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# Transformational Change: The Challenge of a Brave New World

Independent Evaluation Unit, Learning Paper No. 1, 2018



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Transformational Change:  
The Challenge of a Brave New World,  
Independent Evaluation Unit,  
Learning Paper No. 1, 2018

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## About this IEU Learning Paper

This paper examines how and if transformational change can be defined and measured. It examines and discusses efforts by international organizations to undertake these measurements and explores potential ways forward.

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## ABSTRACT

Most multilateral development agencies aim for change that is ‘transformational’ or that shifts the ‘paradigm’. In many ways transformation has become the holy grail in development assistance, with most development and environmental aid agencies aspiring to deliver transformational change. Despite this, definitions for what constitutes transformational change remain elusive. Consequently, there is nearly a complete absence of evidence on whether transformational change has been achieved.

What is transformational change? Can we define it? Can we measure it? If a transformational change occurred, would we notice it? This paper looks at several instances where attempts have been made to define and measure transformational change. It then discusses if these instances were defined as having caused transformational change and explores potential ways to measure this change. The paper claims technologies and methods are now available that could help us better understand what transformational change may encompass. However, understanding and developing strategies related to transformational change will require concerted thinking on this topic, a devolution of measurement capacities and a wider recognition of technologies and techniques as well as cross-systems thinking.

## ABBREVIATIONS

ARPA	Amazon Protected Areas Program-Phase I
CIF	Climate Investment Fund
CPIA	Country Policy and Institutional Assessment
CRESP	China Renewable Energy Scale-up Program-Phase I
FAO	Food and Agriculture Organisation
GCF	Green Climate Fund
GEF	Global Environment Facility
IDB	Inter-American Development Bank
IEG	Independent Evaluation Group
IEU	Independent Evaluation Unit
IFAD	International Fund for Agriculture Development
LA	Lighting Africa
MEAs	Multilateral environmental conventions
PAS	Protected Area Systems
PCRs	Project Completion Reports
PES	Payments for Environmental Services
PRS	Poverty Reduction Strategy
QCA	Qualitative comparative analysis
REDD	Reduced emissions from deforestation and forest degradation
SDGs	Sustainable Development Goals
SLEM-U	Sustainable Land, Water, and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand
UKCIP	UK Climate Impacts Programme
UWEP	Uruguay Wind Energy Programme
WB	World Bank

## I. INTRODUCTION AND OBJECTIVES

What is transformational change? Can we define it? Can we measure it? Will we know a transformational change when it occurs? In the book *Soonish* (Weinersmith and Weinersmith, 2017), the authors discuss transformational technologies: Ideas such as asteroid mining and cable cars that run up into space require technologies whose times have not yet come, but represent important ways in which the world's existing woes – including the problem of resource constraints – may be solved. Most multilateral development agencies aim for change that is 'transformational' or that shifts the 'paradigm'. Arguably, transformational change has become the holy grail in development assistance. Most development and environmental aid agencies aspire to provide transformational change, referring in turn, at least in spirit if not in letter, to something that will change the way our work is done or the way we think about the impact of our work (Levine and Savedoff, 2015). Despite this, definitions for what constitutes transformational change remain elusive, meaning the near absence of evidence on whether transformational change has been achieved. In this paper we discuss some experiences in which the defining and measuring of transformational change took place. We then discuss whether or not these instances were defined as having brought such a change, and explore potential ways in which measurement may occur.

The idea of transformational change or paradigm shift has been around since Thomas Kuhn's classic work on scientific revolutions (*The Structure of Scientific Revolutions*, 1962), in which he refers to paradigm shifts. An example of a transformational change or one exhibiting a paradigm shift was the discovery of a heliocentric universe and the subsequent move away from the geocentric model. However, the change toward a view of the universe where the sun lies at or near a central point did not occur suddenly. The prevailing paradigm until the 1600s was Ptolemy's view that the earth lay at the centre. A change occurred when Copernicus first wrote about it in 1543 in *De Revolutionibus Orbium*, but the world did not adopt this new way of thinking. A shift in the prevailing paradigm only began when the world had accumulated data that could not be explained (or 'anomalies') and had the technology to verify such phenomena. It wasn't until the early 1600s that Galileo was able to construct a telescope that could help verify the Earth indeed moved around the sun. Until then, there had been many inexplicable phenomena such as the various phases of Venus. Kuhn calls these obstacles to the previous paradigm an accumulation of anomalies that in turn lead to 'revolutions'.

Kuhn deconstructs revolutions that lead to transformation into three phases. The first part of the transformation is the 'pre-paradigmatic phase', where activities and most conceptual thinking occur within the old paradigm. Then there is the second phase of 'normal science', where experimentation takes place and there is a quest for data and verification. Normal science occurs within the reigning paradigm and is aided by new scientific techniques and technology. If the reigning paradigm of thinking (and action) is the right one, most scientific inquiry confirms this paradigm. On the other hand, if experimentation and research are unable to verify these phenomena, we witness a third phase – the phase of anomalies. These occur when experimentation, observations and research cannot explain our observations or the effects of prevailing practices. Once these anomalies accumulate, we witness a revolution, a transformation or a paradigm shift.

Transformational change has become the mantra in the world of multilateral organisations (see Table 1), at a time when they are both striving to make a real difference and attempting to justify the importance of their work to donors. In our assessment of these agencies, however, we find that there are few examples of best practices in which the levels of transformational change or paradigm shift have been evaluated, or indeed where rigorous methods have been used to assess such changes. Judging whether transformational change is occurring is a critical tool for organisations, both from a learning perspective (is a transformation occurring, and if one is, what facilitated the change and

can it be replicated elsewhere at other times?) and from an accountability perspective (are agencies that aspire to be transformational, actually causing a change?). If a contribution is being made by an agency, then how much of a contribution is it? Can we quantify it? Can we explain it? We discuss these questions in this paper.

During our study we find that agencies employ ‘proxy indicators’ (or surrogate indicators) to indicate transformational change. Multilateral and bilateral agencies around the world use and report indicators related to change and effectiveness. Typically, indicators related to ‘value for money’ and ‘sustainability’ are used as surrogates for transformational change that illustrate and prove transformation (see Table 1). In many cases, we have seen an intentional strategy of leaving the definition of ‘transformational change’ ambiguous. One such example is the Green Climate Fund, which has not yet defined the phrases ‘transformational shift’ and ‘paradigm change’<sup>1</sup>, as it recognizes the concept will apply in different ways to different sectors, and differently at different times.

In this chapter, we review how a selection of multilateral agencies are dealing with the question of transformational change – including ways in which they define and measure the phenomenon – and then discuss a paradigm within which transformational change can be identified and measured. We argue that there are now scientific technologies available that could lead to a better understanding of what transformational change may encompass. However, understanding and developing strategies related to transformational change will require concerted thinking on this topic, a devolution of measurement capacities and a wider recognition of technologies and techniques as well as cross-systems thinking.

This paper has two objectives: First, it reviews what international organisations are doing to understand, measure and assess transformational change. Second, it discusses a paradigm within which at least some aspects of transformational change may be identified and measured. We also provide some steps that organisations may adopt while thinking about and measuring transformational change. In Section II we take stock of how agencies have incorporated the idea of transformational change into their own strategies and plans. This is followed in Section III by a review of what selected organizations are finding as part of their assessments of transformational change, while Section IV provides discussion and Section V concludes.

## II. WHAT ARE OTHER ORGANIZATIONS DOING?

Table 1 presents a summary of where and how a selection of international organisations refer to transformational change in their strategies. In the mission statements of all these organisations, there is an implicit assumption that they will be performing transformational or paradigm-shifting work. Also evident in all the statements are self-referencing declarations that agencies are ‘additional’ and contributing in measurable ways to improving the world, while there is a supplementary assumption that transformational change would not be possible without the technical and monetary support they provide and galvanize.

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<sup>1</sup> See the Governing Instrument document of the Green Climate Fund.

**Table 1: Mentions and treatment of ‘transformational change’ by selected multilateral organisations in their strategy and vision documents**

AGENCY	KEY VISION/STRATEGY DOCUMENT SOURCE	MENTIONS OF ‘TRANSFORMATIONAL CHANGE’
Green Climate Fund (GCF)	Initial Strategic Plan: Green Climate Fund. <sup>2</sup>	<p>“[The action plan] serves to address policy gaps and to invest the Fund’s resources in transformational climate action in a country-driven manner.”</p> <p>“What is crucial, however, is that the Board’s ambition to get the Fund off the ground and up to scale swiftly does not compromise on its ambition to promote cutting-edge innovation and real transformation towards the low-emission and climate-resilient future that the global community committed itself to in the Paris Agreement.”</p> <p>“As an operating entity of the financial mechanism of the UNFCCC and of the Paris Agreement, and the largest multilateral climate fund, the GCF will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their greenhouse gas emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change.”</p>
	‘Who we are’ Green Climate Fund. <sup>3</sup>	“[GCF] seeks to promote a paradigm shift to low-emission and climate-resilient development, taking into account the needs of nations that are particularly vulnerable to climate change impacts.”
Global Environment Facility (GEF)	GEF 2020 Strategy <sup>4</sup>	<p>“GEF2020 emphasizes the need for us to support transformational change and achieve impacts on a broader scale.”</p> <p>“The 2020 vision for the GEF is to be a champion of the global environment building on its role as financial mechanism of several multilateral environmental conventions (MEAs), supporting transformational change, and achieving global environmental benefits on a larger scale.”</p>
	Guidelines on the project and program cycle policy <sup>5</sup>	“The GEF recognizes there is a need to act differently to support sustainability by embracing transformational change in order to strengthen the resilience of ecosystems, social systems and responses to climate change.”
Climate Investment Fund (CIF)	Annual report. <sup>6</sup>	“The CIF is financing policy and regulatory work that is critical to achieving transformational change.”
	‘What we do’ <sup>7</sup>	“Since 2008, the CIF has been leading efforts to empower transformations in the energy, climate resilience, transport and forestry sectors.”
	‘Transformational Change	“Supporting the transformation to low-carbon, climate-resilient development is an overarching goal of the CIF, and a key priority globally as articulated in the Sustainable Development Goals (SDGs) and the Paris Agreement”

<sup>2</sup> *Decisions of the Board – Twelfth Meeting of the Board, 8-10 March 2016: Annex I: Initial Strategic Plan for the GCF* (Songdo: GCF, 2016), 27-35.

<sup>3</sup> About the fund. Available online at: <http://www.greenclimate.fund/who-we-are/about-the-fund>.

<sup>4</sup> Source: Global Environment Facility. *GEF 2020 Strategy*, Washington: World Bank, 2015.

<sup>5</sup> Global Environment Facility. *Guidelines on the project and program cycle policy* (Washington DC: World Bank, 2017).

<sup>6</sup> *Annual Report 2016*, Climate Investment Funds. Washington DC: World Bank 2016.

<sup>7</sup> Climate Investment Funds – About us. Available online at: <https://www.climateinvestmentfunds.org/about>

AGENCY	KEY VISION/STRATEGY DOCUMENT SOURCE	MENTIONS OF 'TRANSFORMATIONAL CHANGE'
	Approach Paper <sup>8</sup>	“However, questions remain regarding how the term ‘transformation’ is interpreted (and to whom) and operationalized within the CIF context, and the extent to which CIF activities and investments are designed and implemented to support transformational change.”
World Bank (WB)	The World Bank Group Development Committee <sup>9</sup>	<p>“We are committed to actively participating in setting a collective Post-2015 Agenda that is ambitious and transformational and that encompasses ending extreme poverty and building prosperity for all in a sustainable manner.”</p> <p>“Transforming the trajectory to maintain the historical trend requires a concerted effort by the international development community to bend the “natural arc” of history.”</p> <p>“Jobs are a driver of poverty reduction and shared prosperity not only by increasing the earnings of the poor, but also by being a force for transformation—jobs empowering women lead to greater investments in children and efficiency increases as workers get better at what they do and as more productive jobs replace less productive ones.”</p> <p>“As a Group, we need to be more selective and identify activities for truly transformational development impact. We need to move decisively beyond the remnants of a one-size-fits-all approach and recognize the full extent of the diversity and complexity of our client base, then tailor solutions to each client.”</p> <p>“Moving further, the new Strategy will lay out a framework to sharpen the focus of World Bank Group activities on transformative products and services that leverage the World Bank Group’s scarce resources and deliver development solutions that are sustainable.”</p>
	Lessons from World Bank Group Experience Independent Evaluation Group. <sup>10</sup>	“Transformational engagements are a critical pillar of the World Bank Group’s strategy for achieving its twin goals of extreme poverty elimination and shared prosperity.
IFAD	IFAD strategy <sup>11</sup>	<p>“As an integral part of the emerging post-2015 global development agenda and vision, IFAD envisages a post-2015 world in which extreme rural poverty is eliminated through inclusive and sustainable rural transformation;</p> <p>“IFAD continues to develop and innovate in its areas of expertise and comparative advantage. It responds to the key drivers of change that affect smallholder agriculture and rural transformation and adjusts its operational priority areas accordingly.”</p>
	IFAD strategic framework <sup>12</sup>	“[IFAD’s fifth Strategic Framework] responds to the evolving global environment and positions IFAD to play a crucial role in the inclusive and sustainable transformation of rural areas.”

<sup>8</sup> Climate Investment Funds. CIF Evaluation and Learning Initiative: Transformational Change Approach Paper Washington DC: World Bank 2017.

<sup>9</sup> A Common Vision for the World Bank Group Development Committee. Washington DC: WB 2013.

<sup>10</sup> Supporting Transformational Change for Poverty Reduction and Shared Prosperity: Lessons from World Bank Group Experience. Independent Evaluation Group. Washington DC: IEG World Bank 2016.

<sup>11</sup> A Strategic Vision for IFAD 2016-2025: Enabling inclusive and sustainable rural transformation International Fund for Agricultural Development. (Rome: IFAD 2014).

<sup>12</sup> 2016-2025 Strategic Framework International Fund for Agricultural Development. *IFAD Strategic Framework 2016-2025: Enabling inclusive and sustainable rural transformation* (Rome: IFAD 2016).

AGENCY	KEY VISION/STRATEGY DOCUMENT SOURCE	MENTIONS OF 'TRANSFORMATIONAL CHANGE'
		<p>“[IFAD’s] unwavering focus on smallholder agriculture and rural development, its specialized experience and expertise, and the strengths and qualities of its approach give it a comparative advantage and strategically position it to play a stronger role at national and international levels in promoting inclusive and sustainable rural transformation and in contributing to the SDGs.”</p>
<p>Food and Agriculture Organization (FAO)</p>	<p>FAO/CIFOR<sup>13</sup></p>	<p>“The meeting is part of a process being undertaken by FAO and CIFOR on structuring the Paradigm-Shift / Transformational potential on land-use and REDD+ related policies and most importantly on the ground, of projects and programmes and their overall contribution to low-carbon and climate-resilient development pathways.”</p> <p>“Paradigm Shift in the context of REDD+ was defined as “a fundamental change in the current pattern of unfolding the complex REDD+ initiatives and in the pattern the organization (REDD+ projects and programs) has been conducting business”.”</p> <p>“There is no agreed definition of transformational change, however Brockhaus and Angelson define it in the context of REDD+ as “a shift in discourse, attitudes, power relations and deliberate policy and protest action that leads policy formulation and implementation away from business as usual policy approaches that directly or indirectly support deforestation and forest degradation”.”</p>
	<p>FAO Policy and vision<sup>14</sup></p>	<p>“FAO’s strategic vision has been adjusted to the transformative vision and ambitions of the 2030 Agenda.”</p> <p>“Food and agriculture must be transformed if countries are to achieve the SDGs, and FAO is working closely with governments and their stakeholders to select national targets implement and monitor progress in line with the overall vision and aspirations of the 2030 Agenda.”</p>
	<p>Evaluation of FAO’s contribution to the reduction of rural poverty<sup>15</sup></p>	<p>“FAO’s approach to rural poverty reduction is relevant and has an overall sound intervention logic. There has been a progressive evolution and refinement of the approach, based on the concept of ‘inclusive rural transformation’. This evolution reflects due consideration of key challenges and the emergence of new themes relevant for rural poverty reduction.”</p>
<p>Inter-American Development Bank</p>	<p>Institutional Strategy<sup>16</sup></p>	<p>“For this Update of the Institutional Strategy, the vision of the Inter-American Development Bank (IDB) is to increase productivity and reduce inequality in a sustainable way to transform LAC into a more inclusive and prosperous society.”</p>

<sup>13</sup> Transformation Expert Meeting Summary Food and Agriculture Organization of the United Nations, Center for International Forestry Research. *Transformational Impact Potential and Approaches to Land Use and REDD+ Implementation: Summary of the Expert Meeting held in Rome on 6 and 7 March 2017* (Rome: FAO, CIFOR 2017).

<sup>14</sup> Policy Vision, Food and Agriculture Organization of the United Nations. “Vision.” FAO: Policy Support and Governance. Available online at: <http://www.fao.org/policy-support/vision/en/>.

<sup>15</sup> Office of Evaluation. *Evaluation of FAO’s contribution to the reduction of rural poverty through Strategic Programme 3* (Rome: FAO OED 2017).

<sup>16</sup> Inter-American Development Bank. *Update to the Institutional Strategy 2010–2020* (Busan: IDB 2015).



Below, we review the experiences of the World Bank (WB), the International Fund for Agriculture Development (IFAD) and the Global Environment Facility (GEF), in the evaluations they undertook to examine their own contributions to transformational change.

### III. A DISCUSSION OF AGENCY EXPERIENCES

#### A. The Experience of the International Fund for Agricultural Development

As part of its strategic vision for 2016-25, IFAD has committed to eliminating “extreme rural poverty” “through inclusive and sustainable rural transformation”.<sup>17</sup> In the same strategy document, the authors also note that IFAD will respond to the key drivers of change that affect small-holder agriculture and rural transformation and “adjust its operational priority areas accordingly”.

A large part of this strategy rests upon the reports and assessments that were put forward as part of the ninth replenishment of IFAD’s resources (IFAD 9). From these, the IFAD Executive Board concluded that resources needed to be invested if IFAD wanted to understand the impact of its financed activities, which resulted in their support for the IFAD9 IAI (Impact Assessment Initiative). The IFAD9 IAI in turn recognized the importance of IFAD generating “evidence of the success of IFAD projects so as to learn lessons for future ones”. In 2016 the IFAD Board concluded that the “approach to IFAD9 IAI was scientific, systematic and comprehensive”. The IFAD9 IAI provided IFAD with significant lessons and results, and concluded that as a result of IFAD investments (see Figure 1):<sup>18</sup>

- 44 million people will see substantial increases in agricultural revenues;
- Of those targeted by IFAD programmes, many will see improvements in their assets; some 29 million people will see a rise in the amount of poultry they own, while 23 million will see increases in their livestock.
- More than 10 million beneficiaries will witness an increase in each of the following: overall assets, productive assets, gender empowerment, dietary diversity and reduction in shock exposure.

As a consequence of these findings and the evidence attained to support them, the IFAD Board concluded that IFAD had indeed ‘transformed’ rural agriculture, although clearly more needed to be done. Simultaneously with these results, several challenges were also identified that would help further determine and measure possible IFAD transformational impact. Chief amongst these, the impact assessment report identified three main categories upon which the secretariat would need to focus if it was expected to shape IFAD’s transformational impact in a reliable and credible manner.

The first amongst these was that the IFAD secretariat would collect better, high-quality baseline data and regular project-level data that would show the fidelity of programme implementation.<sup>19</sup> Secondly, since the Initiative was forced to use ex post impact assessment methods which tend to be expensive and also much more costly in terms of time and effort, the report concluded that a selection of projects would include impact assessments in their design to enable impact measurement and “to facilitate and maximize learning”.<sup>20</sup> It requested that there be adequate data

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<sup>17</sup> Op.cit..

<sup>18</sup> This is not a comprehensive summary of their conclusions. We urge the reader to refer to the original document.

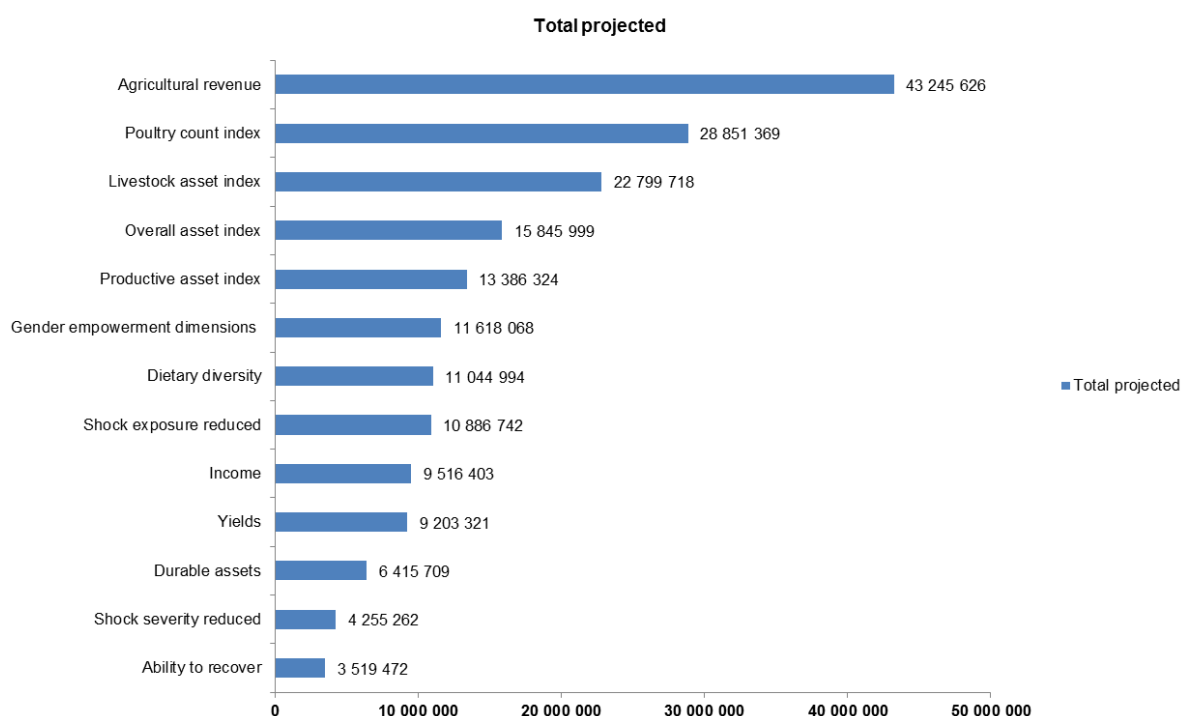
<sup>19</sup> EB 216/117/R.8/Rev.1.

<sup>20</sup> IFAD9 IAI committed IFAD to producing and reporting on 30 impact assessments, all of which would use either ex ante methods or ex post methods (one-fifth needed to use ex ante impact evaluation methods), while moving to ‘succinct accounts (of results reporting) that are focused on impacts and outcomes achieved’.



collection to measure impact (henceforth called ‘impact surveys’).<sup>21</sup> This process was to be participatory and multi-stakeholder. In this connection, IFAD also concluded that it is important to systematically review the portfolio, to dynamically measure where the possibility of maximum impact lay for IFAD funded projects, and also to identify gaps in evidence. Thirdly, the report concluded that a framework for measuring development effectiveness needed to be developed. Last but not least, in the Report of the Consultation on the Ninth Replenishment, IFAD also made a commitment to “strengthening national monitoring and evaluation systems by enhancing the capacity of project management staff and implementing partners, *particularly at start-up and early project implementation through the systematic engagement of monitoring and evaluation (M&E) experts during design and supervision missions*” (italics added).<sup>22</sup> It is also important to note that the IFAD9 IAI led to a revision of the IFAD results management framework, and specifically a move away from the overall single indicator that IFAD was using (of moving people out of poverty) toward the inclusion of three additional indicators to be adopted at the strategic level.

**Figure 1: Impact of IFAD projects**



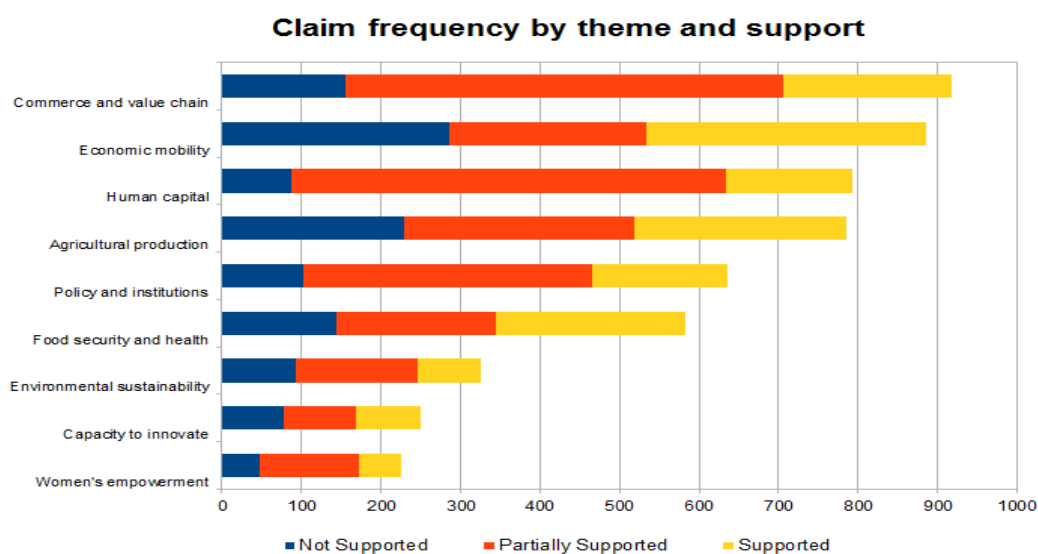
Source: IFAD9 IAI, 20166

An important development related to the IFAD9 IAI was the examination for validity of claims made by Project Completion Reports (PCRs). Such reports are used widely at organisations and are supposed to note what happened as a result of a project. An assessment was made of 70 PCRs that made a total of more than “4,000 unique claims of project success”. These included claims that projects had improved commerce and value chains as well enhancing economic mobility. However, when their theories of change and causal claims were assessed by the team, they found that 78 % of the claims could not be fully validated. This was true across all reported claims (see Figure 2). It also interesting that most claims in PCRs are made with respect to outputs and outcomes, with far fewer made on impact. The IFAD study also found many more outcomes than outputs, indicating that theories of change were poorly articulated.

<sup>21</sup> GC 35/L.4 commits IFAD to ‘Raising the level of compliance with the requirement for projects to have a baseline survey by the end of their first year of implementation’.

<sup>22</sup> GC 35/L.4.

*Figure 2: Evidentiary support for result claims made in Project Completion Reports*



Source: IFAD

## B. The Experience of the Global Environment Facility

In their strategy paper, the GEF underscores the importance of transformational change in tackling climate change (see Table I). To understand whether the GEF was indeed being effective and transformational, the GEF Independent Evaluation Office (IEO) studied GEF activities. Undertaken in 2017, the remit of the evaluation was to identify both designs and implementation structures that have proven transformative. The GEF IEO defined transformative engagements as:

“...engagements that help achieve deep, systemic, and sustainable change with large-scale impact in an area of global environmental concern.”

While undertaking the evaluation, the IEO asked GEF agencies to self-identify transformational interventions. The IEO explored two evaluative questions using these self-volunteered examples:

- What are the necessary and sufficient conditions for GEF interventions to achieve transformational change?
- What causal factors make a difference in the outcome?

To answer these questions, the study reviewed and aggregated findings to make evaluations of the eight cases listed in Table 2.

*Table 2: Self-identified examples of ‘transformational change’ assessed by the Independent Evaluation Office of the Global Environment Facility*

No.	PROJECT NAME	DESCRIPTION
1.	Lighting Africa (LA)	Project aims to catalyse the market for modern off-grid lighting in Africa. It aims to provide off-grid lighting for 250 million people by 2030.  Evaluation conclusion: This was done by leveraging capital inputs in multiple areas of the business cycle and by alleviating policy barriers.
2.	China Renewable Energy Scale-up Program (CRESP)-Phase I	Grants to develop China’s policy, legal and regulatory framework to promote renewable energy, and investing in the local sustainable energy equipment manufacturing industry.

No.	PROJECT NAME	DESCRIPTION
		Evaluation conclusion: The success of the programme was attributed to a multi-year preparation period used to achieve consensus and cohesiveness on key policy directions and reforms, complemented by pilot investments in renewables.
3.	Uruguay Wind Energy Programme (UWEP)	Programme deployed capital to overcome economic barriers to developing the commercially viable wind energy industry, and overhauling existing policy framework to remove a number of barriers.  Evaluation conclusion: The programme created a stable framework for investment along with tariff incentives, which has, in turn, secured private sector support for the new market.
4.	Sanjiang Plain Wetlands Protection Project	The investment aimed to facilitate sustainable economic development in selected wetland and forest areas to alleviate the status of globally threatened species.  Evaluation conclusion: The project was effective in securing the rehabilitation of wetland areas; however, improvements noted in species indicators could not be attributed to the project.
5.	Sustainable Land, Water, and Biodiversity Conservation and Management for Improved Livelihoods in Uttarakhand Watershed Sector Project (SLEM-U)	GEF investment in decentralised water management aimed to improve source sustainability and security as well as to facilitate biodiversity conservation and management.  Evaluation conclusion: Participatory, community-based approaches and capacity building at both local governmental and water user levels, have fostered ownership and sustainability.
6.	Namibia – Strengthening the Protected Area Systems (PAS)	GEF funding to improve the management of protected areas, as well for consolidating and expanding them.  Evaluation conclusion: The efforts were successful due to political and regulatory support and uptake, as well as due to the creation of synergies between already present expertise and development activities.
7.	Amazon Protected Areas Program (ARPA)-Phase I	The program aims to consolidate the management of existing protected areas and their expansion. The main activity of the project was to establish a fund to meet these costs.  Evaluation conclusion: Stakeholder participation in the project’s preparation has built capacity to sustain project results past completion. However, government budgeting challenges have made the results reliant on continued donor support.
8.	Promoting Payments for Environmental Services (PES) and Related Sustainable Financing Schemes in the Danube Basin	The programme piloted sustainable resource management and PES practices to improve and protect biodiversity in the lower Danube region.  Evaluation conclusion: Government participation in project development and capacity building allowed for continued adoption and ownership. However, long-term financial sustainability was not secured.

Source: GEF IEO

The GEF IEO conducted a desk review of final evaluation reports. Answers to questions were scored in terms of relevance, depth of change, sustainability and presence and quality of evaluative evidence (e.g. is there evaluative evidence? Yes/No). The review explored market processes for depth and scale of change, as well as the possibility for evaluators to review ‘other types of qualitative change’.

This review assessed the transformational mechanisms of eight projects. It examined factors that helped (or did not help) to mainstream projects; project capacity for replication or its use for demonstration; and the potential for catalytic effects beyond project intervention. The review also assessed ‘other types of transformational mechanisms’. Both internal and external factors that could affect the success of a transformational intervention were also assessed, for effects ranging from negative to positive for a number of prespecified areas. Outcomes were assessed using two main parameters – depth and scale of change to the market and/or system, and sustainability. Finally, the evaluations were aggregated<sup>23</sup> and combined with a cross-case analysis to assess the presence of conditions that have facilitated transformative change. The review used qualitative comparative analysis (QCA), which creates causal inferences using Boolean algebra (the values of variables are true/false, denoted as 1 or 0) to inform this cross-case analysis.

The review found each of the eight cases contributed fundamentally to transforming either a system or a market. It also concluded that five GEF-funded projects that were self-selected by teams on the ground, had accomplished their transformation targets, while the remaining three did not meet financial sustainability targets at the time of project completion. The five projects that were financially sustainable cases had harnessed market forces or secured allocations of government budget. The projects that had successfully leveraged market forces helped in removing regulatory barriers and facilitated technological advancement, which in turn helped to reduce costs. Projects that managed to secure government budgetary allocations accomplished this by building consensus to promote supportive policy, including government ownership of projects in some instances (see Table 2).

### C. The World Bank’s Assessment of Transformational Change

The 2013 World Bank Group strategy laid out the importance of enhancing its impact and catalyzing fundamental change in promoting prosperity in developing countries (see Table 1). To help achieve these aims, the WB commissioned the Independent Evaluation Group (IEG) to undertake a study published in 2016, named ‘Supporting Transformational Change for Poverty Reduction and Shared Prosperity: Lessons from World Bank Group Experience’.

The IEG based their work on the following definition of transformational engagements:

“...interventions or series of interventions that support deep, systemic, and sustainable change with the potential for large-scale impact in an area of a major development challenge. Such engagements help clients remove critical constraints to development, cause of support fundamental change in a system, have large-scale impact (at) the national or global level, and are economically, financially and environmentally sustainable.”

The IEG identified four dimensions to the definition (see Table 3) to select and screen a range of cases from the WB Group’s areas of operation. It drew on evaluative evidence from 1990, but had a particular focus on the period from 2000-2014. The IEG also used these dimensions to then employ three approaches to inform and measure the idea of transformational change. These approaches are now briefly discussed.

First, the WB team used counterfactuals. The IEG team identified engagements they considered to not be transformational and used these as comparisons. Comparative engagements with similar

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<sup>23</sup> The GEF IEO called it a ‘meta-evaluation’, although it wasn’t a meta-evaluation in the strict sense of the word. For example, see Borenstein et al (2009) for definitions.

factors such as country context, objective and scope were chosen, with 37 in total organized into 17 clusters (dyads).

**Table 3: Dimensions of transformational change, Independent Evaluation Group, World Bank 2016**

DIMENSION	DESCRIPTION	CHARACTERISTICS
Relevance	Addresses a major development challenge (or societal or global concern) such as poverty, equity.	Evidence from diagnostic or analytical work showing the constraint or problem addressed was of critical importance.
Depth of change	Causes or supports fundamental change in a system or market; addresses root causes to support a change in trajectory.	Evidence of market change, systemic change or behavioural change.
Scale of change	Causes large-scale impact at the national or global level.	Evidence of scaling up of approaches and innovations and replication; catalytic effects; demonstration effects; positive spillovers and externalities; acceleration/discontinuity in a development indicator.
Sustainability	Impact has been economically, financially, environmentally sustainable in the long run.	Evidence of financial, economic, environmental sustainability of results after engagement.

Source: IEG Supporting Transformational Change for Poverty Reduction and Shared Prosperity p.3.

These clusters were then used to assess whether the country had witnessed a significant reduction in poverty, whether it had made sustained and significant progress in its social sectors, and whether it had achieved broad-based and inclusive economic growth over an extended period of time during the review period. The review examined the following three main WB initiatives with this approach:

- Transition from centrally planned to market-based economies (transition initiative): 1989-present;
- Poverty Reduction Strategy (PRS) Initiative: 1998-present;
- Fragile and conflict-affected states initiative (focusing on countries that graduated from this status): 2002-present.

The second approach the IEG team used was to develop an analytical/statistical framework. They compiled a list of 83 developing countries that had achieved sustainable and inclusive development. The accompanying database featured data on GDP in real terms, headcount poverty, the Human Development Index and income inequality. Differentiation between countries was made on the basis of environmental sustainability, social inclusion, WB Group lending and private sector engagement. Each country was ranked according to their annually sustained progress in regard to GDP growth, poverty reduction, life expectancy, rate of schooling and changes in income inequality. This list was divided into the top 25 %, middle 50 % and bottom 25 % by the pace of change exhibited by the countries.

The third approach examined whether a country transitioned from the low-income classification to the middle- or high-income classification over the 1990-2013 period, along with the average of each country's Country Policy and Institutional Assessment (CPIA) score from 2000-2010. While the evaluation recognized that there is no single policy to best catalyse transformational change, it identified four mechanisms that had the potential to significantly support it:

- Binding constraints: identifying and addressing the binding constraints to progress toward a development objective;

- Cross-sectoral approaches: adopting systemic approaches that address multiple constraints in interrelated parts, including through cross-sectoral approaches;
- Scaling up innovations: scaling up and replicating both effective approaches and innovations, and novel financing instruments;
- Behavioural change: changing behaviours by modifying incentives of beneficiaries, introducing market forces, or increasing the flow of information.

The review also identified a number of factors that facilitated transformational engagement: good diagnostic work, building consensus, building capacity and adaptively addressing evolving challenges with the use of monitoring and reporting systems, were all seen as being important steps.

## IV. DISCUSSION

In all the studies of transformational change, several common features emerge (see Table 4). In Table 4 we also include two other still-ongoing studies of transformational change being undertaken by Climate Investment Funds (CIF) and the UK Climate Impacts Programme (UKCIP). Results from these studies are not yet available but in this investigation of transformational change, it is useful to also examine their approaches.

Most analyses acknowledge the importance of seeing change that not only is large and has scale, but also has depth. On this basis, a large change in a small pilot programme ostensibly should not count. But neither should a small change among many people. What counts, one imagines, is a large change that covers large areas. Three of the six agencies we reviewed employed the idea of agencies using projects to demonstrate and catalyze change. Several also considered the idea of lowering costs and removing barriers as an important attribute of what would potentially be transformational. Several referred to ‘systems change across sectors’ (WB, GEF and UKCIP) and others consider the time dimension in their conceptualisation of transformational change. We suspect that of all of them, too, but this is not explicitly mentioned in the documents provided by the organisations.

**Table 4: A review of definitions for ‘transformational change’ across evaluations**

ATTRIBUTE OF T-CHANGE	CIF TRANSFORM ATIONAL	WB TRANSFORMAT IONAL ENGAGEMENT	GEF LDCF/ SCCF	UKCIP	IFAD
Measured T-change?	No	Maybe	No	No	Yes
Specific/consistent indicators	Yes	No	No	No	Yes
Demonstration project logic (Theory of Change)/Catalytic	Yes	No	Yes	Yes	No
Removing barriers/lower costs	Yes	No	Yes	?	No
Scale effects (spatial)	?	Yes	Yes	?	Yes
Research and learning	Yes	No	Yes	?	No
Systems and across sectors	No	Yes	Yes	Yes	Yes
Long-term change	No	Yes	Yes	Yes	Yes

ATTRIBUTE OF T-CHANGE	CIF TRANSFORMATIONAL	WB TRANSFORMATIONAL ENGAGEMENT	GEF LDCF/ SCCF	UKCIP	IFAD
Behaviour change	No	Yes	No	No	Yes
Capacity building	No	No	Yes	No	No

In this discussion section we consider two important aspects of these measurements. The first is building last-mile considerations into discussions and conceptualizations of transformational change. The second is the importance of considering high-quality evidence as an agent of transformation.

#### D. The Importance of Examining the Last Mile – Using Behavioural Insights

One of the most interesting insights from the book *Medical Reversals* (2015) is provided when Prasad and Cifu discuss how in the presence of incontrovertible evidence, actions do not change. This is true not only for medicine but also for development practices. It can be seen in cases where people know certain actions are individually beneficial (e.g. not smoking, going to the gym, etc.), but they do not adopt them. This is especially true for development and environmental projects. Olbadistan and his colleagues have written extensively in the field of psychology on the absence of ‘pro-environment’ behaviour, even in the presence of good knowledge and attitudes.<sup>24</sup>

One of the things we need to overturn in our current paradigmatic thinking is the notion that knowledge and attitudes are sufficient to change behavior. This is clearly not true. Whether this is the case with doctors and their hand-washing habits (Davis 2015), doctors adopting proven methods for reducing mortality in early-birth mothers (Crowley et al. 1990; Pittet et al., 2000; Nicolay, 2006; Davis R 2015), or for households and their adoption of efficient cookstoves (Burwen and Levine, 2012), farmers adopting actuarially fair insurance instruments (Barooah et al. 2017), citizens not paying their taxes even though this is the right thing to do (Shahar et al.; Halpern 2015), people not throwing garbage in the open (Chong et al. 2013) or citizens not responding to information about the honesty of their electoral candidates (see Banerjee et al. 2014; and Woon and Kanthak 2016), there are many slip-ups between the cup and the proverbial lip of action. We call this the problem of the ‘last mile’.

If programmes are to be transformative, this last-mile problem needs to be addressed. There are emerging paradigms that can help to take away or mitigate this last-mile problem, especially in climate change. Several agencies are doing this. Important ways in which last-mile problems can be dealt with include ensuring high-quality formative work and making sure that planners dealing with critical bottlenecks within the theory of change are well informed of previous evidence and of formative work on the ground.

#### E. Missed Opportunity – Transformational Potential of High-Quality Evidence

In most cases, transformational change – whether you look at medicine, agriculture, education (the introduction of evidence-based medicine) or just more operationally, handwashing or a change in doctors’ practices with respect to how they treat Malaria or TB, the use of vaccines, the use of checklists (see for example Gawande 2009), forestry (Samii et al. 2014; Borner et al. 2016),

<sup>24</sup> See for example Obstaliston (2013) and Osbaldiston et al. (2012).



agriculture (Rogers 1995) or community-driven development (White et al. 2018), or now with cash transfers (for example, see Davis et al. 2016) – has taken the form of progressive build-up of credible evidence, and evidence that shows that an approach has the measured impact (not just once or twice, but repeatedly). In scientific parlance, this is called replicability (see, for example, Ioannadis 2012).

Indeed, as discussed above, many interventions and programmes that were ‘believed’ to have been successful, were on the contrary quickly dislodged when it was shown, provably, that they didn’t work (Prasad et al. 2013). In all these cases, one strong attribute has emerged – there was evidence to show that these actions were transformational. But unfortunately, it has almost never been true that a *single* piece of evidence has transformed action or practice. In almost all cases, it has been many, repeated pieces of evidence gained from a multitude of studies (see, for example, Pereira et al. 2012) that prove the success or failure of a project.

## V. CONCLUSIONS: IMPLICATIONS FOR ORGANISATIONS

The challenge of transformation is not just in implementation. It is in first conceptualizing what a transformational change could look like, and most importantly for evaluators, in identifying a transformational change (*did* a transformational change occur?) and measuring the magnitude of the change, if one occurred. In this section we briefly discuss some actions that organisations can take to increase their own learning, to help them identify and measure transformational change in credible and robust ways.

**Examine the evidence that already exists:** Clearly it is of the utmost importance to understand previous evidence and examine where syntheses are possible. Attributes associated with transformational change – including changes in scale, depth, sustained change and systemic change can benefit from being informed by existing evidence to the greatest extent possible. In this context, creating evidence databases and synthesizing evidence is an important first step.

**Set up ex ante theory-based impact evaluations and impact measurement systems:** To measure the effects of impact, we need to ensure that programmes and projects are ready for impact measurement. This needs to happen at the inception of programmes and projects. Methods that use counterfactuals are one way of doing this. However, other methods can also be used to measure causal change in rigorous ways. Combining these with qualitative approaches while ensuring that they are guided by theory is an important second step. It should also be noted that the measured effects or impact are ‘average effects’. Actual impact will vary. Some beneficiaries will benefit more, and others less. Disaggregating these by sub-category, for example, examining the effect on vulnerable populations or those living with a certain income level is important and also policy-relevant.

However, it is also clear, that not all projects can have these systems built into them. Projects should be selected so that they maximize learning. They should be representative of the overall themes of the organisation, and should also be built and picked in consultation with the operational teams. The criteria for choosing which projects are included for measuring and understanding impact could include the following: 1) they should be innovative; 2) there is a widely acknowledged ‘evidence gap’ in understanding the effects of these projects (i.e. there should be little pre-existing evidence); 3) they are projects that are going to be scaled up (indeed, projects should not be scaled up unless there is good evidence for impact); 4) there is buy-in at the beginning from the project team toward measuring impact, as well as from the implementing agency. We also advocate doing multi-site studies, that investigate the same set of interventions and outcomes in different contexts.



**Implementation research:** Monitoring programmes and projects closely is another important requirement. Most programmes build datasets that in the end are not very useful, primarily because the data is not of good quality. It is necessary to ensure that good monitoring data is produced, along with good protocols.

**Build buy-in:** Studies have shown the benefits of effective planning in understanding and overcoming the nuanced constraints that engagements face. Furthermore, it has been shown that for engagements to be successful in bringing transformative change, they must recognise and anticipate the transformation of the environment in which they operate. Multistage engagements can accommodate and reflect the evolution of the different stages of a transformational change. However, one of the first and most important steps is designing an engagement that fits the context in which it is deployed.

**Replicate:** Ensuring that evaluations aren't showing one-off results and that the results are replicable is also important (see, for example, Pereira et al. 2012).

Further research and examination of this phenomenon is something we recommend that organisations undertake. A key starting point for agencies seeking to evaluate transformational change is to perform a systematic review of evidence in areas where good evidence is available, so that causal inferences can be made. Examining what factors are associated with large effects is one way of approaching such an evaluation. Pereira et al. 2012), for example, explore this and review the medical literature for meta-analyses that contain statistical aggregates.

To conclude, it is clear that the aspiration to be transformational is credible. However, for claims to be credible, organisations will need to invest a lot more in deliberation and design, and measuring and informing transformational change. This in turn requires critical thinking and investments by the agencies involved.

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