration funds should be established within countries from commodity taxes and distributed to rights-based restoration initiatives through local authorities and CSO platforms

To finance Recommendation Two, ring-fenced restoration funds should be created using commodity levies. These could include timber, agricultural and mining levies. This fund should be collected by a third party NGO or other impartial organisation, and governed by a board of representatives from across stakeholder groups. Fund management should be transparent and accountable to minimise the risk of vested interests. It could be distributed by the CSO platforms and local governments to rights-based restoration initiatives, enabling them to appropriately scale up their operations.

Implementing this recommendation will ensure that rights-based restoration has independent funding that is not solely reliant on international development banks or development finance from the global North, but rather is simultaneously levied internally through sustainable, legal forestry and other commodities. Having a separate fund for rights-based restoration would prevent commodity levied tax being used for other purposes.

Acronym List

Accelerated Rural Development Organisation (ARDO)
Accountability Framework Initiative (AFI)
African Development Bank (AfDB)
African Forest Landscape Restoration Initiative (AFR100)
African Plantations for Sustainable Development (APSD)
Assisted Natural Regeneration (ANR)
Centre for International Forest Research (CIFOR)
CDC (the UK's development finance institute)
civil society organisations (CSOs)
Climate Investment Funds (CIF)
Climate Land Ambition and Rights Alliance (CLARA)
Convention on Biological Diversity (CBD)
Community Development and Knowledge Management (COMDEK)
Community Resource Management Areas (CREMA)
corporate social responsibility (CSR)
Dedicated Grant Mechanism (DGM)
Domestic Lumber Timber Association (DOLTA)
Enhancing Natural Forests and Agroforest Landscapes (ENFAL)
Environmental Protection Agency (EPA)
Expanded Plantation Programme (EPP)
European Union (EU)
Farmer Based Organisations (FBO)
Farmer Managed Natural Regeneration (FMNR)
Food and Agriculture Organisation (FAO)
Foreign, Commonwealth and Development Office (FCDO)
Forest Investment Programme (FIP)
Forest Landscape Restoration (FRL)
Forest Law Enforcement, Governance and Trade (FLEGT)
Forest Resource Managers (FRMs)
Forest Stewardship Council (FSC)
Forest Watch Ghana (FWG)
Forestry Commission (FC)
Free, Prior and Informed Consent (FPIC)
Green Climate Fund (GCF)
Ghana Forest Plantation Strategy 2016-2040 (GFPS)
Ghanaian cedi (GHC)
Ghana's Medium-Term Development Plan (GSGDA II)
Global Environment Facility (GEF)
Global Information Systems (GIS)
Global Partnership on Forest Landscape Restoration (GPFLR)
hectares (ha)
International Finance Corporation (IFC)
International NGOs (iNGOs)
International Partnership for the Satoyama Initiative (IPSI)
Intergovernmental Panel on Climate Change (IPCC)
International Tropical Timber Organisation (ITTO)
International Union for Conservation of Nature (IUCN)
Ministry of Food and Agriculture (MOFA)
Modified Taungya System (MTS)
National Action Plans (NAPs)
National Forest Plantation Development Programme (NFPDP)
Nationally Determined Contributions (NDCs)
Nature-Based Solutions (NBS)
Nature and Development Foundation (NDF)
Nature and Development Ghana (NDG)
Natural Climate Solutions (NCS)
non-timber forest products (NTFPs)
Payment for Ecosystem Services (PES)
Plantations Socfinaf Ghana (PSG)
Public-Private Partnerships (PPPs)
Reduced Emissions from Deforestation and Degradation (REDD+)
Restoration Opportunities Assessment Methodology (ROAM)
Savannah Accelerated Development Authority (SADA)
Society for Ecological Restoration (SER)
United Kingdom (UK)
United Nations (UN)
United Nations Development Programme (UNDP)
United Nations Framework Convention on Climate Change (UNFCCC)
Voluntary Partnership Agreement (VPA)
Village Tree Enterprises (VTE)
World Bank (WB)
World Agroforestry Centre (ICRAF)
World Resources Institute (WRI)
Youth in Plantation (YiP)
Zoological Society London (ZSL)

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"I see restoration as being about more than trees. It is about wildlife and livelihoods. If my forefathers could go into the forest and pick snails and mushrooms, I should be able to do that too. This is why we nurture the native forest. This is restoration."

– A Rocha practitioner in interview, July 2019

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