

The background of the top half of the cover is an abstract, textured composition. It features a central globe-like shape with a grid of latitude and longitude lines, rendered in shades of blue and teal. Overlaid on this are several golden, metallic-looking arches and circular patterns, some resembling film strips or architectural elements. The overall effect is dynamic and layered, suggesting a complex, interconnected world.

# TRANSFORMATIONAL EVALUATION

FOR THE GLOBAL CRISES OF OUR TIMES

**Rob D. van den Berg**

**Cristina Magro**

**Marie-Hélène Adrien**

EDITORS



**IDEAS**

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# TRANSFORMATIONAL EVALUATION

FOR THE GLOBAL CRISES OF OUR TIMES

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## CHAPTER 5

# Evaluation at the Nexus Between Nature and Humanity for Transformational Change

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**Abstract.** The global environmental crises being manifested through climate change and rapid loss of biodiversity require transformational change in major systems ranging from energy and transportation to agriculture and cities. The pandemic of 2020–21 has demonstrated the interdependence of human and ecosystem health. Evaluation can contribute significantly to identifying solutions for the future but, to do so, must rise above its focus on individual interventions in isolation of their context. Evaluators must also learn to operate in the nexus between human and natural systems, where sustainable development takes place. This chapter draws upon experiences with evaluating the work of the Global Environment Facility (GEF) in supporting adaptation to climate change, an area that by necessity transcends the boundaries of human and natural systems. The chapter also introduces a framework for evaluating the GEF's additionality in six specific areas: environmental, legal and regulatory, institutional and governance, financial, socioeconomic and innovation.

## Introduction

The state of the global environment and climate change have emerged, in the words of United Nations Secretary-General António Guterres, as the defining challenge facing humankind in the 21st century (United Nations 2018). The changing climate poses a long-term threat to the natural environment and human welfare. Its consequences are already being felt around the world in increasing weather anomalies, such as increasing frequency and intensity of storms, heatwaves and wildfires that directly affect how we live our lives and how our economies develop; climate change is also associated with societal conflict at many levels (Burke, Hsiang and Miguel 2015). Even if greenhouse gas emissions stopped tomorrow – an obviously impossible scenario – the lengthy lifetimes of such gases in the atmosphere would guarantee continued warming for several decades to come. There is thus an urgent need to enhance our capacity to adapt to climate change. This does not mean that we should give up on mitigation efforts. On the contrary, these need to be intensified to avoid catastrophe. At the same time, chemical pollution is reaching critical levels, posing great risks to human and ecosystem health. Business as usual will not do the trick; we need long-term transformations in our industrial, energy, urban, agricultural, transportation and other major systems to address the climate challenge.

The climate crisis, unfortunately, is not the only environmental challenge that we face. Biodiversity – species of animals and plants as well as entire ecosystems – is being lost at a faster rate than ever during the existence of humans on the planet (Caballos, Ehrlich and Dirzo 2017). Biodiversity, and all life on Earth, has intrinsic value in itself, but we are also losing resources that are very valuable to humans and society in terms of ecosystem services, including clean air and water, protection against storm surges and rising sea levels and medicines. Undisturbed ecosystems tend to find an equilibrium that benefits a multitude of species, which the reintroduction of wolves, an apex predator, to Yellowstone National Park has famously demonstrated, triggering a tritrophic cascade that has led to healthier populations not only of animals, but also of plants (Ripple and Beschta 2012).

Scientists are also increasingly realizing that the escalating outbreaks of new diseases, such as COVID-19, which became a global pandemic in spring 2020 with devastating human and economic costs, are directly linked to how we interact with and abuse the natural environment (UNEP 2016). Such zoonoses, in which a pathogen spills over from a non-human host to humans, cause 60 per cent of all infectious diseases and 75 per cent of emerging infectious diseases (Asokan and Asokan 2015). Interaction between species

requires adoption of a One Health approach, recognizing that ecosystem and human health are closely interlinked. As humans encroach deeper into ecosystems – building roads, clearing forests, mining – we disrupt ecosystems and come in ever-closer contact with wildlife, which makes it easy for pathogens to cross over to humans from non-human animals. Human population growth, unchecked urbanization and suburbanization and pursuit of financial profits drive these processes.

The good news is that environmental challenges are receiving more international attention than ever before. The United Nations member states adopted the 2030 Agenda for Sustainable Development and the attendant Sustainable Development Goals (SDGs) in 2015 (UN DESA n.d.). Environment is recognized as one of the three main pillars of sustainable development and can be seen as the foundation on which social and economic development depends. The Paris Agreement (UNFCCC 2021), through which an overwhelming majority of the world's countries agreed to limit their greenhouse gas emissions, came into being in the same year. The Global Commission on Adaptation (GCA 2021) (led by former United Nations Secretary-General Ban Ki-moon, International Monetary Fund Executive Director Kristalina Georgieva and Bill Gates) released its landmark report *Adapt Now* in September 2019, making an urgent call for leadership on climate resilience (GCA 2019).

Despite the new institutional arrangements and agreements, the steps that have been taken are not enough to halt climate change or species extinction or for the world to reach sustainable development, as the 2018 special report of the Intergovernmental Panel on Climate Change made clear (IPCC 2018). We need concerted efforts to address these challenges while the world is facing increasing uncertainty, and suspicions between countries and groups are on the rise. Financial resources, especially from public sources, are significantly smaller than the economic forces that contribute to climate change (e.g. fossil fuel subsidies, agricultural practices that lead to deforestation), although the role of public finance in promoting adoption and development of climate-friendly technologies is crucial (Van den Berg and Cando-Noordhuizen 2017). According to the Climate Policy Initiative, total annual flows of climate finance from public and private sources rose to \$590 billion in 2017/18 (Buchner et al. 2019). Financing, often in the form of subsidies, dwarfs these financial flows, to the detriment of the environment. We therefore must make sure that efforts to solving these challenges are effective and making a difference in the real world. This is where evaluation comes in. Evaluation can play an important role among other tools to provide evidence of the effectiveness, efficiency and impact of the various

policies, strategies, programmes and projects for transformational change. To do this meaningfully, evaluation must rise above tracking the results of individual initiatives in isolation and focus on what has been called 'significance' (Feinstein 2019) or 'transformational fidelity' (Patton 2020a).

In this chapter, I discuss the implications for evaluation, making a strong case that evaluation must consider all interventions in their broader context and how they interact with human and natural systems. It is not adequate to evaluate an intervention only against its internal logic without considering how it interacts with the external system, as well as any unintended consequences it may have (see e.g. Patton 2020b; Garcia and Zazueta 2015). I draw on evaluations by the Independent Evaluation Office (IEO) of the Global Environment Facility (GEF), focusing on adaptation taking place at the nexus between nature and humanity. I also outline a novel framework for assessing additionality, which brings together the intended impacts of GEF's work on the environment and societal dimensions.

## Implications for Evaluation

All interventions take place in an environment that encompasses the natural (biophysical) and human (social, cultural and economic) spheres. The SDGs are intended to provide an integrated perspective, with all 17 giving due consideration to the three pillars of sustainable development (social, economic and environmental) (see e.g. Griggs et al. 2017), although in practice, in policymaking and in evaluation, the focus is almost exclusively on the economic benefits. The social dimension receives some attention, but mostly in terms of how it supports the economic in terms of matters such as labour productivity. The environmental is virtually ignored or receives lip service as an afterthought even though all development depends upon it (Reid et al. 2017).

Furthermore, the SDGs in practice may easily lead to new silos as organizations claim stakes in addressing particular goals. This can be seen, for instance, in the United Nations system, in which primary responsibility for the various SDGs has been carved out for specific agencies; the Food and Agriculture Organization of the United Nations focuses on Goal 2 (No hunger), whereas UN Women's mandate is with Goal 5 (Gender equality), and the United Nations Educational, Scientific and Cultural Organization's is with Goal 4 (Quality education). In practice, all of the SDGs are closely linked with each other (see e.g. Vladimirova and Le Blanc 2015). The agencies working towards achievement of their mandated SDGs often recognize

the interlinkages but may lack the resources and skills to extend their work beyond their narrowly defined mandate.

Evaluation as a practice and profession has its roots firmly in social inquiry and econometrics, both approaches focusing on attempting to measure the effectiveness of discreet interventions. Favoured approaches have included experimental and quasi-experimental designs, scenario building and cost–benefit analyses, which have been presented as the gold standard for evaluation<sup>1</sup>. These approaches have been widely criticized for their lack of explanatory power, external validity and appropriateness and their ethical challenges, in particular in the case of international development (see e.g. Ngii 2020; Abimbola 2020). Many approaches to evaluation have been used, and significant progress has been made in inclusiveness, gender rights and human rights (see e.g. UNEG 2016), although the prevalent approach to evaluation is still narrowly focused on projects, evaluating against their internally defined logic models instead of placing them into context (Patton 2020b). By context, I mean the context in which the evaluation takes place and, more importantly, the context of the evaluand and how it relates to its societal, political, historical and cultural setting. Incorporation of biophysical dimensions has lagged seriously behind in mainstream evaluation practice. Evaluating in the coupled human–natural systems is a necessity for sustainability-ready evaluation (Rowe 2019).

On the other hand, there have long been efforts to assess the effectiveness of environmental interventions from the natural science perspective. These, for their part, have sometimes left out the human dimension. Even in the GEF, earlier evaluations tended to focus exclusively on outcomes of such things as biological diversity; greenhouse gas emissions and ecology of lakes, rivers and coasts, with little consideration for what happened to the people living in the project areas. In the GEF, a shift can be detected around the mid-2000s, which coincided with a broader realization in conservation circles that environmental protection that ignored local development interests would be doomed to failure (see e.g. GEF EO 2006). Since then, there has been a marked shift in GEF strategy towards addressing the drivers of environmental change, which can be found in the economic and development sectors.

There are two important, interlinked implications for evaluation if we as evaluators are going to contribute successfully to transformational change.

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<sup>1</sup> As late as 2019, the prestigious Nobel Prize in economics was awarded to three proponents of experimental designs in development evaluation: Abhijit Banerjee, Esther Duflo and Michael Kremer (Royal Swedish Academy of Sciences 2019).



First, we must move beyond the project mentality in which the focus of evaluation is on measuring the effectiveness of individual interventions as if they existed in a vacuum (Feinstein 2019; Magro and Van den Berg 2019; Patton 2020b; Uitto 2016). Every intervention, whether it is a project, programme or policy, takes place in a broader landscape where it interacts with other forces and actors, some of which may be reinforcing, whereas others often work counter to the aims of the intervention. Furthermore, the relationship between the intervention and its environment may be manifold; the intervention may be targeted to change (parts of) the environment, or its goal may be outside of the immediate environment, and it may have unintended effects on the environment that may be positive or negative. In such a situation, it is futile simply to check boxes regarding whether the intervention produced the outputs it set out to produce without analysing whether it made a difference in the larger system that it is part of.

Evaluations must also seek to identify and understand unintended and unforeseen consequences that the intervention's logic model will not capture. It is safe to assume that every intervention will have environmental consequences, whether intended or unintended, positive or negative. Similarly, it will not always be possible to identify win-win solutions for all groups, which may also have different priorities and goals for an area or use of a resource (Rowe 2012). Therefore, evaluators must be able to point out possible conflicts while being sensitive to power relations and differences in vulnerabilities between groups (including indigenous peoples). Individual evaluations will not be able to produce all the necessary analytical knowledge, but it is incumbent upon evaluators to draw on scientific knowledge and to collaborate with researchers in identifying synergies and managing trade-offs (Bierbaum et al. 2018).

Because such broader contexts consist of human and natural elements, evaluations must systematically consider both systems. This nexus between nature and humanity is where sustainable development happens, if it is to happen. The need to incorporate natural and human systems, identifying synergies and trade-offs, demands a change in focus in evaluation approaches and the methods we use. Instead of evaluating against logic models of projects, we need open theories of change that place the intervention into the broader context, take into account other parts of the complex system and how the intervention interacts with them and are open to detecting unanticipated consequences. These are still theory-based approaches to evaluation but applied at a higher level.

The approach also calls for choosing evaluation approaches and methods depending on the questions to be answered. The standard

approach is a mixed-methods one that may encompass quantitative and qualitative methods. In the case of the GEF, working in environmental and natural resources management domains has allowed us to use remote sensing and geospatial methods effectively in combination with a range of other methods (Lech et al. 2018; Runfola et al. 2020; Sidman, Batra and Fuhrig 2020). An open theory of change combined with a mixed-methods approach allows us to evaluate GEF-funded projects and programmes in terms of their relevance, effectiveness, impact and sustainability; that is, do they make a difference in the global environmental problems that are the focus of the GEF's work, do they do so in a way that also benefits the people who depend on the landscape and resources where the interventions take place and are the benefits sustainable? I also ask what GEF's additionality in these situations is. Herein, I demonstrate the above points in light of practical examples from recent GEF evaluations.

## Adaptation

An area squarely in the nexus between natural and human systems is adaptation to climate change. As global climate change has accelerated and national commitments under the Paris Agreement (even if fully implemented, which seems extremely unlikely) have been inadequate to halt warming below the target 2°C, adaptation has gained increasing urgency at the policy and practical levels. This by no means implies that mitigation efforts should be abandoned as futile, just that they need to be complemented by actions to adapt. The Global Commission on Adaptation calls adaptation a human, environmental and economic imperative (GCA 2019).

On the human level, adaptation solutions must address power structures and dynamics because climate change exacerbates inequality between the rich and the poor and puts a disproportionate burden on women. It tends to be the people living closest to the land – such as small farmers (a large proportion of whom are women) and Indigenous peoples – who are most vulnerable to the effects of climate change. As for the environmental imperative, degradation of the natural environment – including loss of biodiversity and ecosystem integrity – removes many of the protections that the natural environment provides against climate-related and other environmental hazards, including cyclones and storm surges, floods, droughts and heatwaves. Finally, according to the Global Commission on Adaptation, economic returns to investments in resilience are very high. Adaptation brings multiple benefits.

The costs of inaction will be dramatic, threatening cities, especially in coastal areas, from New York to Tokyo to Lagos, as well as global food security. Again, poor and vulnerable people and countries will bear the brunt of the immediate costs in terms of loss of life and livelihood.

In the field of evaluation, one of the earliest efforts to bring together the emerging community of climate evaluators around the topic of adaptation was the 2008 International Conference on Evaluating Climate Change and Development held in Alexandria, Egypt (Van den Berg and Feinstein 2009). Since then, evaluators have made progress (see e.g. Bours, McGinn and Pringle 2015), but there are still no widely accepted standards or benchmarks against which to measure adaptation. Groups such as the Technical Evaluation Reference Group of the Adaptation Fund and the Green Climate Fund Independent Evaluation Unit are working to find solutions to the evaluation challenges. One in particular relates to the nature of adaptation outcomes; successful adaptation often means the absence of something negative (e.g. a natural disaster, loss of a harvest). Evaluators would thus have to evaluate against a hypothetical counterfactual of what might have happened without the intervention.

As an operating entity of the financial mechanism of the United Nations Framework Convention on Climate Change, the GEF plays an important role in financing climate change adaptation in developing countries. The GEF and its network of partners have developed a financing framework based on the concept of climate-resilient development (GEF 2016, 21). At the United Nations Framework Convention on Climate Change Conference of Parties in Marrakech, Morocco, in 2001, three new avenues for adaptation funding were established: the Least Developed Countries Fund, the Special Climate Change Fund and the Adaptation Fund. The GEF directly manages the first two of these, whereas the Adaptation Fund is a separate entity with its own governance mechanism that the GEF administratively supports. In addition, in response to a Conference of Parties request, the GEF launched the Strategic Priority for Adaptation to pilot and demonstrate activities to reduce vulnerability and increase adaptive capacity to climate effects in GEF's focal areas (GEF 2016). The GEF's support of adaptation has been through these windows.

Adaptation in GEF programming has focused largely on least developed countries (LDCs) and other countries that are particularly vulnerable to climate change and have limited capacity to cope. Two recent evaluations focusing on LDCs (GEF IEO 2020a), and specifically on the Sahel and Sudan–Guinea Savanna Ecosystems in Africa (GEF IEO 2020b), found that adaptation to climate change featured centrally in the GEF portfolios in

these groups of countries. Thirty-four per cent of GEF funding in LDCs was allocated to adaptation, and 23 per cent of all GEF funding and 78 per cent of climate change funding went to adaptation in the two African biomes. These figures reflect the importance of the topic for these poor countries. Although their contribution to climate change has been minimal in comparison with that of more industrialized countries, they (alongside small island developing states, a few of which are also LDCs) are bearing the brunt of its impacts. GEF additionality lies in integrating adaptation to climate change into development plans and programmes.

Enhancing resilience to climate shocks is essential. Resilience can be seen as incremental (adaptive) or transformative change. The former refers to various adjustments that people or communities make to adapt to changing conditions and may include new agricultural techniques or farming practices, diversified livelihood strategies and social organization. Transformative change involves more-fundamental systemic shifts, for example, when a region changes its economic strategy. These shifts may include a combination of technological innovations, institutional reforms, behavioural shifts and cultural changes (Pelling 2011).

The interventions that the GEF has supported in the case study countries have varied considerably because adaptation is by definition place specific. What is common is the focus on ecosystem-based adaptation (using ecosystem restoration to reduce the vulnerability of human social and economic systems to climate impacts). For instance, the regional project *Adaptation to Climate and Coastal Change in West Africa – Responding to Shoreline Change and Its Human Dimensions in West Africa through Integrated Coastal Area Management*, which the United Nations Development Programme (UNDP) implemented, addressed coastal dune sustainability, which is a major environmental problem in Mauritania. The project piloted a method of reconstituting the ecosystem and biodiversity of part of the coastal dune, making it possible to secure the Mauritanian capital of Nouakchott against ocean incursion. The project *Integrating Climate Resilience into Agricultural Production for Food Security in Rural Areas*, which the Food and Agriculture Organization of the United Nations implemented in Mali, contributed to greater resilience of local grain production systems, diversification of revenue sources for rural communities, training, and restoration of soil fertility through climate-resilient techniques. Similarly, in Cambodia, the UNDP-implemented project *Promoting Climate-Resilient Water Management and Agricultural Practices* introduced new technologies, such as solar pumps, and adaptive agricultural practices that improved the livelihoods of farmers.

Overall, the two evaluations found that GEF programming has been relevant to these countries' priorities in the nexus between natural and human systems. The LDC evaluation also found that adaptation projects performed better on average than projects in other GEF focal areas.

The countries face immediate challenges pertaining to climate change and other environmental impacts that affect the lives and livelihoods of people and communities. Addressing these requires interventions in the natural environmental sphere and the social and economic spheres. The recent shift in GEF strategies towards greater integration has not decreased its relevance. On the contrary, identifying and addressing the root causes of environmental change allows the GEF to address fundamental environment and development challenges effectively.

## Additionality

Since its inception in connection with the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, the rationale of the GEF has been to catalyse action to generate global environmental benefits. As highlighted in the above discussion, environment and development are closely related. Because environmental protection takes place where people live and where their activities affect the natural environment, it is not possible to achieve environmental goals while ignoring people. The first study to examine this systematically in the GEF context confirmed this overall conclusion empirically (GEF EO 2006). The GEF strategy to achieve the global environmental benefits it seeks is to address the drivers of environmental degradation in human systems. Important ways involve seeking win-win solutions for people and the environment and instigating legal, policy and regulatory reforms that are beneficial for the environment.

Like other multilateral financial institutions, the GEF is concerned about whether its funding is truly incremental and not displacing other funding. The GEF's additionality was originally formulated in terms of incremental cost (the difference between business as usual and the additional cost of achieving these developmental benefits in an environmentally sound way), which the GEF would fund. This question is closely related to the true impact of the GEF and how much measurable change could reasonably be attributed to GEF funding. In other words, the question is that of a credible counterfactual: Would these changes have happened without GEF funding? Following an evaluation in 2006 that found much confusion and weak understanding of the application of the incremental cost

principle, the GEF Council simplified determination of incremental cost the following year (GEF 2007). The incremental cost analysis continued to focus on the global environmental benefits, ignoring the human aspects. The new additionality framework that the IEO developed would allow for systematic capture of the GEF's additionality through its policies, strategies, portfolios, programmes and projects (GEF IEO 2018a).

Based on a review of policies and practices of other agencies (including those of the multilateral development banks) and academic literature (e.g. Bennett 2010; Valatin 2012), the IEO framework proposed adoption of six areas of GEF's additionality: specific environmental, legal and regulatory, institutional and governance, financial, socioeconomic, innovation.

The framework would allow for better capture of the GEF's additionality across the different domains, not only the direct environmental benefits. As the fundamental justification for establishing the GEF, the global environmental benefits have been the focus of programming, as well as monitoring and evaluation systems, although there is evaluative evidence that this narrower focus has underestimated the GEF's broader impacts in the environment–development nexus (GEF IEO 2018b, 2018c). Furthermore, IEO analysis suggests that additionality beyond direct environmental outcomes is not fully understood within the partnership. For instance, the GEF most often achieves its environmental goals through engaging in legal and regulatory reform or institutional and governance improvement. Working in the coupled human–natural systems, GEF's work affects the people who depend on the ecosystem for their livelihood, be they farmers or fishermen, or whose actions affect environmental sustainability. Conversely, the drivers of environmental destruction – biodiversity loss, deforestation, land degradation, fisheries depletion, chemical pollution, climate change – are in the economic sector. To be effective, the GEF must work in the productive sectors to address the root causes. Finding win-win solutions and identifying trade-offs is necessary. Finally, since its inception, innovativeness has featured centrally in the GEF's strategies.

The IEO has applied the framework to evaluations that have been conducted since, including the evaluation of GEF support to biodiversity mainstreaming (GEF IEO 2019). Mainstreaming refers to integrating biodiversity into broad development policy, planning and practice as a mechanism to address the drivers of biodiversity loss while achieving multiple environmental and development goals. The Convention on Biological Diversity has recognized the mainstreaming goal as important, but its operationalization has been challenging (UNEP 2010). Biodiversity mainstreaming has gained in importance in GEF programming over the years,

and mainstreaming continues to be a strategic objective under the biodiversity focal area of the GEF. The current emphasis on programmatic and integrated approaches at the landscape and seascape levels reflects the importance of mainstreaming biodiversity into productive sectors, as well as in various environmental domains. Inclusion of natural capital assessment and accounting as a GEF priority is a significant step in making the business case for biodiversity. By definition, biodiversity mainstreaming takes place at the nexus of natural and human systems.

The goal of the evaluation was to assess the effectiveness of GEF contributions to biodiversity mainstreaming and to identify good practices and challenges in biodiversity mainstreaming interventions. The evaluation used mixed methods. Recognizing that country context and external variables that are outside the influence of most projects very much determine the extent of mainstreaming, the evaluation focused on three countries selected based on their representativeness of the opportunities and challenges in mainstreaming; Colombia, India and South Africa are lower- to upper-middle-income countries that have established governance frameworks and capacities for environmental management. The country studies examined biodiversity mainstreaming in productive economic sectors (mining, coffee, cattle ranching, grape cultivation, fisheries), as well as geographically in relation to land management and sustainable resource management practices.

I will not dwell on the overall findings or the country-specific results of the evaluation but instead will focus on the specific analysis of GEF's additionality. The evaluation, which was one of the first two in which we used the additionality framework, demonstrated the framework's utility and the insights it could bring in terms of, especially, the areas where human systems meet biodiversity.

The evaluation found that the GEF biodiversity mainstreaming portfolio has contributed to the various dimensions of additionality, including legal and regulatory, institutional and governance, financial, socioeconomic, and innovation, in addition to the specific environmental additionality. These include innovative approaches based on multi-stakeholder partnerships linking grassroots organizations to regional research institutions, advocacy platforms and national environmental authorities. Landscape management practices have been validated and have then influenced national policy and legislative and regulatory reform. Several projects were found to have contributed to important biodiversity legislation; transformed core institutional and sector practices and led to measurable conservation impacts in forest cover, pasture and other biodiversity indicators.

Still, systematically quantifying the social and economic benefits of biodiversity mainstreaming is difficult, although the evaluation identified plausible cases in which the projects had generated such benefits. For example, in Colombia, coffee growers who adopted environmentally sound shade cultivation and agroforestry practices received better prices for their produce, which in turn resulted in higher incomes. Similarly, in India, the Sustainable Land Management in Shifting Cultivation Areas of Nagaland for Ecological and Livelihood Security project that the UNDP implemented benefited more than 3,000 women, whose income from sales of produce from the *jhum* cultivation system rose 25 per cent during the project period. In the project area, 78 per cent of surveyed farmers felt that their agricultural income had increased during the project period. Systematically quantifying such socioeconomic benefits will be a future priority.

## Conclusions

The close interdependence between the natural and human systems is recognized more widely than perhaps ever before. The COVID-19 pandemic has underscored that humans are not separate from the Earth's ecological system. The way we exploit and abuse the natural environment contributes significantly to the increasing occurrence of zoonotic pandemics as human activities encroach deeper into natural ecosystems and we come into closer contact with non-human animals. Evaluation can play an important role in uncovering evidence from past experiences and demonstrating the importance of maintaining ecosystem integrity and a stable climate, not only for the purposes of the environment, but also for human welfare and health (GEF IEO 2020c).

Still, as a community and a profession, evaluation is not yet in a place where it can effectively address sustainability. Evaluators struggle with coupled human and natural systems. We are still stuck in a project-centred mindset in which we tend to evaluate interventions in isolation against their internal logic, although there are clear signs that the situation is changing. The discussion about the need for systems approaches to evaluation has found its way to many conferences, listservs and communities of practice where evaluation is discussed. Many evaluators and evaluation users recognize the need, but the practice lags. The intervention focus dominates most of evaluation practice, largely driven by funders' demand for accountability. In a complex system in which attribution of specific changes to an individual intervention is difficult, such accountability focus can be counterproductive



and could be achieved through tools other than evaluation (e.g. performance audit). It is important for evaluators to place the evaluand into the context in which it operates and, specifically, in which it interacts with human and natural systems. This will require an open theory of change that pays attention to unanticipated consequences – to the environment; to different groups of people, especially the most vulnerable; to incentives and disincentives for sustainability – and whether the intervention makes a positive difference in the problem it was established to address.

Most development takes place at the nexus between nature and humanity. This relationship has been heightened as we have entered the Anthropocene, an era in which human impacts are so pervasive that they lead to significant modifications in the Earth's biosphere and geosphere. Although we seek win-win solutions in which people and the planet both benefit, these are not always easy to find. Evaluators must be clear on the choices and trade-offs that may be necessary. It is imperative for evaluators to remain relevant to rise to the challenge of evaluating as if both people and the environment mattered.

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## References

- Abimbola, S. 2020. Evidence as cliché: Using trials to tamper with governance. *CODESRIA Bulletin* 4: 9–15.
- Asokan, G.V., and V. Asokan. 2016. Bradford Hill's criteria, emerging zoonoses, and One Health. *Journal of Epidemiology and Global Health* 6: 125–129.
- Bennett, K. 2010. Additionality: The next step for ecosystem service markets. *Duke Environmental Law and Policy Forum* 20: 417–438
- Bierbaum, R., A.L. Cowie, R.O. Barra et al. 2018. Integration: To solve complex environmental problems. Washington, DC: Scientific and Technical Advisory Panel to the Global Environment Facility. <https://tinyurl.com/w9ddm9xe>
- Bours, D., C. McGinn and P. Pringle, eds. 2015. Monitoring and evaluation of climate change adaptation: A review of the landscape. *New Directions for Evaluation* 2015 (145).
- Buchner, B., A. Clark, A. Falconer et al. 2019. Global landscape of climate finance 2019. Climate Policy Initiative: London. <https://tinyurl.com/4hpvzx3>

- Burke, M., S. M. Hsiang and E. Miguel. 2015. Climate and conflict. *Annual Review of Economics* 7: 577–617.
- Caballos, G., P.R. Ehrlich and R. Dirzo. 2017. Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines. *Proceedings of the National Academy of Sciences*. [www.pnas.org/cgi/doi/10.1073/pnas.1704949114](http://www.pnas.org/cgi/doi/10.1073/pnas.1704949114)
- Feinstein, O. 2019. Dynamic evaluation for transformational change. In: *Evaluation for transformational change: Opportunities and challenges for the Sustainable Development Goals*, (eds.) R.D. van den Berg, C. Magro and S. Salinas Mulder, 17–31. Exeter, UK: IDEAS.
- Garcia, J. R., and A. Zazueta. 2015. Going beyond mixed methods to mixed approaches: A systems perspective to asking the right questions. *IDS Bulletin* 46 (1): 30–43.
- GCA (Global Center on Adaptation). 2019. Adapt now: A global call for leadership in climate resilience. Rotterdam and Washington, DC: Global Commission on Adaptation and World Resources Institute. <https://tinyurl.com/dybkdxyv>
- GCA (Global Center on Adaptation). 2021. The Global Commission on Adaptation. <https://gca.org/global-commission-on-adaptation/home>
- GEF (Global Environment Facility). 2007. Operational guidelines for the application of the incremental cost principle. <https://tinyurl.com/5cb7w2ek>
- GEF (Global Environment Facility). 2016. Time to adapt: Insights from the GEF's experience in adaptation to climate change. Washington, DC: GEF. <https://tinyurl.com/22pd2mzm>
- GEF EO (Global Environment Facility Evaluation Office). 2006. *The role of local benefits in global environmental programs*. Washington, DC: GEF EO. <https://www.gefio.org/evaluations/lb-global-environmental-programs-2006>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2018a. An evaluative approach to assessing GEF's additionality. <https://www.gefio.org/evaluations/additionality-framework>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2018b. Evaluation of the multiple benefits of GEF support through its multifocal area portfolio. Washington, DC: GEF IEO. <https://www.gefio.org/evaluations/multiple-benefits-2016>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2018c. *Impact of GEF support on national environmental laws and policies in selected countries*. Washington, DC: GEF IEO. <https://www.gefio.org/evaluations/regulatory-reform-2017>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2019. *Evaluation of GEF support to mainstreaming biodiversity*. Washington, DC: GEF IEO. <https://tinyurl.com/ywmcnufe>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2020a. *Strategic country cluster evaluation of the least developed countries*. Washington, DC: GEF IEO. <https://www.gefio.org/evaluations/scce-ldc>

- GEF IEO (Global Environment Facility Independent Evaluation Office). 2020b. *Strategic country cluster evaluation: Sahel and Sudan–Guinea savanna ecosystems*. Washington, DC: GEF IEO. <https://www.gefio.org/evaluations/scce-biomes>
- GEF IEO (Global Environment Facility Independent Evaluation Office). 2020c. *The GEF response to crisis: What can we learn from evaluations?* Washington, DC: GEF IEO. <https://www.gefio.org/sites/default/files/documents/ieo-covid-2020.pdf>
- Griggs, D.J., M. Nilsson, A. Stevance et al., eds. 2017. *A guide to SDG interaction: From science to implementation*. Paris: International Council for Science. <https://tinyurl.com/3h494t5d>
- IPCC (Intergovernmental Panel on Climate Change). 2018. Special report: Global warming of 1.5°C. <https://www.ipcc.ch/sr15/>
- Lech, M., J. I. Uitto, S. Harten et al. 2018. Improving international development evaluation through geospatial data and analysis. *International Journal of Geospatial and Environmental Research* 5 (2). <https://dc.uwm.edu/ijger/vol5/iss2/3/>.
- Magro, C., and R. D. van den Berg, 2019. Systems evaluations for transformational change: Challenges and opportunities. In: *Evaluation for transformational change: Opportunities and challenges for the Sustainable Development Goals*, (eds.) R. D. van den Berg, C. Magro and S. Salinas Mulder, 131–155. Exeter, UK: IDEAS.
- Ngii, D. 2020. The *Randomista* rampage in development economics: A view from the trenches. *CODESRIA Bulletin* 4: 3–7.
- Patton, M.Q. 2020a. Evaluation criteria for evaluating transformation: Implications for the coronavirus pandemic and the global climate emergency. *American Journal of Evaluation* 1–37. <https://doi.org/10.1177/1098214020933689>
- Patton, M.Q. 2020b. *Blue Marble Evaluation: Premises and principles*. New York: Guilford Press.
- Pelling, M. 2011. *Adaptation to climate change*. New York: Routledge.
- Reid, A. J., J. L. Brooks, L. Dolgova et al. 2017. Post-2015 Sustainable Development Goals still neglecting their environmental roots in the Anthropocene. *Environmental Science and Policy* 77: 179–184.
- Ripple, W.J., and R. L. Beschta, 2012. Trophic cascades in Yellowstone: The first 15 years after wolf reintroduction. *Biological Conservation* 145 (1): 205–213.
- Rowe, A. 2012. Evaluation of natural resource interventions. *American Journal of Evaluation* 33 (3): 384–394.
- Rowe, A. 2019. Sustainability-ready evaluation: A call to action. In: *Evaluating sustainability: Evaluative support for managing processes in the public interest*. *New directions for evaluation*, (ed.) G. Julnes, 162: 29–48. San Francisco: Jossey-Bass.
- Royal Swedish Academy of Sciences. 2019. Press release: The prize in economic sciences 2019. <https://tinyurl.com/2a3cn252>

- Runfola, D., G. Batra, A. Anand et al. 2020. Exploring the socioeconomic co-benefits of global environment facility projects in Uganda using a quasi-experimental geospatial interpolation (QGI) approach. *Sustainability*. <https://www.mdpi.com/2071-1050/12/8/3225>
- Sidman, G., G. Batra and S. Fuhrig. 2020. The use of remote sensing analysis for evaluating the impact of development projects in the Yellow Sea large marine ecosystem. *Sustainability*. <https://www.mdpi.com/2071-1050/12/9/3628>
- Uitto, J.I. 2016. The environment-poverty nexus in evaluation: Implications for the Sustainable Development Goals. *Global Policy* 7 (3): 441–447.
- UN DESA (United Nations Department of Economic and Social Affairs). n.d. Transforming our world: The 2030 Agenda for Sustainable Development. <https://sustainabledevelopment.un.org/post2015/transformingourworld>
- UNEG (United Nations Evaluation Group). 2016. Norms and standards for evaluation (2016). <http://www.unevaluation.org/document/detail/1914>
- UNEP (United Nations Environment Programme). 2010. Decision adopted by the Conference of the Parties to the Convention on Biological Diversity at its tenth meeting. <https://www.cbd.int/doc/decisions/cop-10/cop-10-dec-02-en.pdf>
- UNEP (United Nations Environment Programme). 2016. Frontier 2016: Emerging issues of environmental concern. Nairobi: UNEP. <https://tinyurl.com/c98afr4b>
- UNFCCC (United Nations Framework Convention on Climate Change). 2021. The Paris Agreement. <https://tinyurl.com/3twkkcnd>
- United Nations. 2018. Secretary-General's remarks on climate change [as delivered]. <https://tinyurl.com/44kcv69k>
- Valatin, G. 2012. Additionality and climate change mitigation by the UK forest sector. *Forestry* 85 (4): 445–462. <https://academic.oup.com/forestry/article/85/4/445/519175>
- Van den Berg, R. D., and L. Cando-Noordhuizen. 2017. Action on climate change: What does it mean and where does it lead to? In: *Evaluating Climate Change Action for Sustainable Development*, (eds.) J.I. Uitto, J. Puri and R. D. van den Berg, 13–34. Dordrecht: Springer. [https://link.springer.com/chapter/10.1007/978-3-319-43702-6\\_2](https://link.springer.com/chapter/10.1007/978-3-319-43702-6_2)
- Van den Berg, R. D., and O. Feinstein (eds.). 2009. *Evaluating climate change and development*. London and New York: Routledge.
- Vladimirova, K., and D. Le Blanc. 2015. How well are the links between education and other Sustainable Development Goals covered in UN flagship reports? A contribution to the study of the science-policy interface on education in the UN system. DESA Working Paper No. 146. UN DESA. [https://www.un.org/esa/desa/papers/2015/wp146\\_2015.pdf](https://www.un.org/esa/desa/papers/2015/wp146_2015.pdf)

The COVID-19 pandemic has demonstrated the enormous challenges humanity is facing. It has been facilitated by other crises as climate change, biodiversity loss, economic exploitation, and increased inequity and inequality. The UN Agenda 2030 and the Paris Agreement on climate change call for transformational change of our societies, our economies and our interaction with the environment. Evaluation is tasked to bring rigorous evidence to support transformation at all levels, from local to global. This book explores how the future of the evaluation profession can take shape in 18 chapters from authors from all over the world, from North and South, East and West, and from Indigenous and Decolonized voices to integrative perspectives for a truly sustainable future. It builds on what was discussed at the IDEAS Global Assembly in October 2019 in Prague and follows through by opening trajectories towards supporting transformation aimed at solving the global crises of our times.

*By combining practical experiences with perspectives drawn from new initiatives, this book offers invaluable insights into how evaluation can be transformed to support transformational change on the global stage.*

Indran A. Naidoo, Director of the Office of Independent Evaluation of IFAD

*Across continents, educational systems, and historical complexities, this book builds up the language we all should speak about our field. A mandatory read for all young evaluators.*

Weronika Felcis, Board member of EES and Secretary of IOCE

*After reading these chapters you will have a sharper look at what is relevant when managing or doing an evaluation, and you will notice that 'business as usual' will no longer be an option.*

Janett Salvador, Co-founder of ACEVAL, Former Treasurer of ReLAC

*This book offers original, visionary discourse and critical perspectives on the challenges evaluation is facing in the post COVID-19 pandemic era.*

Doha Abdelhamid, Member of the Egyptian Academy of Scientific Research and Technology

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