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Evaluating Environment in International Development (2nd ed.)

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Introduction

How effective are governments, aid agencies, and civil society organizations in addressing pressing environmental issues? Is evaluation equipped to help decision makers identify, design, implement, and track sustainable development interventions? Can it help accelerate progress towards the objectives of the 2030 Agenda for Sustainable Development?

These are among the questions evoked by *Evaluating Environment in International Development*, edited by Juha I. Uitto, Director of the Independent Evaluation Office of the Global Environment Facility (GEF). Informed by the findings of recent climate research, the second edition of this landmark open access publication brings together sixteen essays contributed by eminent development evaluation thinkers and practitioners.

Why a New Edition?

A lot has happened since 2014, when the first edition of *Evaluating Environment in International Development* was published. In 2015, the international development community endorsed the Sustainable Development Goals and the UN Sendai Framework for Disaster Risk Reduction (2015-2030). In parallel, the Year of Evaluation culminated in the historic adoption of a Global Evaluation Agenda that visualized a world when evaluation has become an integral part of all governments, civil society, and private sector development efforts.

In the following year, following decades of denial and evasion, the Paris Agreement committed all parties to the UN Framework Convention on Climate Change to limit global warming below 2°C above pre-industrial levels while pursuing efforts to limit the temperature increase to 1.5°C. But neither the Paris undertakings nor the Sustainable Development Goals are binding, and it is by now clear that policy progress has gone off track. Indeed, even before the COVID-19 pandemic had struck, the United Nations had abandoned the overarching goal of absolute poverty eradication by 2030 and it estimated that 6% of the world population would remain stuck below the absolute poverty line by that date. This may be optimistic: the Covid-19 recession has pushed back an additional 70-100 million people into poverty.

More than half of the global population still lacks access to essential health services; reductions in infant and maternal mortality rates have stalled; and youth unemployment is soaring: one out of six young people have lost their jobs. On the climate front, governments have failed to take credible action to reverse the catastrophic trend of rising carbon emissions.

Thus, as a result, of inadequate international action, an existential disaster is taking place in slow motion. Food security and equitable development cannot be reached without addressing climate change. Sustained inclusive growth implies the protection of biodiversity. Human welfare depends on the protection of ecosystems. As highlighted in Michael Quinn Patton's inspiring foreword to *Evaluating Environment in International Development*, the environment is "at the nexus of humanity's future".

The Conceptual Framework

The first section of the book highlights the need for a policy breakthrough at the intersection of international cooperation and environmentally sustainable development. Four chapters describe the relentless destruction of human habitats and the health risks caused by unchecked population growth and low-quality, inequitable development. They highlight the importance of ecosystem services for human well-being, establish that pandemics are environmental crises, and highlight the untapped potential of evaluation to contribute to social and environmental sustainability.

In Chapter 1, Juha I. Uitto sets the scene. He relates excess mortality to environmental damage and air pollution. He shows that drastic social inequalities hinder sustainable development. He probes the links between societal values and development metrics; addresses the limitations of prevailing evaluation approaches; recognizes the pervasive neglect of natural and physical sciences by evaluators; and encourages greater reliance on systems thinking and complexity theory.

Chapter 2 authored by Rob D. van den Berg, former President of the International Development Association (IDEAS), aptly describes the environmental crisis as a massive market failure. It illuminates the catastrophic consequences of the dominant neo-liberal policies that underlie the looming climate disaster. Absent regulation, trade-offs between short run private interests and the welfare of future generations cannot be avoided.

In Chapter 3, Andy Rowe, former President of the Canadian Evaluation Society (CES), highlights the inconvenient fact that human and natural systems often stand opposed to each other. He observes that in contrast to indigenous evaluation, development evaluation is not 'sustainability ready'. Many evaluation practitioners still claim human dominion over nature, ignore the looming threat of extinction, and through their siloed evaluations contribute to fragmentation of the development agenda.

By contrast, Hazel and David Todd put social anthropology and disaster management expertise to work in Chapter 4. They advocate development interventions focused on community resilience, and they sketch a 'nested' theory of change that takes explicit account of the close linkages and feedbacks connecting projects, programs, and the enabling policy context. They show that it is the poor who most suffer from the effects of climate change.

Lessons of Evaluation Experience

Novel evaluation approaches that illuminate good practices at the frontier of development evaluation are presented in the second section of the book. It signals that evaluation functions in international development agencies have begun to reconsider development evaluation objects, metrics, methods, and practices.

Objects

Impact evaluation of complex eco-systems interventions within the South China Sea is addressed in Chapter 6 authored by Aaron E. Zazueta and Jeneen R. Garcia. It describes the difficulties associated with evaluative approaches designed to isolate the contribution to observed changes of a single actor (the Global Environment Facility) in dynamic contexts.

In Chapter 9, Segbedzi Norgbey and Michael Spilsbury show that the evaluation tool kit used to evaluate operational activities is serviceable for evaluations the United Nations Environment Program's normative work. They show that, beyond projects, environmental norm setting activities

conceived as development interventions help counteract silo thinking and reduce the fragmentation of global governance frameworks.

Along similar lines, Vijayalakshmi Vadivelu's overview of UNDP's disaster risk reduction capacity building interventions in 27 countries (Chapter 15) stresses the role of the enabling institutional environment in achieving coherence between long term development and disaster risk responses. A focus on resilience at community level emerges as a promising approach.

Conversely, Chapter 16 by Roberto La Rovere describes the upstream shift of Consultative Group on International Agricultural Research's evaluation work from individual projects to clusters of research interventions in pursuit of improved country level assessments of research impact on the economy, the society, and the environment.

Metrics

In Chapter 5, Anupam Anand and Geeta Batra show how the Global Environment Facility has used remote sensing indicators in its evaluations of biodiversity, land degradation and climate change. It confirms that objective indicators drawn from geospatial methods are increasingly used, e.g., to track desertification.

The field-based Review of Outcomes to Impacts (ROtI) methodology developed and practiced by the GEF Independent Evaluation Office focuses on the secondary and indirect effects of development interventions through the judicious use of indicators is illustrated in Chapter 7, a case study of the Seychelles Marine Ecosystem Management Project authored by David Todd and Rob Craig.

In its account of a meta-evaluation of GEF small grant interventions around the world, Chapter 12, authored by Sulan Chen and Juha I. Uitto, demonstrates that project level social, economic, political, and environmental indicators, can be aggregated within a comprehensive evaluation framework to better track sustainable development outcomes and measure impacts.

Methods

Anupam Anand and Geeta Batra's Chapter 5 highlights the analytic advantages of Big Data for evaluation (huge volume, high velocity, and high variety). It can also help to visualize baselines, outputs, and impacts of development interventions; identify patterns in the elaboration of theories of change and adjudicate among alternative causality hypotheses.

In Chapter 8, Christine Wörlen shifts the focus of evaluative analysis to the relationships between climate mitigation interventions and the overall policy and institutional context. Her innovative 'theory of no change' method illustrates that sins of omission in policy design can be more consequential than sins of commission by pinpointing major policy gaps in the actions required to create a market for sustainable energy products and services.

Four case studies (Barbados, Brazil, Costa Rica, and Ecuador) summarised in Chapter 13 measure trade-offs between economic growth, social equity, and environmental sustainability objectives. Beyond project level considerations, its authors (Ronal Gainza and Simon Lobach) use a credible analytic framework to illuminate the role of initial conditions and regulatory policy contexts in the promotion of a green economy.

Practices

The critical need for coherence, synergy, and harmonization in pursuit of the Sustainable Development Goals is the theme evoked by Carlo Carugi and Heather Bryant. Chapter 10 suggests that joint evaluations, despite their high transaction costs, can substantially improve the quality of environmental evaluations.

Chapter 11 by late Michael Stocking zeroes in on the challenges of evaluations at the intersection of poverty and environmental degradation. Four country cases (Mali, Morocco, Rwanda, Tanzania) highlights the knowledge limitations and organizational constraints that the United Nations Development Program faces in addressing and evaluating trade-offs between poverty

reduction and environmental protection interventions.

In Chapter 14, Alan Fox presents a meta-evaluation of five GEF cross-border aquifer management projects that identify the fiscal and regulatory obstacles faced in implementation of evaluation recommendations given the limited capacities of transboundary commissions in inducing conservation and protection measures at national and local levels.

The Case for Policy Transformation

Taken together, the two sections of *Evaluating Environment in International Development* demonstrate that economic growth has not always been compatible with the preservation of the natural resource base. Yet, governments in rich and poor countries alike have proceeded on the assumption that economic growth is the key to poverty reduction even though their stubborn reliance on energy intensive policies has unleashed destructive climate change and irreversible biodiversity extinction.

In 2020, the Earth's temperature tied with 2016 as the warmest year on record and the prevailing trends indicated that global temperatures would rise by up to 3.2°C by 2100. Disappearance of animal and plant species is taking place 100 times faster than it would without human impact. Thus, the golden thread that ties the book together is the notion that the time for a fundamental transformation of the dominant development paradigm has arrived.

Historical evidence shows that significant reductions in natural resource use only occur in economic recessions. Indeed, Covid-19 and its associated lockdowns have offered a respite (a 6% drop in greenhouse gas emissions) but it is less than the 7.6% annual reduction envisaged under the Paris agreement, emissions are rising again, and the vigorous economic recovery hailed from the commanding heights of the global economy presages a reversion to the pre-Covid trend of catastrophically rising temperatures.

This will translate into a continued rise in the frequency and severity of natural disasters – wildfires, hurricanes, droughts, floods, rising sea levels, reduced water availability, species extinction, etc. In tropical regions, climate change will induce weed and pest proliferation, reduce agricultural yields, increase hunger, and induce large-scale migration. In parallel, the devastation of forests as well as the global rise in meat consumption will make diseases leaping from animals to humans more likely.

In sum, the rationale for *Evaluating Environment in International Development* lies in a simple proposition: climate change is a development issue. Developing countries bear over four fifths of climate change negative social consequences[1]. In pursuit of rising living standards, they have replicated rich countries' dependence on carbon intensive growth policies. As a result, they are already generating well over 60% of global emissions[2]. They have become highly reliant on global supply chains that increase their carbon footprints while rich countries that are driving the globalization process outsource their industrial production to the periphery.

Hence, protecting the planet is a universal enterprise. Unfortunately, most nations have substituted pious promises for the substantive reforms needed to implement net zero emissions policies. The heavy reliance on energy-intensive growth is turning sustainable development into an oxymoron: current development strategies are depleting natural resources at an extraordinary rate, and as the global pandemic has demonstrated, unregulated connections among countries threaten human security.

[1] Climate change is driven by the consumption patterns of rich countries. The world's richest 10% of people emit half of the world's carbon emissions. The average person in the UK emits 65 times more carbon than a Malawi citizen.

[2] High income countries (1.2 billion people) emitted 38% of global emissions in 2016 while upper-middle countries (2.6 billion people) accounted for 48%; lower-middle income countries (3 billion people) for 13%; and low-income countries (0.7 billion people) for 0.5%.

The Implications for Evaluation

Given these dour realities, the second edition of *Evaluating Environment in International Development* offers a ray of hope: the poverty-environment nexus has begun to be probed by evaluation researchers and the evaluation practitioners of several UN agencies. This is a welcome development since regular reporting on progress towards the SDGs and the Paris agreement is mandatory so that, beyond monitoring, evaluation has been given an opportunity to play a distinct role in shaping public policy.

Methods dominate the book narrative. They are deployed with considerable skill throughout the book although surprisingly little attention is devoted to the complexity sciences, systems thinking, or the causality revolution triggered by Big Data and powerful computers (Judea Pearl and Dana McKenzie, 2018). On the other hand, the book demonstrates conclusively that the existing evaluation tool kit can be used to excellent effect. Refreshingly, it highlights the potential of the goal-oriented evaluation criteria endorsed by aid donors in a variety of contexts while also highlighting their significant limitations.

Current development evaluation practice is dominated by theory of change models. They privilege goal achievement and ignore the centrality of the environmental side effects that characterize growth-oriented development interventions. There is no mystery about the hard decisions needed to stop the warming and minimize the misery it is inflicting on humanity (Bill Gates, 2021). Missing are the policy actions required to get emissions down from 51 billion tons of greenhouse gases a year to zero.

This is where Christine Wörlen's "theory of no change" comes into its own (Chapter 8). Rather than focusing on the validity of the theories of change embedded in development interventions sponsored by power holders, it focuses on the significance of their overarching goals relative to what needs to be done. This evaluative approach is aligned with the 'dynamic evaluation' concept promoted by Osvaldo Feinstein in the second chapter of the IDEAS Evaluation for Transformational Change book (Rob D. van den Berg, et.al., 2019) that stresses the need for a paradigm shift in evaluation.

But are the approaches displayed in *Evaluating Environment in International Development* a harbinger of decisive shifts in development evaluation practice? Does it signal a paradigm shift? In the sobering Chapter 7 of the 2019 IDEAS publication (Rob D. van den Berg, et.al., op. cit.), Juha I. Uitto et.al. draw on international environmental funds experience.[3] They use the methodology of the World Bank's Independent Evaluation Group (2016) to ascertain whether their evaluations are truly transformational (see Table 1).

Table 1
Major Dimensions of Transformational Change

Dimension	Description
Relevance	Addresses a major sustainable development challenge in a significant way
Depth	Causes or supports fundamental changes in policy, systems, markets, etc. geared to achieving sustainable development, (e.g., addressing the root causes of climate change).
Scale	Causes large-scale impact at the national or global level
Sustainability	Evidence of long-run, positive economic, social, and environmental results

[3] A follow up IDEAS publication, (Rob van den Berg, et. al., eds., in press), highlights the complementary need for evaluation professionalization and the enabling environment for evaluation reforms that they imply.

Using the same perspective, the portfolio of good practices included in *Evaluating Environment in International Development, Second Edition* offers a decidedly mixed picture. Revealingly, the book does not include any essay authored by evaluators employed by major aid donors, multilateral development banks, impact investors, etc. This is not surprising. Climate change has yet to come to the center stage of development cooperation[4]. Given that global warming is a 'public bad' largely attributable to rich countries' policies, climate finance has been dogged by controversy about who should pay for its mitigation and for the adaptation costs overwhelmingly borne by poor countries.

Political pressure for making compensatory finance 'new and additional' to official aid has dominated the international debate so that climate finance has mostly been segregated from the official development assistance operations funded (and evaluated) by aid donors. As a result, given the development effectiveness imperative of country ownership, the evaluation functions of development agencies have internalized the policy priorities of aid recipients and evaluation for the transformational changes needed to avoid a climate disaster has been largely relegated to the international environmental funds.

It follows that development evaluation has yet to have a deep, large, and systematic impact on climate change and the other "problems without passport" of the closely interconnected and politically fragmented global system. The relevance of most evaluations described in the book under review is limited to an intervention, a country, a region, or an organization. In terms of depth and scale, there is a wide and palpable gap between the ambitions laid out in the first section and the modest formative impacts described in the second section of the book. No evidence of beneficial long-run benefits attributable to any of the evaluations is offered.

To be fair, the editor makes no claim that the book is transformational. Its editor only evinces the hope that the essays included in the publication "will make a useful and interesting contribution to how to better utilize evaluation for achieving development that is more sustainable for people, the planet and prosperity" (Chapter 1, p. 20). The book does so with great clarity and commendable modesty, and it should be compulsory reading, especially for young and emerging development evaluators.

References

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[4] A turnaround may be in the offing following the World Bank's March 2021 announcement of a Climate Change Action Plan: it lays out new and ambitious targets for climate finance and enhanced priority to clean- energy transition in development operations. See: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/755721468011421594/world-bank-group-climate-change-action-plan-2016-2020.