

GEF/STAP/C.56/Inf.04 June 06, 2019

56th GEF Council Meeting June 11 – 13, 2018 Washington, D.C.

ACHIEVING MORE ENDURING OUTCOMES FROM GEF INVESTMENT A STAP DOCUMENT





Contents

Exe	Executive Summary and Recommendations3			
1.	Introduction	6		
2.	Terminology and definitions	7		
3.	Risk appetite, transformational change, and durability	9		
4. V	Vhat is the evidence on securing enduring outcomes?	.11		
4	.1 Achieving enduring outcomes from projects	.11		
4	.2 Systems Change: Towards transformation and durability	.13		
5.	Design and implementation actions towards achieving enduring outcomes and impacts	16		
5	.1 At the project level	.16		
Арр	Appendix A: Glossary			
End	Endnotes1			

Executive Summary and Recommendations

Investment in GEF-7 is increasingly seeking greater **integration** and more **innovation**, and for investments to be **scaled** to deliver **transformational** change and consequently much **more impact**.

The **GEF IEO defines transformation** as achieving deep, systemic, and sustainable change with largescale impact in an area of global environmental concern: the key criterion is **'sustainability'**, i.e. the impact endures financially, economically, environmentally, socially and politically, long term after the intervention ends.

The IEO found that about 80% of completed projects achieved satisfactory short- to medium-term outcomes, and that these were likely to endure in the long-term in about 60% of projects, with the remainder facing considerable risks to the long-term continuation of their benefits

The GEF needs to be confident that global environmental benefits will endure. This paper uses the term *enduring* to mean the long-term maintenance of outcomes and consequent impacts, whether environmental or not, and restricts the use of 'sustainability' to the project's and program's effects *on* natural resources, including in the long-term, beyond the project lifetime. ('Sustainability' is often confused with environmental sustainability and sustainable development, which aim to endure, but usually imply 'not living beyond our means' or 'not diminishing global environmental benefits'.)

The extensive literature on achieving project outcomes and impact increasingly emphasises success factors focused specifically on durability. The simple logic chain here is that engaging key stakeholders and incentivising them will build **stakeholder trust and motivation**; building the capacity of stakeholders and institutions as part of incentivising them as well as emphasising diversity of inputs will help ensure **enduring capacity and financing**; emphasising diversity and adaptability along with a good application of systems thinking and learning will **build resilience** in the outcomes.

Enduring impacts also need to endure in the face of long-term external changes, such as climate change, demographic change, or shifting demand for products, as well as avoiding or managing unintended consequences. This requires outcomes to be resilient and adaptive to such changes, and for these external changes to be considered in designing investments.

There is a widespread assumption that scaling and transformational change imply greater durability; this may often be true, but it is not a strict causal relationship. For example, local benefits may be enduring but not scale, and benefits may scale successfully but not endure. It is important therefore to scale <u>both</u> for systems change, i.e. broad impact, <u>and</u> for durability, i.e. long-term impact.

Larger investments do not necessarily guarantee transformational success, and this will not happen of its own accord. Transformation needs to be embedded in planning from the outset, may require additional financing after the initial GEF investment, require more innovation, and new, or additional, stakeholders.

Systems change for transformation requires innovation which can occur in diverse ways, including technological, financial, business model, policy, and institutional innovation. Most transformational change involves more than one of these elements of innovation.

Greater innovation brings the likelihood of higher failure rates, which are also opportunities to learn. Expectations for projects and programs need to be clearly articulated, and the GEF Council should decide on what is an acceptable risk appetite.

In an earlier paper, STAP made recommendations on how to improve **integration** in the design of GEF projects. There are common elements in this paper which builds on and extends those recommendations, and other previous STAP analysis, to show how to embed the requirement to consider long-term **durability** more explicitly in project outcomes and impacts. Taken together ^a, STAP recommends the following:

- 1. Articulate an explicit risk appetite and consequent expectations for enduring outcomes from GEF investment, with a low tolerance for programs failing to deliver enduring benefits, and transformational outcomes. Where innovation and risk are high, there should be an expectation that interventions aim for high impact, recognising that some innovative projects may fail to scale durably, and that others may deliver outsize results that endure.
- 2. **Apply systems thinking**: Devise a logical sequence of interventions, which is responsive to changing circumstances and new learning (adaptive implementation pathways). Address inter-connected environmental, social, economic, and governance challenges across sectors in the project/program design and implementation, with an eye towards resilience, transformational and enduring change.
- 3. Develop a clear rationale and robust theory of change to tackle the drivers of environmental degradation by assessing assumptions and outlining causal pathways and by devising responses that are robust to future change and adaptive in the event that desired outcomes do not materialize. The theory of change should encompass enablers of durability and transformation, in particular to clarify assumptions which underlie the intended transformation pathways, and address any limitations.
- 4. Choose the innovations to be scaled, which may include technological, financial, business model, policy, and institutional innovation, and describe intended modes of scaling. Transformation at scale is likely to require multiple forms of innovation. Allow flexibility in project preparation to accommodate the additional transaction costs and time required to tackle complex issues through multi-agency teams.
- 5. Analyse the barriers to, and enablers of, scaling and transformation, which may include, for example institutional, governance, cultural, and vested interests, etc. Assess the potential risks and vulnerabilities of the key components of the system, to measure its resilience to expected and unexpected shocks and changes, and the need for incremental adaptation or more fundamental transformational change.
- 6. Maximise global environmental benefits, by improving effective integration, and by identifying positive synergies among multiple benefits, and avoid doing harm, by minimise negative interactions, and managing any trade-offs, including climate risk and other long-term changes.
- 7. **Develop multi-stakeholder platforms** including with local communities, not just government officials, from inception and design, through to project completion, ideally building on existing platforms, and flexibly structured to extend and evolve in form and membership over time towards enduring transformational change. This is essential to create ownership, address innovation, pathways to scaling and transformation, enable learning and to maximise global environmental benefits.
- 8. Establish a monitoring, evaluation, and learning (MEL) process which will track the intended innovations, integration and transformation, as well as indicators of durability, including regular review of the theory of change to allow a structured approach to flexibility in implementation, and to learn about innovation, integration and transformation during and after implementation. Develop explicit plans and funding for good quality knowledge

management including sustainable databases, simple, useful and usable common indicators; this is essential for 'lessons learned' and scaling up.

This paper sets out **principles for securing durability in project outcomes and impacts** built round four themes: engaging the right stakeholders; building the incentives for these key actors to act; incorporating adequate diversity and flexibility in project design and implementation; and underpinning it all with a systems-thinking approach. Enduring transformational change will require consideration of new stakeholders, new partnerships, and multi-stakeholder platforms.

^a Toth (2018)¹⁸

Bierbaum et al. (2018)⁶

STAP guidelines for screening GEF projects⁶²

O'Connell et al. (2016)¹⁰

Stocking et al. (2018)⁵³

Tengberg and Valencia (2017)²¹

Zazueta (2017)²⁶

1. Introduction

Investment in GEF-7 is increasingly seeking greater integration and more innovation, and for investments to deliver transformational change and consequently much more impact, particularly in the IPs.

The **GEF IEO defines transformational interventions**¹ as those that help achieve deep, systemic, and sustainable change with large-scale impact in an area of global environmental concern. It notes four criteria that help to differentiate truly transformational interventions from engagements that are "merely" highly successful, complex, or large in size:

- relevance to global environmental challenges,
- depth of change (driving a fundamental change in a system or market),
- scale of change ('full-scale' impact at the local, national, or regional level) and
- 'sustainability' (the impact endures financially, economically, environmentally, socially and politically, long term after the intervention ends).

The GEF IEO² found that about 80% of projects achieved satisfactory short- to medium-term outcomes, and that these were enduring in the long-term in about 60% of projects, with the remainder facing risks to the long-term continuance of their benefits; and the IEO estimated that about 13% of projects had achieved impact scaling at a broad scale and a further 45% at a local scale. It is important to note that most of these projects were from GEF-4 (2006-2010) and design principles are expected to have improved substantially over the last two replenishment periods with the focus on development of the Integrated Approach Pilots and the Impact Programs.

Nevertheless, given the desire for more enduring transformational outcomes, particularly for Impact Programs (IPs), the GEF Secretariat asked STAP to examine the evidence from practice and the research literature about what can lead to such outcomes.

This paper: reviews an extensive literature; explains some key concepts and provides definitions; summarises some key themes emerging from the literature on durability, scaling and transformation; outlines the consequences of these for the design of GEF investments; and concludes with some recommendations to help deliver more enduring outcomes that are integrated, scaleable, and transformative.

An <u>appendix</u> reports in more detail on a literature survey of more than 75 analyses of project and program durability, both at project level and when scaled to achieve transformative systems change.

2. Terminology and definitions

This paper uses the IEO's definitions for:

Outputs – direct products of projects, and programs

Outcomes – activities beyond the investment period, which will lead to longer-term impacts. These are often processes or institutional arrangements put in place during the investment that need to continue after the GEF investment has concluded, including, where appropriate, with additional financing

Impacts – key impacts for GEF are the global environmental benefits (GEBs), but these are also expected to be compatible with other social and policy goals, such as gender equity, national policy priorities, and livelihood improvement. Impacts may often take time to emerge, well beyond the investment period.

The GEF-7 investments are increasingly seeking greater **integration** and more **innovation**, with an expectation that these innovations be **scaled** to deliver **transformational** change and consequently much more impact.

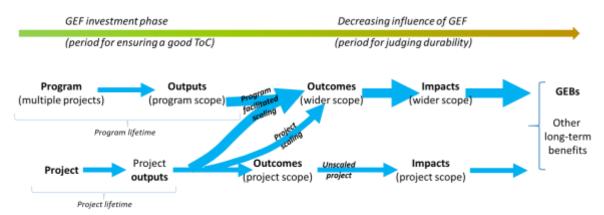
Figure 1 relates these concepts to project and program level activities.

- At a project level, outcomes and impact should at least occur within the geographic or organisational scope of the project; this requires proper project design and implementation. Integration is important to maximise co-benefits among different GEBs and social outcomes, and innovation to support a step change in impacts, beyond just further implementation of well-known approaches.
- **Ideally projects should also set up a pathway to scale** so that their local outcomes are taken up by other actors and in other places, and contribute to transformational change. This often requires an additional round of innovation to address barriers to scaling.
- At program level there is an explicit intention to be integrated and to deliver transformational change across the program's portfolio of projects, even if every individual project does not scale in its own right.

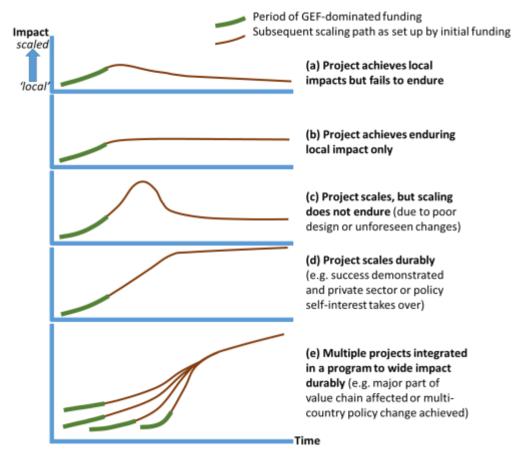
In summary, outcomes may be: project-level and restricted to the project's scope; project-level but scaled to some degree; or program-level for which transformational change is expected through scaling from multiple child projects with a synergistic effect (see Figure 2).

The GEF needs to be confident that global environmental benefits will endure. This is widely referred to as 'sustainability' in project management, and in development literature³. However, in the environmental field this term causes considerable confusion with environmental sustainability and sustainable development, which certainly aim to endure, but in which 'sustainable' usually implies 'not living beyond our means' or 'not diminishing global environmental benefits'. The term enduring is therefore becoming more widely used (see Appendix <u>http://stapgef.org/appendix-stap%E2%80%99s-paper-%E2%80%9Cachieving-enduring-outcomes-gef-investment%E2%80%9D-short-literature-review</u>)

This paper uses the term *enduring* (and *durability*) to mean the long-term maintenance of outcomes and consequent impacts, whether environmental or not, and restricts the use of 'sustainability' to the project's effects *on* natural resources, including in the long-term, beyond the project lifetime.



STAP Figure 1: Temporal and functional relationships between some key terms in GEF usage. Illustrates three ways impact may be delivered – by projects within their original scope, through scaling from an individual project, and by a program integrated across multiple projects. (GEBs: Global Environmental Benefits.)



STAP Figure 2: Impact, scaling and durability. Illustrates different scenarios in which a period of GEF funding (green) may or may not achieve enduring impact.

3. Risk appetite, transformational change, and durability

Systems change requires greater innovation to explore new ways of achieving more impact, which often entails greater uncertainty with a likelihood of higher failure, compared to tried and tested approaches (Figure 3). The Independent Commission for Aid Impact⁴ emphasises the importance of clearly articulated expectations about risk appetite across a program.

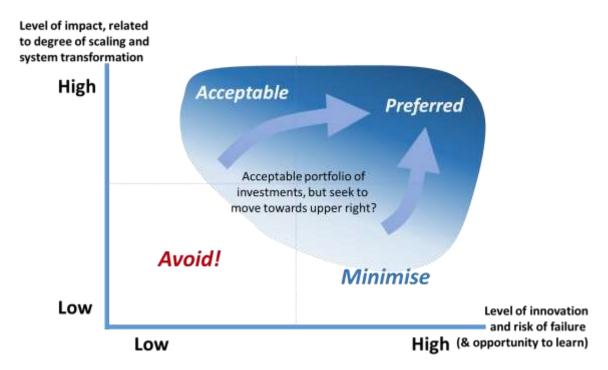
Project delivery: The minimum expectation of any project is that it should achieve its expected outcomes and impact and that these impacts should be enduring. Across an innovative portfolio, it would be reasonable to expect a modest project failure rate. Good design processes should ensure that almost all projects at least deliver short-term outcomes, but this performance might drop off in terms of how enduring these outcomes are.

The GEF IEO² found that about 80% of projects achieved satisfactory short- to medium-term outcomes (exceeding the 75% target set in the GEF-4 replenishment), and that these were enduring in the long-term in about 60% of projects. **An acceptable risk appetite is a matter for GEF Council policy.** However, it is important to clarify expectations – when projects fail it should be *despite* excellent project design, and not because of design or implementation failures.

Scaling from projects: GEF IEO² estimated that about 13% of projects had achieved impact scaling at a broad scale and a further 45% at a local scale at the time of their *ex post* assessment (which primarily examined projects financed through GEF-4 and earlier, typically 2 to 3 years after project completion). A significantly higher level should be expected for the current investment portfolio, given the increased emphasis on integration, systems thinking, and transformation in GEF-6 and GEF-7, especially via IAPs, IPs, and Multi-Focal Area Projects. Scaling to transformation, where GEF is seeking most innovation at present, may be where a higher risk of not achieving enduring transformation may be most acceptable.

Program delivery: The target for durability should be much higher when a project is embedded in a coherent program, e.g. the Impact Programs. At the program level, transformational outcomes are expected: these may not accrue from every child project, but the program as a whole should have a very low probability of failure whilst targeting a high level of enduring impacts.

This is the essence of well-informed risk-taking through a portfolio of investments: **by prioritizing innovation that explicitly aims at scaling and enduring transformational change, we recognize and accept that some efforts will fall short but that, on average, those that succeed will deliver more enduring impact at larger scales.** Moreover, integrating project investments in well-structured programs should increase the likelihood that "failures" will yield valuable lessons about which approaches merit increased investment, and which should be abandoned or re-conceived.



STAP Figure 3: A visualisation of the preferred areas of operation for GEF for levels of innovation (risk) and of impact (return). Activities are increasingly preferred as they move from lighter to heavier shaded areas but some portfolio diversity across these is desirable, whilst the low impact area is to be avoided.

4. What is the evidence on securing enduring outcomes?

4.1 Achieving enduring outcomes from projects

There is an extensive peer-reviewed and grey literature on achieving project outcomes and impact, which increasingly emphasises success factors focused specifically on durability: engaging the right stakeholders; building the incentives for these key actors to act; incorporating adequate diversity and flexibility in project design and implementation; and underpinning it all with a systems thinking approach.⁵

The simple logic chain here is that engaging key stakeholders and incentivising them will build **stakeholder trust and motivation**; building the capacity of stakeholders and institutions as part of incentivising them as well as emphasising diversity of inputs will help ensure **enduring capacity and financing**; emphasising diversity and adaptability along with a good application of systems thinking and learning will **build resilience** in the outcomes (as summarised in Figure 4). These three emergent factors are widely seen as indicators of the durability of the outcome processes that underpin enduring impacts.



STAP Figure 4: Simplified chain of logic illustrating how emergent indicators of enduring outcomes relate to underlying design principles (elaborated in section 3) and design actions (elaborated in section 4).

Enduring impacts depend not only on establishing enduring outcomes in the form of actors' behaviours, institutional arrangements or financing. They also entail enduring in the face of long-term external changes, such as climate change, demographics, or changes in demand for products, as well as avoiding or managing unintended consequences. This requires outcomes to be appropriately resilient and adaptive to such changes, which means these issues must be considered in project and program design. (These principles from the literature underpin STAP's guidance on the IP program framework documents, and build on STAP's previous work on 'integration'⁶.)

There is a more limited literature on how project durability is affected by a changing world, and also how projects can deal with the unintended consequences of an intervention.^{7 8} Risk assessments in development projects tend to focus on short-term financial, organisational and project management risks, rather than the risk that the project outcomes will not stand up in a changing world, such as the increasing risk that climate change may undermine project outcomes.⁹ To help prepare for these, STAP encourages the Theory of Change and project/program design to explore response

options that are robust to future uncertainty, as well as pursuing adaptive modes of implementation in case the anticipated intervention proves inadequate. ^{6 10 11}

Box A illustrates various examples of these risks, which relate to different types of uncertainty. These require different forms of project design responses:

- a. foreseeable known changes design for these, test ability to cope if they do not happen
- b. known change, form foreseeable, magnitude not use scenarios¹² to look for robust approaches, including flexible pathways over time
- c. known change, form and magnitude unforeseeable game-play some possibilities, consider flexible approaches, build resilience in relevant actors/institutions
- d. unknown changes build general resilience.¹⁰

STAP Box A: Achieving durability by avoiding unintended consequences or failure due to external changes

There are many possible types of longer-term trends or events that may undermine the durability of even a well-designed project. Different forms of uncertainty underlie these¹³¹⁴, from those that have a formal probability (i.e. a defined risk), to those with known or unknown levels of uncertainty, to those that cannot easily be foreseen. These require thought in project planning and implementation, as illustrated by the following examples:

- Change in climate known to be happening, magnitude of local impacts uncertain projects should assess durability with respect to different scenarios (see below) and look for robust approaches (i.e., approaches which work reasonably well across all possible futures rather than optimally but only in one: e.g., adaptation pathways which retain flexibility¹¹)
- **Change in government policy** if an outcome is dependent on a specific government policy, then risk management should require an appraisal of how robust the outcomes are to the possibility of change, and whether there are approaches (e.g. flexible staging of actions, engaging all sides of politics, etc) that would make the intervention more robust
- **Changes in demographics** in most developing regions this includes population increase, often coupled with urban migration, and significant shifts in age structure these are reasonably foreseeable and their implications for durability must be considered
- **Changes in demand for products** (e.g. coffee, cocoa) often reasonably foreseeable, but can test intended outcomes against a less likely scenario (e.g. a drop in global demand)
- Change in technology certain to happen, but whilst some may be foreseeable and easily related to implications for some interventions, others are entirely and unpredictably disruptive. Developing some scenarios may help minimise risks here, but extreme changes impossible to foresee instead build resilience among networks of stakeholders (e.g. reflective processes, local capacity, capable institutions, etc)
- **Novel pests and diseases** likely to happen, impacts very uncertain game play possibilities and look for resilience, as above
- **Breakdown of law and order, conflict** may or may not be able to assess risk of this in context use above approaches as appropriate¹⁵
- **Unforeseen side effects of a project**⁸– by definition unpredictable (though engaging a wider range of stakeholders at the design stage may help foresee possible outcomes)

4.2 Systems Change: Towards transformation and durability

Transformation implies impact at scale, but not all impacts at scale are necessarily transformational.

There is a widespread assumption that scaling and transformational change imply greater durability; this may often be true, but it is not a strict causal relationship. For example, local benefits may endure well but not scale, and benefits may scale successfully but not endure, for example where changes in policy or technology, or unexpected project side-effects⁷ undermine success (Figure 2c). For systems change, it is therefore important to have both broad impact, and long-term impact.

Similarly, larger investments do not necessarily guarantee transformational success^{1 16} ; this can also be achieved, for example, in adaptation from a bundle of interventions which adjust flexibly to change rather than reinforcing the status quo.^{16 17}

System change for transformation can occur in diverse ways, based on one or more types of innovation. STAP's paper on *Innovation and the GEF*¹⁸ identified **five forms of innovation**: technological, financial, business model, policy, and institutional innovation (including changes in cultural norms). In principle these can apply at any scale – local, regional, national and global. Most transformational change involves more than one of these elements of innovation.

GEF IEO¹ noted four transformational mechanisms in the GEF projects they reviewed – specifically, what they termed *mainstreaming*, *demonstration*, *replication* and *catalytic effects*. Box B shows some lessons from the literature on transformation at scale, suggesting some additional forms, as well as a **diagnostic for project and program design**.

GEF funding is by design often a fraction of a total project or program investment – and an even smaller fraction of investment in the given sector. For this 'tail to wag the dog', there needs to be a clear theory of change strategy that can be adaptive. Scaling through replication can achieve enduring impact when a change is of sufficient benefit to self-interested actors to continue it after the intervention, and there are no 'rules' or 'values' barriers. Examples include reducing the costs of uptake (e.g. electricity from renewables), exposure to new knowledge or technologies not previously seen but obviously beneficial (e.g. mobile phones), or innovations that yield profitable business advantages and are picked up by the private sector.

Where benefits are diffuse or common goods, a bigger system transformation is required. This may involve hard-to-undo changes in the policy environment (e.g. changes in land tenure or control of resources), or in financing (e.g. a department of finance providing enduring funding in return for increased tax revenue), or through a real change in social context (e.g. a persistent green market incentive driven by demand down a value chain).

Transformation requires an analysis of the barriers and enablers of scaling related to **knowledge**, **rules**, **or values** (cf. Box B).

STAP Box B: Lessons from the literature on Systems change and transformation

The expanding literature on transformation is converging on the consistent lesson that transformation requires three elements which provide **a simple diagnostic** for projects to use to analyse the possible barriers^{19 20 21 22}:

- 1. Having practical examples of success which provide knowledge and experience that works
- 2. Getting the rules and institutions right, usually at a higher level of organisation than the project
- 3. Making sure that wider cultural norms and values are properly aligned to enable scaling.

In their *ex post* review of factors that had facilitated transformational change, the GEF IEO¹ concluded that projects should:

- **a.** Have clear ambition in design with regard to triggering a fundamental system change that addressed a root cause for an environmental concern
- **b.** Explicitly identify the transformational (scaling) mechanism(s)
- **c.** Harness market forces where appropriate (especially in technology projects), as this may be a sufficient condition for transformation
- **d.** Have quality implementation and execution.

Principles for achieving durability in	and for achieving enduring				
outcomes and impacts	transformational change				
Engage key stakeholders					
 Emphasise legitimate engagement and on-going partnerships, with and among appropriate stakeholders.^{21 23 24 25 2126} Have processes to manage diverse values and motivations. ^{24 27} Use co-design and co-production to involve key actors, with a pre-planned and phased approach 	 Review and evolve the changing identity, roles and partnerships with key actors. ²⁷ Recognise expanded diversity of motivations, especially across scale. ^{27 28} Extend planning for phased withdrawal from the intervention, with careful timing relative to scaling and long-term financing. ^{26 29 30 31} 				
to withdrawal. ^{23 25 28}					
	core actors				
 Value local knowledge and institutions. ^{32 33} Link to local culture and use story-telling. ^{5 33 34} Build human and social capital, individual and community capacity. ^{29 32 34 35 36} Develop leadership and champions. ^{29 31 36} 	 Build capital and capacity beyond the original core actors and covering a wider set of skills. ^{34 37} Identify cultural barriers and enablers of scaling and transformational change, such as 'moral norms'.^{38 39} 				
 Deliver local benefits, whatever else is achieved. ⁵ ²⁶ ³⁴ 	 Build multi-stakeholder platforms and coalitions to address social and political barriers and enable collective learning.^{40 41} Address inequities in power and distribution of benefits. ^{42 43} 				
Emphasise diversity and adaptation					
 Ensure diversity in inputs and outputs, e.g. livelihoods, people and financing. ^{5 31} Be flexible and adaptable in project implementation. ^{5 25} Build adaptive processes into community/local structures. ⁴⁴ 	 Create structured flexibility (i.e. not open-ended change) to enable scaling as new barriers and enablers become apparent.⁴⁵ Consider the policy and institutional environment.⁴⁴ Explicitly set goals and plan for transformation and scaling from early on, identifying the form (or mechanism) of scaling.^{30 44} 				
Apply systems thinking and learning					
 Take an integrated, holistic, systems view. ^{34 46} Emphasise on-going monitoring, reflection and learning cycles.^{4 33} Plan for long-term changes and shocks.^{28 47} (See also Box A) 	 Handle added complexity in monitoring, evaluation, and learning from scaling and transformation.^{29 48 49 50} Challenge (all) actors with the need for transformation. 				
	• Allow time for scaling to deliver impact. ^{27 32 49}				

STAP Table 1: Towards Systems Change: Key principles for achieving durability and transformational change in project or program outcomes and impacts

5. Design and implementation actions towards achieving enduring outcomes and impacts

Designing and implementing projects and programs that align with the principles outlined above, therefore increasing the likelihood of achieving enduring outcomes and impacts, requires attention to certain design considerations. These were introduced in section 3 (see Figure 4), and in this section they are elaborated.⁵¹ These align well with the STAP principles for integration. ⁶

5.1 At the project level

At project level, key design considerations for better durability emphasise **multi-stakeholder processes**, supporting the **involvement and motivation of stakeholders**, developing and testing a robust **theory of change**, and promoting **adaptive learning**.

Multi-stakeholder design processes

- Do (and regularly update) **stakeholder mapping and institutional analyses** to inform engagement of all necessary stakeholders: pay attention to power and influence over the barriers and enabler of project outcomes (thus needing an iterative process as these develop).²⁷
- Identify and **equitably engage all key stakeholders**, explicitly allowing that these will evolve over time, with careful design of how much of this is formally involved in project governance. ^{23 32}

Strategic capacity assessment

- Develop explicit plans to **demonstrate the comparative advantage of adopting planned project outputs** to potential adopters within its scope (including potential policy level supporters), in other words, show 'local' benefits.^{27 26}
- Design **individual and community or institutional capacity building plans**, that will develop leaders and champions, consider diversity in all forms, connect with local institutional structures, value local knowledge, use story-telling, and link to local culture in ways that build motivation, trust and ownership. ^{33 34}

Theories of change

- **Co-design (with stakeholders) a robust theory of change** for project level outcomes and impact: this should include a clear definition of the problem to be addressed and its root causes or drivers; a co-designed vision of desired outcomes; a systematic analysis of barriers to, and enablers for, achieving the outcomes; consideration of how to address all barriers (including, persistent funding after the intervention³¹); a plan for a phased withdrawal of the intervention; and the prioritisation of the *necessary and sufficient set* of responses for the project to focus on (allowing for other complementary activities outside the current investment). ^{52 10}
- Identify and **plan for distributional outcomes** and how to manage issues arising from winners and losers of the intervention in the theory of change ²⁴: this is to minimise the risk of them undermining its durability.
- **Explicitly identify any long-term drivers of changes** (e.g. population, climate, migration, product demand, etc) that might undermine project outcomes beyond its lifetime (or create alternative opportunities), and incorporate these into the theory of change (see Box A).
- **Regularly review and refine ToC in light of learning** from monitoring and formative evaluation efforts, to allow structured flexibility in implementation.^{4 45} (This needs to be accepted at the program level, see below.)

Adaptive learning

• Establish effective monitoring, evaluation and learning (MEL) and knowledge management (KM) systems, coupled to an on-going mechanism or process (e.g. local committees, capacity building, new or strengthened value chain organisation, etc) that will carry the project outputs forwards into outcomes and impact after the end of investment; the MEL should encompass the durability of the outcomes. ^{26 28} (This may be facilitated at a program level, see below.)

5.2 At the program level

A coordinated portfolio of projects in a program may deliver transformation and systems change in various ways from the sum of the parts if they:

- Scale from individual projects, with learning across projects so that each project scales more easily; this requires networking across project participants, demonstration sites etc.
- **Coordinate sets of projects so a regional or system-wide outcome is reached** beyond what independent individual projects could achieve; this usually requires engaging with higher levels of governance scales than individual projects need to, and may require institutional change at a higher level (e.g. agreement on tackling land degradation neutrality among nations across the Mopane woodlands region, or driving change into private sector aggregators of a substantial part of the global cocoa or coffee value chains).
- **Maintain partnerships, collaborative networks and coalitions over time**, so that individual projects build to transformational impacts (within or beyond the national level); this requires persistent and evolving stakeholder engagement.

To support transformation, programs should establish processes or conditions that enable projects to take the actions identified in section 4.1 and in STAP's integration paper ⁶, such as:

- Establish (or strengthen existing) multi-stakeholder platforms to sustain collaboration and build coalitions for change, allow flexible engagement with a network of stakeholders that may change through project and program lifetimes.
- Support learning by establishing a knowledge management system⁵³ which includes compiling and periodically reviewing innovative policy and management actions or measures (e.g. dryland restoration/rehabilitation strategies/actions) as well as documenting roadblocks and pitfalls.
- Support structured flexibility in implementation in projects, perhaps by using regular project-level theory of change reviews to assess where flexibility is important and implement adaptive management.⁴⁵
- Support capacity building among project teams to do good project design for durability, for example by creating a community of practice⁵² and providing consistent future scenarios against which to test for future shocks.¹²
- Develop and review a robust theory of change at the program level, which addresses scaling from individual projects.⁵⁴
- **Develop effective approaches to MEL and KM** that assist individual projects to do this efficiently but also provide program level outputs, including those that help judge durability, and allow quality control of knowledge shared across project.

Appendix A: Glossary

Term	Definition
Impact	The positive and negative, primary and secondary long-term effects produced
	by a project or program, directly or indirectly, intended or unintended. 55
Integration	Combination of two, or more, disciplines to provide holistic and systemic
	outcomes. ⁶
Innovation	An idea, embodied in a technology, product, or process, which is new and
	creates value. To be impactful, innovations must also be scalable, not merely
	one-off novelties. ^{18 56}
	A new or improved product or process (or combination thereof) that differs
	significantly from the unit's previous products or processes and that has been
	made available to potential users (product) or brought into use by the unit
	(process). ⁵⁷
Outcome	An intended or achieved short-term and medium-term effect of a project or
	program's outputs. ⁵⁵
Output	A product or service that results from the completion of activities implemented
	within a project or program. ⁵⁵
Scaling	Extending the impact of a product or process. Scaling out, up and deep ³⁹ are
	discussed in Box B.
Sustainability	The continuation of benefits from a development intervention after major
	development assistance has been completed. The probability of continued
	long-term benefits. The resilience to risk of the net benefit flows over time. 58
	The likely ability of an intervention to continue to deliver benefits for an
	extended period of time after completion; projects need to be environmentally
	as well as financially and socially sustainable. ⁵⁹
Sustainable	Sustainable development is "Development that meets the needs of the present
development,	without compromising the ability of future generations to meet their own
sustainability in	needs." ⁶⁰
an environmental	
sense	Sustainability is a contested term used in a "universalist sense" encompassing
	the notions that the planet and its people endure in perpetuity, while
	maintaining health, prosperity, and well-being. This is commonly translated into
	a concept of three interdependent "pillars" of sustainability – that is,
-	maintaining environmental, social and economic health. ¹⁰
Transformation	A system change to a new identity. In this regard, system refers to social-
	ecological system ¹⁰ social-ecological systems are complex, integrated systems in
	which humans are part of nature. ⁶¹

Endnotes

- ¹ GEF IEO. (2018a) Evaluation of GEF Support for Transformational Change, Evaluation Report No. 122. Global Environment Facility Independent Evaluation Office, Washington, DC.
- ² GEF IEO. (2018b) GEF Project Performance and Progress to Impact (Evaluation Report No. 121). Global Environment Facility, Independent Evaluation Office, Washington DC. 56 p.
- ³ OECD DAC. (1991) Principles for evaluation of development assistance. OECD Development Assistance Committee, Paris. 12 p.
- ⁴ Independent Commission for Aid Impact. (2015) DFID's approach to delivering impact. ICAI, London.
- ⁵ TANGO International. (2009) Sustainability of rural development projects: Best practices and lessons learned by IFAD in Asia INDIA CASE STUDY. IFAD, Rome.
- ⁶ Bierbaum, R. et al. 2018. Integration: to solve complex environmental problems. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC. <u>http://stapgef.org/sites/default/files/publications/STAP%20Report%20on%20integration.PD</u> <u>F</u>
- ⁷ Koch DJ, Schulpen L. (2018) Introduction to the special issue 'unintended effects of international cooperation'. Evaluation and Program Planning 68:202-209. DOI 10.1016/j.evalprogplan.2017.10.006
- ⁸ Swidler A, Watkins SC. (2009) 'Teach a Man to Fish': The Doctrine of Sustainability and Its Effects on Three Strata of Malawian Society. World Dev 37(7):1182-1196. DOI 10.1016/j.worlddev.2008.11.002

⁹ Highlighted in review comments on the OECD's DAC principles, see Appendix B.

- ¹⁰ O'Connell D, Abel N, Grigg N, Maru Y, Butler J, Cowie A, Stone-Jovicich S, Walker B, Wise R, Ruhweza A and others. (2016) Designing projects in a rapidly changing world: Guidelines for embedding resilience, adaptation and transformation into sustainable development projects. (Version 1.0). Global Environment Facility, Washington, D.C. 112 p. <u>http://stapgef.org/sites/default/files/publications/RAPTA%20Guidelines%20-%20High%20Resolution.pdf</u>
- ¹¹ <u>Climate Screening paper</u> forthcoming
- ¹² Some of these approaches require a set of scenarios of the future against which alternative project responses can be tested. These may benefit from being framed by the Shared Socioeconomic Pathways (SSPs), which are scenarios that explore how future internally-consistent changes in climate, population, diet, land use regulation, trade (i.e. different socio-economic pathways) affect outcomes such deforestation, malnutrition, water stress

(Byers E, Gidden M, Leclère D, Balkovic J, Burek P, Ebi K, Greve P, Grey D, Havlik P, Hillers A and others. (2018) Global exposure and vulnerability to multi-sector development and climate change hotspots. Environmental Research Letters 13(5):055012. DOI 10.1088/1748-9326/aabf45; van Vuuren DP, Riahi K, Calvin K, Dellink R, Emmerling J, Fujimori S, Samir KC, Kriegler E, O'Neill B. (2017) The Shared Socio-economic Pathways: Trajectories for human development and global environmental change. Glob Environ Change-Human Policy Dimens 42:148-152. DOI 10.1016/j.gloenvcha.2016.10.009.Wilkinson and Eidinow (2008) provide guidance on how to use scenarios in different contexts. (Wilkinson A, Eidinow E. (2008) Evolving practices in environmental scenarios: a new scenario typology. Environmental Research Letters 3(4):45017 (45011pp). DOI http://dx.doi.org/10.1088/1748-9326/3/4/045017)

- ¹³ Stirling AC, Scoones I. (2009) From risk assessment to knowledge mapping: Science, precaution and participation in disease ecology. Ecol Soc 14(2):Art 14 (on-line). DOI
- ¹⁴ Walker W, Marchau V, Bloemen P, Lawrence J, Lempert R, Kwakkel J. (2018) Comment on "From data to decisions: Processing information, biases, and beliefs for improved management of natural resources and environments" by Glynn et al. Earth's Future 6:757-761. DOI 10.1002/2017EF000750
- ¹⁵ Ratner, B.D. 2018. Environmental security: dimensions and priorities. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, DC.
- ¹⁶ Warner K, Zommers Z, Wreford A, Hurlbert M, Viner D, Scantlan J, Halsey K, Halsey K, Tamang C. (2019) Characteristics of Transformational Adaptation in Climate-Land-Society Interactions. Sustainability 11(2):356. DOI
- ¹⁷ Park SE, Marshall NA, Jakku E, Dowd AM, Howden SM, Mendham E, Fleming A. (2012) Informing adaptation responses to climate change through theories of transformation. Global Environmental Change 22(1):115-126. DOI 10.1016/j.gloenvcha.2011.10.003
- ¹⁸ Toth F. (2018) Innovation and the GEF: STAP Information Paper. Global Environment Facility, Washington, DC. <u>https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.STAP_.C.55.Inf_.03_STAP_Innovation.pdf</u>
- ¹⁹ Geels FW. (2011) The multi-level perspective on sustainability transitions: Responses to seven criticisms. Environmental Innovation and Societal Transitions 1(1):24-40. DOI https://doi.org/10.1016/j.eist.2011.02.002
- ²⁰ Riddell D, Moore M-L. (2015) Scaling Out, Scaling Up, Scaling Deep: Advancing Systemic Social Innovation and the Learning Processes to Support it (report prepared for the J.W. McConnell Family Foundation and Tamarack Institute). J.W. McConnell Family Foundation and Tamarack Institute, Canada. 36 p.
- ²¹ Tengberg A, Valencia S. (2017) Science of Integrated Approaches to Natural Resources Management: a STAP Information Document. Global Environment Facility, Washington, DC. <u>http://www.stapgef.org/science-integration-natural-resources-management</u>

- ²² Gorddard R, Colloff MJ, Wise RM, Ware D, Dunlop M. (2016) Values, rules and knowledge: Adaptation as change in the decision context. Environ Sci Policy 57:60-69. DOI http://dx.doi.org/10.1016/j.envsci.2015.12.004
- ²³ Bayiley YT, Teklu GK. (2016) Success factors and criteria in the management of international development projects Evidence from projects funded by the European Union in Ethiopia. International Journal of Managing Projects in Business 9(3):562-582. DOI 10.1108/ijmpb-06-2015-0046
- ²⁴ de Vente J, Reed MS, Stringer LC, Valente S, Newig J. (2016) How does the context and design of participatory decision making processes affect their outcomes? Evidence from sustainable land management in global drylands. Ecol Soc 21(2). DOI 10.5751/es-08053-210224
- ²⁵ Ika LA, Donnelly J. (2017) Success conditions for international development capacity building projects. International Journal of Project Management 35(1):44-63. DOI 10.1016/j.ijproman.2016.10.005
- ²⁶ Zazueta A. (2017) Principles for the Development of Integrated Climate Change and Chemicals and Waste: A STAP Information Document. Global Environment Facility, Washington, DC. <u>http://www.stapgef.org/principles-development-integratedtransformational-projects-climate-change-and-chemicals-waste</u>
- ²⁷ Boshoven J, Hill M, Koontz A. (2018) The Nature of Conservation Enterprises: A 20-year retrospective evaluation of the theory of change behind this widely used approach to biodiversity conservation. USAID, Washington. 84 p.
- ²⁸ Rogers BL, Coates J. (2015) Sustaining Development: A Synthesis of Results from a Four-Country Study of Sustainability and Exit Strategies among Development Food Assistance Projects. FHI 360/Food and Nutrition Technical Assistance III Project (FANTA), Washington, DC. 68 p.
- ²⁹ Bao J, Rodriguez DC, Paina L, Ozawa S, Bennett S. (2015) Monitoring and Evaluating the Transition of Large-Scale Programs in Global Health. Global Health-Science and Practice 3(4):591-605. DOI 10.9745/ghsp-d-15-00221
- ³⁰ Buntaine MT, Parks BC. (2013) When Do Environmentally Focused Assistance Projects Achieve their Objectives? Evidence from World Bank Post-Project Evaluations. Global Environmental Politics 13(2):65-+. DOI 10.1162/GLEP_a_00167
- ³¹ Oldewage-Theron WH, Duvenage SS, Egal AA, Lyford C. (2018) Comparative analysis of the factors contributing to sustainability of a food and nutrition intervention programme: Two case studies from South Africa. Evaluation and Program Planning 71:51-57. DOI 10.1016/j.evalprogplan.2018.08.003

- ³² Brooks JS. (2017) Design Features and Project Age Contribute to Joint Success in Social, Ecological, and Economic Outcomes of Community-Based Conservation Projects. Conservation Letters 10(1):23-32. DOI 10.1111/conl.12231
- ³³ Mahonge C. (2013) Factors behind sustainability of activities in the post-project period in Matengo highlands in Tanzania. Journal of Environmental Sustainability 3(3):91-102. DOI
- ³⁴ Hovland Consulting LLC. (2018) Best Practices for Enduring Conservation with a summary of a Five-Year Retrospective (2013-2018) of the Hewlett Foundation's Western Conservation Grantmaking Strategy. Hovland, Boulder CO. 11 p.
- ³⁵ Martinez-Bautista H, Sanchez FJZ, Alvarado-Segura AA, Maldonado HR, Salinas MF. (2015) Determinants of success or failure on community forestry projects with government funding in Mexico. Bosque 36(3):363-374. DOI 10.4067/s0717-92002015000300004
- ³⁶ Sastre-Merino S, Negrillo X, Hernández-Castellano D. (2013) Sustainability of Rural Development Projects within the Working With People Model: Application to Aymara Women Communities in the Puno Region, Peru. Cuadernos de Desarrollo Rural 10(70):219-243. DOI
- ³⁷ Yee JSR, White H. (2016) The Goldilocks Conundrum: The 'Just Right' Conditions for Design to Achieve Impact in Public and Third Sector Projects. International Journal of Design 10(1):7-19. DOI
- ³⁸ Moore HE, Boldero J. (2017) Designing Interventions that Last: A Classification of Environmental Behaviors in Relation to the Activities, Costs, and Effort Involved for Adoption and Maintenance. Front Psychol 8:1874. DOI 10.3389/fpsyg.2017.01874
- ³⁹ Moore M-L, Riddell D, Vocisano D. (2015) Scaling Out, Scaling Up, Scaling Deep: Strategies of Non-profits in Advancing Systemic Social Innovation. Journal of Corporate Citizenship 2015(58):67-84. DOI 10.9774/GLEAF.4700.2015.ju.00009
- ⁴⁰ Glasbergen, P., 2010. Global action networks: Agents for collective action. Global Environmental Change, 20(1), pp.130-141.
- ⁴¹ De Kraker, J., 2017. Social learning for resilience in social–ecological systems. *Current Opinion in Environmental Sustainability*, *28*, pp.100-107.
- ⁴² Lebel, L., Anderies, J.M., Campbell, B.M., Folke, C., Hatfield-Dodds, S., Hughes, T.P. and Wilson, J., 2006. Governance and the capacity to manage resilience in regional socialecological systems. *Ecology and Society*, *11*(1).
- ⁴³ Tanner, T., Lewis, D., Wrathall, D., Bronen, R., Cradock-Henry, N., Huq, S., Lawless, C., Nawrotzki, R., Prasad, V., Rahman, M.A. and Alaniz, R., 2015. Livelihood resilience in the face of climate change. *Nature Climate Change*, *5*(1), p.23.

- ⁴⁴ Barnes C, van Laerhoven F. (2015) Making it last? Analysing the role of NGO interventions in the development of institutions for durable collective action in Indian community forestry. Environ Sci Policy 53:192-205. DOI 10.1016/j.envsci.2014.06.008
- ⁴⁵ Thornton PK, Schuetz T, Forch W, Cramer L, Abreu D, Vermeulen S, Campbell BM. (2017) Responding to global change: A theory of change approach to making agricultural research for development outcome-based. Agric Sys 152:145-153. DOI 10.1016/j.agsy.2017.01.005 provide an approach to allowing flexibility that is constrained.
- ⁴⁶ See also OECD DAC review in Appendix B
- ⁴⁷ Terrapon-Pfaff J, Grone MC, Dienst C, Ortiz W. (2018) Productive use of energy Pathway to development? Reviewing the outcomes and impacts of small-scale energy projects in the global south. Renewable & Sustainable Energy Reviews 96:198-209. DOI 10.1016/j.rser.2018.07.016
- ⁴⁸ Bennett S, Ozawa S, Rodriguez D, Paul A, Singh K, Singh S. (2015) Monitoring and evaluating transition and sustainability of donor-funded programs: Reflections on the Avahan experience. Evaluation and Program Planning 52:148-158. DOI 10.1016/j.evalprogplan.2015.05.003
- ⁴⁹ Midmore P. (2017) The Science of Impact and the Impact of Agricultural Science. Journal of Agricultural Economics 68(3):611-631. DOI 10.1111/1477-9552.12242
- ⁵⁰ Ozawa S, Singh S, Singh K, Chhabra V, Bennett S. (2016) The Avahan Transition: Effects of Transition Readiness on Program Institutionalization and Sustained Outcomes. Plos One 11(7). DOI 10.1371/journal.pone.0158659
- ⁵¹ More background on the sources is provided in Appendix B, and Table B.1 summarises these more briefly, showing the links between success indicators, principles and these actions.
- ⁵² Maru YT, Sparrow A, Butler JRA, Banerjee O, Ison R, Hall A, Carberry P. (2018b) Towards appropriate mainstreaming of "Theory of Change" approaches into agricultural research for development: Challenges and opportunities. Agric Sys 165:344-353. DOI 10.1016/j.agsy.2018.04.010
- ⁵³ Stocking M, et al. (2018) Managing knowledge for a sustainable global future. Scientific and Technical Advisory Panel to the Global Environment Facility, Washington, DC. 16 p. <u>http://stapgef.org/sites/default/files/publications/STAP%20Report%20on%20KM.pdf</u>
- ⁵⁴ GEF IEO (2018a, p.3) contains a generalised theory of change that has elements relevant to the program level, which should be fleshed out by identifying barriers and enablers in particular program contexts
- ⁵⁵ GEF IEO, 2010 after OECD, 2002 (GEF IEO. (2010) The GEF Monitoring and Evaluation Policy. Global Environment Facility Independent Evaluation Office, Washington, DC.; OECD. (2002)

Glossary of Evaluation and Results Based Management (RBM) Terms. OECD, Paris. 38 p. DOI 10.1787/9789264034921-en-fr

- ⁵⁶ White House Office of Science and Technology Policy. (2015) A Strategy for American Innovation.
- ⁵⁷ OECD. (2018) The Oslo Manual 2018, 4th Ed. OECD, Paris. DOI 10.1787/9789264304604-15en
- ⁵⁸ OECD. (2002) Glossary of Evaluation and Results Based Management (RBM) Terms. OECD, Paris. 38 p. DOI 10.1787/9789264034921-en-fr
- ⁵⁹ GEF IEO. (2010) The GEF Monitoring and Evaluation Policy. Global Environment Facility Independent Evaluation Office, Washington, DC.
- ⁶⁰ Brundtland Commission (1987) Report of the World Commission on Environment and Development: Our Common Future. Oxford University Press, Oxford.
- ⁶¹ Berkes F, Folke, C (Eds.) (1998) Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience. Cambridge Univ. Press, Cambridge, UK.
- ⁶² STAP guidelines for screening GEF projects http://stapgef.org/sites/default/files/publications/STAP%20screening%20guidelines_0.pdf;