

Transformational change



Report prepared for International Climate Initiative

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1 Transformational Change

Vivid briefing paper for SNAPFI

1.1 Context of this briefing paper

This paper forms part of the Strengthen National Climate Policy Implementation (SNAPFI) international research project. The project aims to understand how international climate finance can support Nationally Determined Contribution implementation.

1.2 Purpose of this briefing paper

The purpose of this briefing paper is to discuss the concept of ‘transformational change’ and to outline a proposed working approach for the identification of transformative climate finance within SNAPFI. Moving towards a shared understanding of what may or may not constitute transformational change will be crucial in supporting cross-country learning and realising the potential of the SNAPFI project. Country programs will benefit from a shared understanding of transformational change both because it will help them in assessing their national and sub-national studies, and to situate their country-specific findings in the broader debate.

Due to its multifaceted nature, stakeholders disagree about whether or not the term ‘transformational change’ should be defined. The Green Climate Fund (2018) notes that ‘the concept [of transformational change] will apply in different ways to different sectors, and differently at different times’. This has led the institution to not settle on a single definition of transformational change. Similarly, Climate Investment Funds (2019) notes the difficulty in interpreting and operationalising the term ‘transformation’. Furthermore, thinking around transformational change needs to take into account that the Paris Agreement recognises the need for ‘differentiated responsibilities’ (United Nations, 2015, article 2.2) in the light of ‘different national circumstances’ (United Nations, 2015, article 4.3). However, while ‘intentional vagueness’ and ‘constructive ambiguity’ (Robinson, 2004) of the term may lead to a broader stakeholder engagement¹, ‘a lack of clarity on transformational change also entails the risk of the term becoming rhetorical, ungrounded and representing a means to circumvent formal mitigation targets’ (Boodoo, Mersmann and Olsen, 2018).

This note seeks to bring together different elements of existing perspectives on transformational change to come to a working concept for the SNAPFI project. In finding common ground and accounting for the various contexts in which current definitions are set, we can develop a shared, clear understanding of the concept without constraining it to a single definition or setting. This would allow SNAPFI teams to apply it to all different settings that they are looking at.

In this review, we start from the World Bank’s definition, but then compare and contrast it with other perspectives to arrive at a shared understanding of transformational change. The benefit of starting with the World Bank definition is that, unlike many other definitions explored in this note, it was designed to apply to a wide range of settings. Even though SNAPFI focuses on climate change, appreciating the broader contexts in which transformational change has been considered helps in developing a more encompassing approach and viewing the country programs as part of ‘the bigger picture’. The analysis then presents further definitions and approaches, comparing and contrasting

¹ This is because the ambiguity allows different stakeholders to interpret ‘transformational change’ in a way that is applicable to them

these with the World Bank's definition of transformational change. Thereafter, we will collate the different views to arrive at a shared understanding.

This note has three sections: in the first section, we present the World Bank's interpretation of the concept and compare it to the descriptions of transformational change in other work. Thereafter, we discuss the concept in the context of international climate finance² specifically, examining both developing and developed country perspectives. Lastly, we present a suggested assessment framework for transformational change and demonstrate its application with two relevant case studies.

1.3 World Bank Definition

The World Bank provides a definition of transformational engagements (read as 'transformational interventions') as those that:

'support deep, systemic, and sustainable change with the potential for large-scale impact in an area of a major development challenge³ [or societal or global concern]. Such engagements help clients⁴ remove critical constraints [...], cause or support fundamental change in a system, have large-scale impacts at the national or global level, and are economically, financially and environmentally sustainable.' (World Bank, 2016)

The definition is spatial and timeframe agnostic, meaning that it allows for both rapid and slow changes. Closely related to the latter, the World Bank's view also does not specify if an incremental transition (as opposed to a one-off change) can be transformative. The generality of the term 'critical constraints' recognises that a range of different barriers to transformational change can be active. These constraints may include the asymmetric distribution of development and resources as is often the case in cross-country projects.

According to the World Bank, transformational change can be disaggregated into four dimensions. The World Bank (2016) suggests that transformational change is the result of engagements that meet the following four conditions, which in conjunction are considered both necessary and sufficient:

- *Relevance:* Transformative engagements deliver a transformational goal by addressing a major developmental challenge, or societal or global concern.
- *Depth of change:* Transformational engagements address the root cause(s) of the concern and hence allow for an alternative development trajectory. This can be achieved through changes in systems, markets and/or behaviours.
- *Scale of change:* Transformational engagements must cause a large-scale impact, with the potential for further scale effects and/or influences on the wider environment. These changes must go beyond the boundaries of the intervention itself. These can come through catalytic effects⁵, demonstration effects⁶, replication of innovation or positive externalities⁷.

² The definition of international climate finance is further discussed in section 1.3 below.

³ The World Bank adds this broadening of the definition to 'societal or global concern' in parentheses to 'development' in Table 1.1 Dimensions and Characteristics (World Bank, 2016, table 1.1)

⁴ The term 'clients' denotes the World Bank's clients.

⁵ Catalytic effects occur when interventions increase the speed at which change happens

⁶ Demonstration effects occur when other parties observe and copy (part of) the intervention

⁷ Positive externalities are benefits experienced by third parties (i.e. parties that are not directly involved in the intervention)

- *Sustainability*: Transformational engagements bring permanent, robust and resilient change that can be sustained with the financial means available, without harming the prospects of long-term economic growth and in a way that does not harm the environment.

1.4 Comparative Analysis

Table 1 compares the definitions that different organisations and academics use for transformational change using the four dimensions suggested by the World Bank. As discussed below, most fields contain quotes supporting the importance of the respective dimension (full citations can be found in Annex 3). Fields marked as ‘implied’ indicate that the organisation does not explicitly mention the relevant dimension in their definition of transformational change, but its importance can be inferred from the context. Fields marked as ‘disagreement’ indicate that the organisation’s definition of transformational change contradicts the World Bank’s description of the relevant dimension. Our review did not find institutions using definitions with elements beyond the World Bank’s four dimensions.

- *Relevance*

With regards to the relevance dimension, most organisations agree that transformational change can only occur when addressing a global, societal or developmental concern. The World Bank adopts a high-level approach, considering a wide range of transformational goals including poverty reduction and women’s empowerment. Environmental institutions, reflecting their focus, define transformational change specifically in relation to the climate challenge, suggesting that transformational engagements should reduce emissions and/or advance climate resilience. In the context of management theory, transformational change focuses on resolving more micro-level, organisational concerns. Yet, the addressed challenges are still organisationally holistic and hence do not constitute a disagreement in the definition of transformational change.

Some institutions believe that transformational change is not conditional on achieving a particular aim. The Initiative for Climate Action Transparency’s definition, for example, defines transformational change in terms of processes – it must be a change of systems, involve multiple actors at multiple levels, be sustained over a long period of time and disrupt the status quo (Initiative for Climate Action Transparency, 2018). Similarly, the Center for Transformative Change, which is dedicated to supporting social justice, provides a definition that focuses on systems (Gass, 2010) rather than outcomes.

The consensus of existing views suggests that transformational change can occur as the reaction to a global, societal, developmental, environmental or organisational concern. Balancing the merits of having a broad understanding with the need for clarity of purpose, we believe that the environmental and managerial perspectives should be explicitly added to the relevance dimension. Taking into account that the SNAPFI country programs are structured around a particular aim by design, we will take a goal-driven approach to transformational change in this piece of work.

- *Depth of Change*

Adjectives used to describe transformational change include ‘deep’, ‘systemic’, ‘fundamental’, ‘radical’ and ‘structural’. The concept involves a change of systems, markets, policies and/or behaviours. ITAD (2019) refer to ‘systemic change’ as a dimension in their definition, but its description is largely similar to the World Bank’s ‘depth of change’, indicating the two terms have a similar meaning. For example, Wharton and Evans (Wharton and Evans, 2018) argue that ‘systems change is about addressing the root causes of social problems’.⁸

⁸ Varying opinions exist about the degree to which ‘systemic change’ differs from ‘transformational change’. On the one hand, Wharton and Evans (2018) suggest that systemic change is ‘an intentional process designed to fundamentally alter the components and structures that

Most definitions of transformational change do not preclude the possibility of incremental or slow changes. 19 out of the 21 definitions under consideration remain timeframe agnostic, allowing transformational change to occur either incrementally or as a one-off change. Van den Bergh et al (Van Den Bergh, Truffer and Kallis, 2011) argue that societal change often occurs through an incremental, evolutionary process, which is sparked by innovation⁹ that fosters diversity in available products and processes. This diversity is then reduced through a selection mechanism and the change is finally locked in through repeated selection in society. Similarly, Pakistani academics Majid et al (Majid *et al.*, 2011) include incremental change within their definition of transformational change and Halpern and Mason (Halpern and Mason, 2015) explicitly consider the potential for ‘radical incrementalism’. Moreover, most definitions do not specify whether transformational change occurs rapidly or slowly. For example, ICAT considers instances of transformational change that occur over a long period of time (Initiative for Climate Action Transparency, 2018). While the Transformational Change Learning Partnership and the Climate Change Compass allow for an acceleration of the trajectory towards low-carbon and climate resilient development (ITAD, 2019) and for ‘faster change’ (Climate Change Compass, 2018), neither of these two definitions considers acceleration or faster change a requisite.

However, two authors postulate that transformational change is limited to rapid and one-off transitions. Alsher (Alsher, 2018) argues that transformational change ‘can’t be done incrementally’. Niazi (2019) critiques a transformational change that is rapid, and advocates in its place a ‘slow, boring, incremental change’ which he implies is not transformational change.

The broad agreement in the literature suggests that transformational change can consist of changes in systems, markets, policies or behaviours and can occur at any timescale or (dis-)continuity. While ICAT utilises the term ‘systemic change’ synonymously with ‘deep change’, we believe that the general understanding of transformational change explicitly allows isolated – but impactful – changes in markets, policies or behaviours beyond changes in systems only. Moreover, the broad consensus of definitions argues that transformational change is timeframe (rapid or slow) and continuity (incremental or one-off) agnostic.

- *Scale of change*

All institutions agree, explicitly or implicitly, that transformational change involves a large-scale impact. ICAT elaborates by necessitating multiple actors and levels to be involved. The focus on breadth of change is in line with the World Bank focus on effects and influences on the wider environment. Based on this general agreement, the ‘scale of impact’ dimension proposed by the World Bank can work in the context of the SNAPFI project. In order to avoid ambiguity of the term ‘large-scale’, we propose stakeholders to consider the involvement of multiple actors and levels a necessity.

- *Sustainability*

The literature review suggests that, beyond the World Bank’s sustainability dimension, social and political sustainability are essential for community or nationally owned transformational change to occur. There is broad consensus on the sustainability dimension, where all organisations agree that transformational change must result in long-term, sustainable and self-reinforcing impacts. The World

cause the system to behave in a certain way’. Thereby they attribute the ‘depth of change’ dimension to systemic change, which according to the World Bank is a subset of transformational change. On the other hand, Forum for the Future (2018) claim that systemic change is ‘driven by transformational [...] change’.

⁹ Van den Bergh et al use Kemp and Pearson’s (Kemp and Pearson, 2007) definition of environmental innovation as “a product, production process, service or management or business method that is novel to the organisation (developing or adopting it) and which results, throughout its life cycle, in a reduction of environmental risk, pollution and other negative impacts of resource use (including energy use) compared to relevant alternatives” (p. 7).

Bank disaggregates sustainability into three building blocks: financial, economic and environmental. The Global Environment Facility (Global Environment Facility, 2017) extends this definition further by adding social and political sustainability in the list of attributes of transformational change. In the setting of a university, Gioia and Thomas argue that when changes are interpreted as political – that is, geared towards factional interests and preferences – rather than strategic, and involve constituents rather than stakeholders, they involve fundamental changes in identity, which makes them much more difficult to achieve (Gioia and Thomas, 1996; Kezar, 2013). This points to a further change required at the individual level. The Center for Transformative Change asserts that social transformational change ‘derives its power’ by change at the individual level in terms of thinking, feeling and behaviour (Gass, 2010), while management author Anderson asserts that transformational change begins with ‘a profound shift in worldview and awareness’ (Anderson, 2015). Without this change at the individual level, argues Niazi (2019) in a Pakistani newspaper, ‘strongman rulers’ attempting to enforce transformational change in Pakistan so as to achieve development goals have not been successful. This approach suggests both that transformational change needs to stem from a change of thinking at the individual level and cannot subvert structures that are essential for good governance. Furthermore, where transformational engagements adversely affect communities, they must be executed in such a manner that the communities perceive their transition as a ‘just’ one so that they are not incentivised to support anti-change leaders who purport to protect their interests (Robins *et al.*, 2019).

Bringing together the different elements of sustainability proposed by various sources, transformational change should be financially, economically, environmentally, socially and politically sustainable and have long-term effects. The definitions under consideration agree that transformational engagements should have long-lasting effects and be sustainable. The most comprehensive description states the need for five different levels of sustainability (financial, economic, environmental, social and political). We propose that country programs should be evaluated against all five of these levels to ensure their comparability in the broader debate around transformational change.

Table 1 Definitions of Transformational Change

Organisation/ author	Dimensions of Transformational Change			
	Relevance	Depth of Change	Scale of Change	Sustainability
Development definitions				
World Bank (2016)	‘major development challenge’;	‘deep, systemic and [...] fundamental change’	‘large-scale impact’	‘economically, financially and environmentally sustainable’
Feinstein (2019)	Achieving one or more of the SDGs	The depth is implicit in the SDGs being met	‘significant advance in the achievement of one or more SDGs’ or ‘significant change in the direction in which society is organized for a better achievement of the SDGs’	The SDGs are meant to promote sustainable development
Fridahl and Johansson (2017)	‘shifting from an old to a new development path’	‘radical change’	‘large-scale [...] change’	Unclear
Uitto et al (Uitto <i>et al.</i> , 2019)	‘in a significant area of concern’	‘deep, systemic [...] changes’	‘with large-scale impacts’	‘sustainable changes’
Environmental definitions				
Angelsen et al. (2012) - in the context of REDD+	‘low-carbon, climate-resilient development’; ‘away from business as usual policy approaches that directly or indirectly support deforestation and forest degradation’	‘a fundamental change’; ‘leads policy formulation and implementation’; Angelsen et al argue that transformational change can be an indirect result of an intervention.	Implied	Implied
Climate Change Compass (2018)	Implied	‘change which catalyses further changes’; ‘either a shift from one state to another [...] or faster change’	‘Interventions have sufficient reach to achieve progressive institutional or policy reform, or drive down the costs of technology deployment’	‘activities are likely to be sustained once ICF support ends’
Global Environment Facility (2017)	‘in an area of global environmental concern’; ‘strengthens the resilience of ecosystems, social systems and responses to climate change’	‘deep, systemic [...] change’	‘large-scale impact’	‘sustainable change’

ICAT (2018)	No purpose stated	'deep, fundamental change that disrupts the status quo'; 'change of systems'	'not just singular developments'; 'involves multiple actors at multiple levels'	'sustained [...] over a long period of time'
Mersmann and Wehnert (2014)	'it will unlock new development paths'	'a structural change'	'alters the interplay of institutional, cultural, technological, economic and ecological dimensions;	Unclear
NAMA Facility (2019)	'enables actors to shift to zero-carbon pathways'	'catalytic change in systems and behaviours resulting from disruptive climate actions'	Implied	'mechanisms that trigger a self-reinforcing dynamic and prevent reversion'
Transformational Change Learning Partnership (Climate Investment Funds, 2019; ITAD, 2019)	'shift and/or [acceleration of] the trajectory toward low-carbon and climate-resilient development'	'strategic changes in targeted markets and other systems'	'large-scale [...] impacts'	'sustainable impacts'
Developing nation citizen definitions				
Niazi (Niazi, 2019)	'where income inequality isn't quite so stark, the rule of law is applicable to all and justice isn't a privilege of the rich'	'rapid change'; implies that transformational change cannot be incremental	'obliterating the old order'	
Social justice definitions				
Center for Transformative Change (Gass, 2010)	No purpose stated	'radical breakthroughs in paradigms, beliefs and behavior'	'profound, fundamental and irreversible'	It is irreversible because it derives its power by attending 'equally to hearts and minds, human behavior, and the social systems and structures in which they exist'
Friedrich-Ebert-Stiftung in India (Saxer, 2017)	,	'disruptive reforms'		'maximum societal buy-in'
Gender transformative change definition				
CARE India (2017)	'would imply changes in the lives of individuals, family relationships and community, leading to transformation in social norms which are repressive or discriminatory'	'alter structures [...] transformation in social norms [...]	'engages all stakeholders and key influencers'	The change is lasting since it 'leads to a transformation in social norms'
Corporate Social Responsibility				

Unilever Pakistan (2016)	Helping 'more than 1 billion people take action improve their health and well-being by 2020'	'systemic and scalable change'	Impacting 1 billion lives	By helping people help themselves, the change is sustainable
Organisational management definitions				
Alsher (Alsher, 2018) – in the context of management theory	No purpose stated	'frame-breaking change that completely alters your current operating structure'; Disagreement: 'can't be done incrementally'	'These changes will have to be massive change to processes, people, and typically technology'	Unclear
Anderson (Anderson, 2015)	Driven by an imperative that 'the status quo must fundamentally change'	'strategy, structure, systems, operations, products, services, or technology to change radically'	Goes beyond improving what is (developmental change) or replacing what is (transitional change)	'culture and people's behaviors and mindsets to shift fundamentally in order to implement the changes [...] and sustain the benefits'
Majid, Yasir, Khan, Tabbassum (Majid et al., 2011)	'new and radically different forms of organization's mission, culture and leadership'	'It includes both radical and incremental changes'	At the scale of the organisation	
WebFinanceInc. (WebFinance Inc., 2020) – in the context of management theory	No purpose stated	'change in the underlying strategy and processes that the organisation has used in the past'	'organisation-wide'	Unclear
Yolles (2004)	'high stakes'		'a paradigm shift'	

Source: DIW & Vivid Economics

In conclusion, our comparative analysis suggests that most sources have similar views on transformational change as the World Bank. The broad consensus endorses the World Bank's four dimensions as the pillars of transformational change. Relevance, depth of change, scale of change and sustainability are regarded to be the fundamental elements for any transformative engagement.

There exist some divergences that could broaden our view with further interesting elements. Some definitions are context-specific and go beyond the World Bank's definition. We believe that these addendums should be taken into account when assessing projects against their potential for transformational change.

Bringing together the broad agreements in literature with the context-specific elements of different perspectives, we get a shared understanding of the four dimensions of transformational change:

- *Relevance*: Transformational engagements should address a major global, societal, developmental, environmental or organisational concern
- *Depth of change*: Transformational change refers to a fundamental change in systems, markets, policies, norms, beliefs and/or behaviours. It may occur rapidly or slowly, and incrementally or through a one-off change
- *Scale of change*: Transformational engagements should lead to large-scale impacts and involve multiple stakeholders at different levels
- *Sustainability*: Transformational change should have long-term effects and be financially, economically, environmentally, politically and socially sustainable

1.5 Relevance to International Climate Finance

International climate finance is the flow of funds from developed countries to developing countries to support mitigation and adaptation climate actions. The United Nations Framework Convention on Climate Change defines it as 'finance that aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts'. International climate finance seeks to support developing countries meet the full and incremental cost of climate change. The sources of international climate finance are not limited to multilateral public finance but include bilateral public finance and, in some definitions, (aspects of) private finance. The flows of climate finance from developed to developing countries is also a formal recognition of historical responsibility and an attempt to seek a fairer share of the economic cost of climate change impacts.

This section examines how international climate finance relates to the four dimensions of transformational change to support cross-country learning within and beyond the SNAPFI project. We consider the different elements that link international climate finance to the shared understanding of the four dimensions that was discussed above. Our aim is to position climate finance projects within the broader debate around transformational change.

- *Relevance*

The transformational goal of international climate finance is to reduce greenhouse gas emissions and increase the climate resilience of developing countries. International climate finance supports countries to manage risk, build resilience to the impacts of climate change, take up low-carbon development at

scale and manage natural resources sustainably. In other words, by aiming to steer developing countries towards a low-carbon, climate-resilient future, international climate finance addresses environmental, developmental and global concerns. According to broad consensus in the literature, working towards mitigating these challenges constitutes a relevant transformational goal. International climate finance is, therefore, intrinsically relevant. Moreover, the relevance dimension is inherently intertwined with the sustainability dimension where climate finance projects are concerned.

- *Depth of change*

According to the depth of change dimension, international climate finance is only transformational where it results in deep change within the area of intervention and beyond. The change can affect systems, market, policies, behaviours and/or norms. For example, technical assistance can help governments to ‘climate-proof’ their systems and policies. Regarding timescale and continuity, transformational change occurs rapidly, slowly, incrementally or as a one-off change. Robins et al suggest that government and company policies will be required to ensure a ‘just transition’ for workers and communities affected by rapid and disruptive change that existing markets and institutions cannot deal with adequately (Robins *et al.*, 2019). Failure to adequately consider the socioeconomic dimensions of transformational change has been reflected at the ballot box, where anti-climate politicians have caused a backlash by claiming to protect vulnerable workers and communities from change (Robins *et al.*, 2019).

- *Scale of change*

In order to be transformational, international climate finance should have a large-scale impact on various stakeholder groups and lead to chain effects. In order for international finance to have a sustained climate impact over a long period of time,¹⁰ an alignment needs to exist between the objectives of the international climate finance donors and the requirements of the recipients; non-alignment fails to spur transformational change (Fridahl *et al.*, 2015). International climate finance should be participatory and nationally owned, otherwise transformational change ‘risks being perceived as and becoming a pressure imposed on developing countries’ (Winkler and Dubash, 2016). Moreover, projects may lead to chain or demonstration effects, for example if an innovative idea to support energy transition gets replicated in neighbouring countries. Similarly, positive externalities can lead to scale effects. They are an inherent consequence of many mitigation action as the general population benefits from, for example, pollution abatement and avoidance of natural disasters.

- *Sustainability*

International climate finance should be socially and politically sustainable in addition to being financially and economically sustainable, in order to support increased environmental sustainability. International climate finance projects are environmentally sustainable by design, but other levels of sustainability have to be considered, too. Regarding financial sustainability, the programmes should demonstrate the ability to transition from international public to domestic and/or international private financing. Where appropriate, sustainable financing may also involve the transition from grant financing to concessional-loan financing to PPP-structures and finally to pure private-sector financing. Furthermore, the investments should not interfere with long-term economic growth prospects to ensure economic sustainability. Winkler and Dubash (2016) propose that while solving an environmental concern, climate action may occasionally conflict with national development objectives and hence economic sustainability. Moreover, to be politically and socially sustainable, transformational change needs to stem from change at the individual level in terms of thinking, feeling and behaviour (Gass, 2010), and from ‘a profound shift in worldview and awareness’ (Anderson, 2015).

¹⁰ Per the Initiative for Climate Action Transparency (2018) definition of transformational change

1.6 Assessment Criteria

The aim of this section is to provide a guide to identifying climate finance projects that constitute **transformational engagements**. In doing so, we hope to support stakeholders in structuring climate finance projects from the outset in a way that paves the way for transformational change.

Whether international climate finance is transformational is not a binary observation but rather one that falls within a spectrum. Itad (ITAD, 2019), for example, assesses each of the four dimensions against *how strong* the signals of transformation are, not *if they exist*. They differentiate between the following signals:

- *Advanced signals*: Strong evidence of signals of transformation related to the dimension
- *Interim signals*: Evidence of transformational change underway
- *Early signals*: Emerging evidence of transformational change
- *No evidence of signals*

In our analysis, we will adopt a spectral framework for assessing case studies against transformational change. The higher a case study performs against each of the dimensions, the more strongly can we recommend for it to be classified as transformational. Our assessment framework will be subject to revision and refinement based on our findings in the case studies. The following section demonstrates this approach with two example case studies.

1.7 Examples

ITAD (2019) evaluate the extent to which the investments made through the Climate Investment Funds constituted **transformational change**. Two examples from their report illustrate how the definition of transformational change can be applied to international climate finance:

- **Clean Technology Fund (CTF)**. CTF was initiated by CIF in 2008. It aims at transforming the energy sector by stimulating the deployment of low-carbon technologies through 16 programs in emerging economies. The pledged and approved funding amounts to a total of US\$10 billion.
- **Forest Initiatives Programs (FIP)**. CIF has implemented 14 regional FIPs, with a total pledged and approved funding of US\$1.2 billion. These programs address the challenges of conservation, enhancement of forest carbon stocks, and sustainable forest management.

Table 2 summarises ITAD's assessment of the transformational change these programmes delivered.

Table 2 Assessment of transformational change in two CIF funds

	CTF	FIP
Relevance	CTF has successfully resulted in large scale deployment of clean energy and other low carbon technologies. It has addressed financing costs and risk barriers for emerging, sustainable technologies. The selection of interventions was timely and well-targeted.	FIP involved in-depth analyses of the drivers of forest degradation and deforestation as well as comprehensive stakeholder engagement. This in turn contributed to the transformational goal of forest preservation.
Depth of change	The CTF contributed to multiple first-mover and early stage projects that unlocked private investment.	FIP's approach of aligning incentives and creating common understanding has helped lay the foundations for systemic change. It has strengthened high-level government commitment to forest protection and resulted in policy reforms (both in the forestry sector and in the integration of forestry into broader climate policy), new financing approaches and cross-departmental working. However, disbursement remains at an early stage. Furthermore, consensus-building and bureaucratic processes has been slow in the recipient countries.
Scale of change	CTF projects resulted in broader investment in renewable energy, increased installed capacity and engagement by financial intermediaries. Projects contributed in indirect ways to transforming the wider energy sector ¹¹	The scale of change resulting from FIP is limited relative to unsustainable forest practices, particularly considering the continued absence of large-scale financing and prevailing perverse incentives. However, there may be opportunities for replication as the FIP has demonstrated new incentive models. Private-sector led pilot projects offer the best signals of scaling, with expansion in the scale of finance and the area under sustainable management.
Sustainability	CTF projects not only supported the deployment of low-carbon technologies but has also led to cost-competitive new industries that are financially as well as economically sustainable. This is evidenced by falling technology deployment costs, a shift to non-concessional and balance-sheet finance and strengthened policy commitments.	While FIP has demonstrated the potential viability of new business models and has begun the work of aligning stakeholder interests and understanding around a common vision, it is hard to determine the long-term impact. Forest programs can very seldomly attract enough private-sector funding to achieve a self-reinforcing financing mechanism.

 Advanced signals: Strong evidence of signals of transformation related to the dimension

 Interim signals: Evidence of transformational change underway

 Early signals: Emerging evidence of transformational change

 No evidence of transformational change

Source: Vivid Economics, based on ITAD (2019)

¹¹ Although the original authors list this under 'scaling', the system wide impacts could arguably fall under systemic change category.

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3 Annex: Full Definitions of Transformational Change

Development definitions

World Bank, 2016: ‘Individual or series of 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 or support fundamental change in a system, have large-scale impact at the national or global level, and are economically, financially and environmentally sustainable.’ (p. xi)

Feinstein, 2019: ‘In the context of the (long) march towards the SDGs, transformational change of society could amount to a significant advance in the achievement of one or more SDGs. Alternatively, it could involve a significant change in the direction in which society is organized for a better achievement of the SDGs (Feinstein, 2019, p. 18).’

Fridahl and Johansson, 2017: ‘Transformational change thus signifies a measure of scale, i.e. the large-scale and radical change of shifting from an old to a new development path.’ (p. 37) (Fridahl and Johansson, 2017)

Uitto et al, 2019: ‘deep, systemic, and sustainable changes with large-scale impacts in a significant area of concern’.

Environmental definitions

Angelsen et al. (Center for International Forestry Research), 2012: ‘In the context of REDD+, we define transformational change 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. 16-17)

Climate Change Compass, 2018: ‘Transformational Change is ‘change which catalyses further changes’, enabling either, a shift from one state to another (e.g. from conventional to lower carbon or more climate-resilient patterns of development), or faster change (e.g. speeding up progress on cutting the rate of deforestation). [...] Where interventions (such as national, sectoral or regional programmes) have sufficient reach to achieve progressive institutional and policy reform, or drive down the costs of technology deployment; [...] Where activities are likely to be sustained once ICF support ends.’ (p. 5)

Global Environment Facility, 2017: ‘For the purpose of this study, transformational interventions are defined as engagements that help achieve deep, systemic, and sustainable change with large-scale impact in an area of global environmental concern.’ (p. 11)

Initiative for Climate Action Transparency, 2018: ‘Transformational change is a change of systems, not just singular developments, and involves multiple actors at multiple levels. Transformational change constitutes deep, fundamental change that disrupts the status quo, and sustains that change over a long period of time. Transformational change by itself has no normative connotation; values are added by defining a transformation goal.’ (p. 2)

Mersmann and Wehnert, 2014: ‘A structural change that alters the interplay of institutional, cultural, technological, economic and ecological dimensions of a given system. It will unlock new development paths, including social practices and worldviews.’ (p. 10) (Mersmann and Wehnert, 2014)

NAMA Facility, 2019: 'Transformational change is a catalytic change in systems and behaviours resulting from disruptive climate actions that enable actors to shift to carbon-neutral pathways. [...] Transformational change goes beyond individual projects or interventions and requires built-in incremental learning processes that allow fearless learning and mechanisms that trigger a self-reinforcing dynamic and prevent reversion.'

Transformational Change Learning Partnership, 2019: 'The TCLP [Transformational Change Learning Partnership] defines transformational change in climate action as strategic changes in targeted markets and other systems, with large-scale, sustainable impacts that shift and/or accelerate the trajectory toward low-carbon and climate-resilient development.' (Climate Investment Funds, 2019; ITAD, 2019)

Developing nation citizen definitions

Niazi (Niazi, 2019): 'Twenty-eighteen was a year in which the rhetoric of transformational change gripped Pakistan. Imran Khan's vision of Naya Pakistan is built around the idea of obliterating the old order to inaugurate a new and exciting era of rapid change. A Pakistan where income inequality isn't quite so stark, the rule of law is applicable to all and justice isn't a privilege of the rich [...] Historically, transformational change has never been good for Pakistan [...] Pakistan needs to discover the virtue of slow, boring, incremental change (Niazi, 2019).'

Social justice definition

Gass (Center for Transformational Change), 2010: 'It is useful to think of transformational change as profound, fundamental and irreversible [...] Transformational change is a systems approach, deriving its power by attending equally to hearts and minds, human behavior, and the social systems and structures in which they exist. It therefore tends to be multi-disciplinary, integrating a range of approaches and methodologies. By dealing holistically with all elements of human systems, transformational change aims to be irreversible and enduring. [...] Transformational change happens at all levels[with individuals, organisations, networks and society] (Gass, 2010).'

Saxer (Friedrich Ebert Stiftung in India), 2017: 'Transformative Change Making (TCM) is a method to create maximum societal buy-in for disruptive reforms. To achieve the ultimate objective of shifting the development path, the aim is to build a broad societal transformative alliance. By using a set of techniques to visualise the political playing field, TCM facilitates strategic debates over the best entry points, incentive structures and narratives to bring about change (Saxer, 2017).'

Gender transformative change definition

CARE India (2017): Within the gender context, transformative change 'seeks to transform gender roles, alter structures that maintain inequality and promotes gender equitable relationships between men and women. [...] Gender transformative change requires time and persistent dedication [...] and] engaging all stakeholders and key influencers [...] on the issue of gender related norms [...] Gender transformative change would imply changes in the lives of individuals, family relationships and community, leading to transformation in social norms which are repressive or discriminatory' (CARE India, 2017).

Corporate Social Responsibility

Unilever Pakistan 2020: 'Social purpose is at the heart of our business model, and we can both grow our business and drive the type of transformational change needed for a brighter future. However, achieving systemic and scalable change requires us to work in partnership with others who share our vision for a better world. Working with NGOs, UN agencies, civil society, and businesses, we believe

that we can achieve Unilever's ambition to help more than 1 billion people take action to improve their health and well-being by 2020' (Unilever Pakistan, 2016).

Organisational management definitions

Alsher, 2018: '[Transformational change](#) is defined as second order, frame-breaking change that completely alters your current operating structure. These changes will have massive change to processes, people, and typically technology. Once you take these leaps, you can't change your mind and go back to the old ways. And transformation can't be done incrementally.'

Anderson, 2015: The transformational process is triggered by a profound shift in worldview [...] It begins with the overt recognition that the status quo must fundamentally change. The first challenge [...] is that the future state is largely uncertain at the beginning [...] Beyond managing the uncertainty, it requires a shift in people's awareness [...] You can determine whether your change effort is transformational by answering three questions:

1. Does the change require your organization's strategy, structure, systems, operations, products, services, or technology to change radically to meet the needs of customers and the marketplace?
2. Does your organization need to begin its change process before the destination is fully known and defined?
3. Is the scope of the change so significant that it requires the organization's culture and people's behaviors and mindsets to shift fundamentally in order to implement the changes successfully and sustain the benefits of the new state? (Anderson, 2015)

Majid, Yasir, Khan, Tabbassum (2011): 'Transformational change introduces new and radically different forms of organization's mission, culture and leadership. It includes both radical and incremental changes. Transformation of the organization is a continuous process. It focuses on continuous improvement by restructuring, strategic goal setting, effective leadership and continuous improvement in the human side of the organization' (Majid *et al.*, 2011).

WebFinanceInc, 2020 (also provided by BusinessDictionary.com): 'A shift in the business culture of an organization resulting from a change in the underlying strategy and processes that the organization has used in the past. A transformational change is designed to be organization-wide and is enacted over a period of time.'

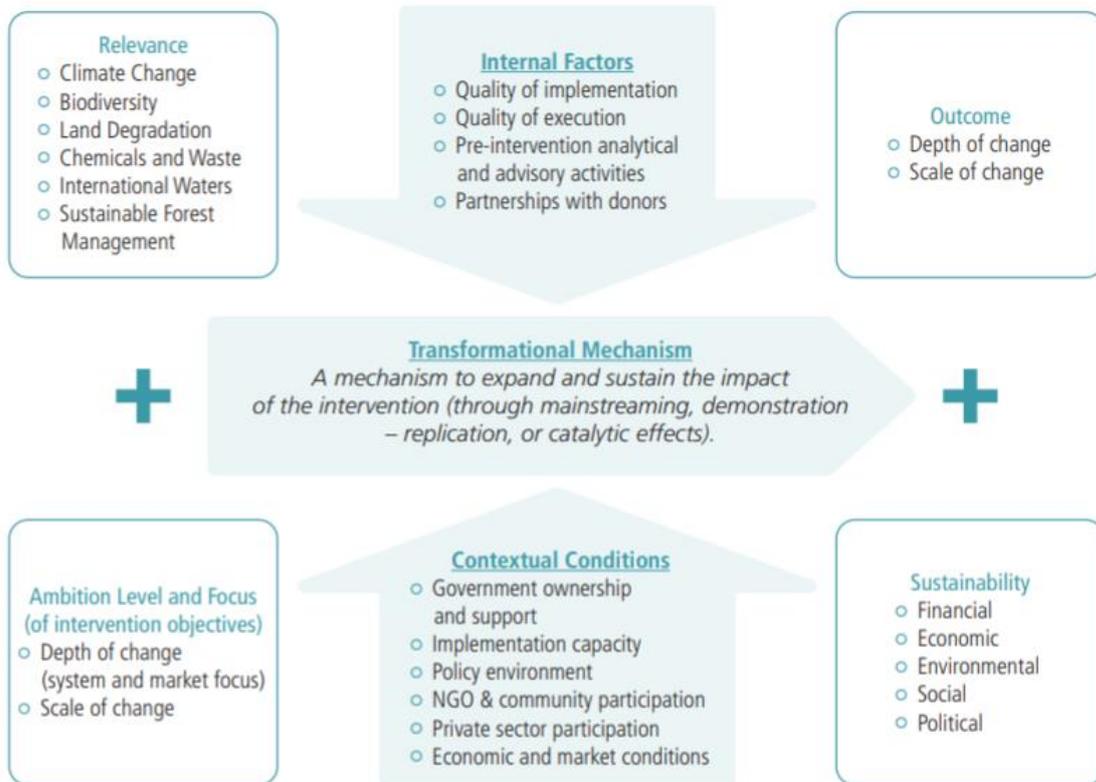
Yolles, 2004: Change [...] can also be transformational, involving a paradigm shift for the organisation - a very special type of change with high stakes. (Yolles, 2004)

Table A1. A review of experience in identifying “transformational change” across evaluations

Attribute of T-change	CIF transformational change studies	Wb transformational engagement	GEF LDCF/SCCF	UKCIP	IFAD
Measured T-change?	No	Maybe	No	No	Yes
Specific/consistent indicators	No	No	No	No	Yes
Demonstration project logic (toc)/catalytic	Yes	No	Yes	Yes	No
Removing barriers/lower costs	Yes	No	Yes	?	No
Scale effects (spatial)	Yes	Yes	Yes	?	Yes
Research and learning	Yes	No	Yes	?	No
Systems and across sectors	Yes	Yes	Yes	Yes	Yes
Long-term change	Yes	Yes	Yes	Yes	Yes
Behaviour change	Yes	Yes	No	No	Yes
Capacity building	No	No	Yes	No	No

SOURCE: PURI 2018

Figure A1. Theory of change for Global Environment Facility transformational interventions



SOURCE: GEF IEO 2017