

5. Sustainable Development Evaluation: Is the Environment Being Left Behind?

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INTRODUCTION

The Sustainable Development Goals (SDGs) stand upon three pillars: the social, economic, and environmental. Like a three-legged stool, the construct will collapse should any one of the pillars break. Integration is a key to the SDGs.¹¹⁶ Yet, it appears that the environmental dimension of sustainable development is receiving far less attention in the international development discourse than the two others.¹¹⁷ The same goes for development evaluation. There has been a shift away from an exclusive focus on economic growth, as it has become clear that mere growth in gross domestic product does not by any means guarantee better development outcomes, let alone sustainability. There is now a renewed focus on inclusive and equitable development that is aimed at reducing disparities in society when it comes to different groups. Development evaluation has actively contributed to the discourse through equity-focused evaluation that embraces gender and human rights perspectives. These are positive developments.

Despite its fundamental importance, the environmental pillar has been relatively ignored both in the development discourse as well as in evaluation. In fact, a better analogy than the three-legged stool is a three-layered cake in which the natural environment forms the bottom layer upon which the social and economic layers lay. Of the 17 SDGs, only some are directly environmental, including Goals 6 (clean water), 7 (clean energy), 11 (sustainable cities), 13 (climate action), 14 (life below water) and 15 (life on land). However, most others are dependent on the natural environment for their fulfilment, including Goals 1 (no poverty), 2 (zero hunger) and 3 (good health). Similarly, Goal 5 relating to gender has a strong environmental dimension.

Should the bottom layer break, the upper layers will necessarily collapse. All human endeavour is dependent on the natural environment, although it is easy to miss the connection in our daily lives which have become increasingly urbanized and dominated by technology. Still the fundamentals of life—food, water, the air that we breathe—are provided by the

116 Stafford-Smith, M., D. Griggs, O. Gaffney, F. Ullah, B. Reyers, N. Kanie, B. Stigson, P. Shrivastava, M. Leach and D. O'Connell, 'Integration: the key to implementing the Sustainable Development Goals,' *Sustainability Science*, doi: 10.1007/s11625-016-0383-3, 2016.

117 Reid, A.J., J.L. Brooks, L. Dolgova, B. Laurich, B.G. Sullivan, P. Szekeres, S.L.R. Wood, J.R. Bennette and S.J. Cooke, 'Post-2015 Sustainable Development Goals still neglecting their environmental roots in the Anthropocene,' *Environmental Science and Policy* 77: 179-184, 2017.

natural environment. Furthermore, ecosystem services stretch much further and are not even fully understood. Environmental economics has emerged as a field that is receiving increased attention. However, although quantifying the economic value of the services that nature provides is illustrative in a world where everything tends to get measured in monetary terms, it is important to bear in mind that in most cases other forms of capital cannot substitute for natural capital that is being destroyed. It can also be convincingly argued that nature—both living and inanimate—has intrinsic value that goes beyond its instrumental value to humans.¹¹⁸

In this paper, I argue that we ignore environmental degradation at our own peril. As a central function for understanding what works, for whom and under what circumstances, and for improving the design and performance of our policies, strategies and programmes towards sustainable development, evaluation carries a responsibility to fully incorporate the environmental dimension into our analysis.

TRENDS IN THE GLOBAL ENVIRONMENT

Human-driven climate change has emerged as a defining theme for our time. As important as it is for the future of humankind, climate change in recent years has largely overshadowed other critical environmental issues. It is also easy to conclude that economic development automatically leads to a better environment: after all, cities in rich countries tend to be cleaner than in poorer countries. While local environment often does get cleaner—and this is not always the case, as the massive health-threatening air pollution in rapidly developing cities such as Beijing and Delhi starkly demonstrates—the global environmental trends still mostly point downwards.

An analytical framework developed with the leadership of the Stockholm Resilience Centre identifies “planetary boundaries” defining a safe operating space for humanity within the limits of the Earth system.¹¹⁹ The analysis suggests that the three of the nine interlinked planetary boundaries have already been breached: (1) biodiversity loss; (2) climate change; and (3) human interference with the nitrogen cycle. Critically, what has been termed the “sixth extinction” is leading to huge population declines and species loss with irreversible consequences for ecosystem functions and services.¹²⁰ All of this may lead to catastrophic consequences for humanity.

The driving forces of all of these ecological stresses are directly related to human activities. A fundamental factor is the growing human population. According to United Nations projections, the population on Earth is expected to reach 9.8 billion by 2050, up from the

118 Washington, H., B. Taylor, H. Kopnina, P. Cryer and J.J. Piccolo, ‘Why ecocentrism is the key pathway to sustainability’, *The Ecological Citizen* 1: 35-4, 2017.

119 Rockström, Johan, ‘A safe operating space for humanity’, *Nature*, Vol. 461 (24 September 2009), pp. 472-475.

120 Caballos, G., P.R. Ehrlich and R. Dirzo, ‘Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines’, *Proceedings of the National Academy of Sciences* 114(30): doi: 10.1073/pnas.1704949114, 2017.

current 7.6 billion.¹²¹ Most of this growth takes place in areas with the least capacity to cope with it and which are already facing major stresses on water, land and other natural resources. Environmental stress can already be seen as a driver behind migration and refugee flows. In addition, consumption is a fundamental driver of environmental degradation and depletion of natural resources. As people and countries get richer, their consumption levels will inevitably go up. Three quarters of tropical deforestation is caused by the production of three commodities in great demand: soy beans, beef and palm oil.¹²² Virtually all oceanic fisheries are overfished, leading to reduced yields and utilization of less desirable species. Climate change adds stresses to all of these sectors and increased energy use associated with economic development leads to increased greenhouse gas emissions, barring a rapid and profound shift in energy production, which does not seem likely.

Despite the increased international attention, public funding for environmental conservation remains meager, estimated at some \$10 billion per year. In contrast, governments spend about \$1 trillion on subsidies that lead to overexploitation and unsustainable use of natural resources.¹²³ Given the scarcity of funding, it is of utmost importance that the interventions are relevant and carefully targeted, are effective in reaching their impacts, are sustainable and provide value for money in a cost-efficient way. Evaluation must play a key role in information policymaking, intervention strategy, design and implementation.

IMPLICATIONS FOR EVALUATION

Effectively incorporating the environmental dimension into sustainable development evaluation poses certain challenges and requires the adjustment of approaches and methodologies. There are specific issues that must be tackled, such as differing geographic and time scales.¹²⁴ Environmental phenomena often do not adhere to political units, as watersheds and ecosystems cross borders and pollution flows without consideration to administrative boundaries. Moreover, the time scales are often incompatible. Environmental changes take long to materialize, while projects typically span over a period of only a few years. A recent evaluation we at the Independent Evaluation Office (IEO)¹²⁵ of the Global Environment Facility (GEF) conducted on land degradation projects found that the on-the-ground environ-

121 <https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html>.

122 Brack, D., A. Glover and L. Wellesley, 'Agricultural Commodity Supply Chains: Trade, Consumption and Deforestation', Research Paper, Chatham House, The Royal Institute of International Affairs, London, 2016.

123 GEF IEO, 'Fifth Overall Performance Study of the GEF. Final Report: At the Crossroads for Higher Impact', Global Environment Facility Independent Evaluation Office, Washington, DC, 2014.

124 Bruyninckx, H., 'Environmental evaluation practices and the issue of scale', in: Matthew Birnbaum and Per Mickwitz (eds.), *Environmental Program and Policy Evaluation: Addressing Methodological Challenges. New Directions for Evaluation* 122: 31-39, 2009, and Hildén, Mikael, 'Time horizons in evaluating environmental policies. In: Matthew Birnbaum and Per Mickwitz (eds.), *Environmental Program and Policy Evaluation: Addressing Methodological Challenges. New Directions for Evaluation* 122: 9-18, 2009.

125 <http://www.gefio.org>.

mental impacts typically only become visible between 4.5 and 5.5 years after the project is complete.¹²⁶

No intervention takes place in a vacuum and every intervention interacts in a complex dynamic system that changes over time. Evaluation design must therefore start with understanding the broader system in which an intervention is located.¹²⁷ It is not sufficient for an evaluation to focus solely on an intervention in isolation. Therefore, static logic models do not adequately allow for evaluations to take into account the dynamic nature of the system in which the intervention operates, account for its interplay with other actors and the external environment, which itself changes over time, and to identify unintended consequences. Theory-based evaluation is still very useful, but the theories must encompass the broader system, take into account the specificities of the geographical scales and time horizons and incorporate the dynamic nature of such systems. Climate change in particular has introduced elements of uncertainty and risk into systems. There may be feedback loops, discontinuities and tipping points that are unexpected and that disrupt linear change. Evaluation in coupled natural and human systems may require constructing a dual evaluand that distinguishes between the speed of change in the different systems.¹²⁸

A number of evaluations conducted by the IEO attempted to systematically address the effectiveness, results and impact of the GEF in the nexus between the environment and human and societal factors.¹²⁹ In this work we explored new approaches and methods, such as using remote sensing and geospatial methods to measure environmental outcomes on biodiversity conservation, land degradation and international waters. It was found that these methods provide reliable and cost-effective tools for measuring baseline information, detecting changes in environmental conditions over time and tracking progress towards achieving the targets of projects and programmes.

An evaluation of the multiple benefits of GEF support assessed the portfolio focusing on multifocal area projects, mostly targeting results in land degradation, biodiversity conservation, sustainable forest management and climate change and carbon sequestration.¹³⁰ In addition to the global environmental benefits that are the focus of GEF programming, the projects also targeted local environmental and socioeconomic benefits that indirectly generate and sustain the global benefits. Using a mixed methods approach, the evaluation found that the projects have the potential to create synergies for focal area mainstreaming and institutional learning. The evaluation also highlighted that the trade-offs from increasing

126 GEF IEO, 'Land Degradation Focal Area Study', Global Environment Facility Independent Evaluation Office, Washington, DC, 2017.

127 Garcia, J.R. and A. Zazueta, 'Going beyond mixed methods to mixed approaches: a systems perspective for asking the right questions', *IDS Bulletin* 46 (1): 30–43, 2015.

128 Rowe, A., 'Evaluation of natural resource interventions', *American Journal of Evaluation* 33(3): 383–392, 2012.

129 Uitto, J.I., 'The environment-poverty nexus in evaluation: implications for the Sustainable Development Goals', *Global Policy* 7(3): 441–447, 2016.

130 GEF IEO, 'Evaluation of the Multiple Benefits of GEF Support through Its Multifocal Area Portfolio', Global Environment Facility Independent Evaluation Office, Washington, DC, 2017.

integration need to be addressed and include the increase in number of stakeholders who need to be consulted and coordinated with at different levels, and whose interests need to be reconciled.

Evaluating GEF work on international waters¹³¹ produced a case study of the Facility's long-term engagement with the Lake Victoria basin, which again clearly highlighted the challenges of dealing with a large transboundary ecosystem. While the lake (the second largest in the world) is directly bordered by three countries—Kenya, Uganda and United Republic of Tanzania—it became evident that to effectively address the pollution and eutrophication problems, one needed to include the upstream countries of Burundi and Rwanda in the programme. Recognizing the time horizon was another important conclusion: it took three consecutive projects and more than a decade before actual environmental status improvements could be detected. These cases demonstrate the need to deal explicitly with the differing time and geographical scales between natural and human systems.

CONCLUSION

Sustainable development evaluation requires taking a holistic view. In the first place, this implies the need to take into account the social, economic and environmental dimensions of sustainability. At the very least, every evaluation should carefully assess the environmental impacts of the intervention being evaluated. Just doing this would oftentimes lead to different assessments of the costs, benefits and sustainability of the intervention. However, it is important to move beyond the “do no harm” approach to proactively evaluate interventions on the criteria of whether they will provide environmental benefits and advance sustainability.

Secondly, the holistic look requires scoping the evaluation so that it does not look at an intervention in isolation, but rather as part of a complex adaptive system, recognizing that any intervention takes place in a broader and dynamic environment. Risk and uncertainty need to be built into evaluations and their logic models. Similarly, every evaluation must assess unintended and unforeseen consequences that the intervention will produce.

To achieve the above will require evaluation capacity development at different levels. Not only do evaluators have to be sensitized to the need for assuming a holistic perspective, they will need to adequately understand the dynamics of natural systems so that they are competent to incorporate the environmental perspectives into evaluations. This may often imply engaging a team rather than relying on a single evaluator. Equally importantly, the users and commissioners of evaluation must understand these needs. In cases where the evaluation function is not independent enough to set the parameters for evaluation, commissioners of evaluation must have the vision to scope the evaluation in broad enough a manner to place the evaluand in a wider system and to identify factors, risks and unintended consequences beyond the internal intervention logic.

131 GEF IEO, 'International Waters Focal Area Study,' Global Environment Facility Independent Evaluation Office, Washington, DC, 2016.