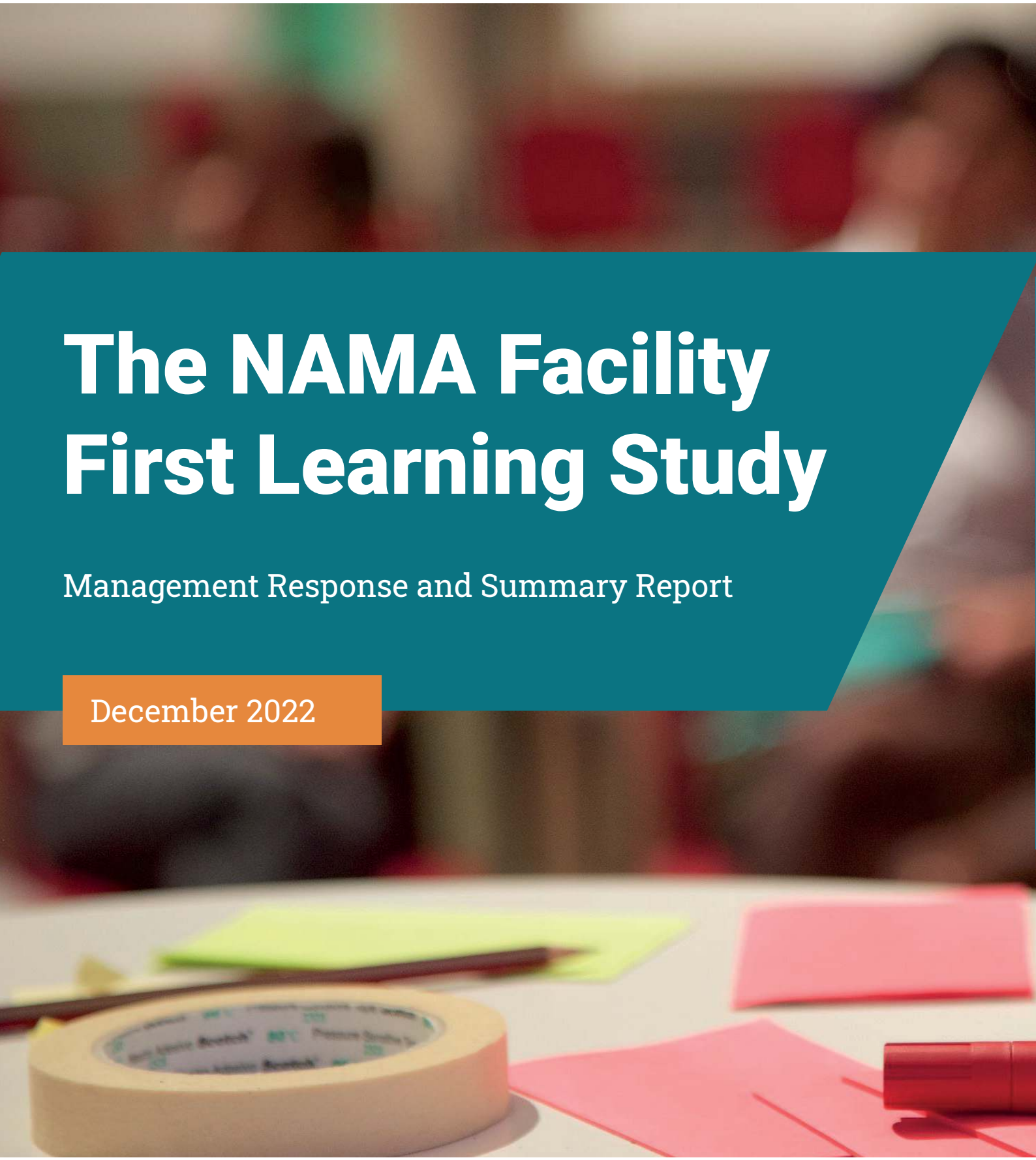


The NAMA Facility First Learning Study

Management Response and Summary Report

December 2022

NAMA Facility

On behalf of

Supported by:

Federal Ministry for Economic Affairs and Climate Action

on the basis of a decision by the German Bundestag

IKI INTERNATIONAL CLIMATE INITIATIVE

Department for Business, Energy & Industrial Strategy

Danish Ministry of Climate, Energy and Utilities

CIFF CHILDREN'S INVESTMENT FUND FOUNDATION

Overview

- Management Response: response to the recommendations made by the evaluation team in this Evaluation and Learning Exercise (ELE) report. Jointly written by the NAMA Support Project (NSP) and the Technical Support Unit (TSU) of the NAMA Facility.

- Evaluation and Learning Exercise Report: external and independent evaluation conducted by the consortium AMBERO and Oxford Policy Management.

Management Response to the recommendations of the ELE Programme's First Learning Study

1. Background

The NAMA Facility funds NAMA Support Projects (NSPs) to promote sector-wide shifts toward sustainable, irreversible, carbon-neutral pathways in line with Nationally Determined Contributions (NDCs) in developing countries and emerging economies. The NAMA Facility's Technical Support Unit (TSU) promotes the exchange of lessons learnt from the NAMA Facility and oversees the Evaluation and Learning Exercises (ELEs) of the NSPs. The TSU commissioned AMBERO and Oxford Policy Management (i.e., the ELE Team) to conduct mid-term and final ELEs for NSPs from Calls 1, 2, 3 and 4. Within this context, a First Meta-Analysis Learning Study ('Learning Study') was commissioned by the TSU to explore overall findings and trends across the nine ELEs conducted by the end of 2021.

This document contains the TSU and ELE Team's responses to the recommendations directed to them contained in the Learning Study.

2. Recommendations

Recommendations	Response	Responsible Entity	Timeline
Recommendation 1: Additional training and mentoring are required to support NSPs, during the design or inception phase of the project to understand the Transformational Change (TC) Measurement Framework and how the impact of their project will be evaluated.	Recommendation accepted. The updated TC Measurement Framework description will be available on the NAMA Facility website. The NSPs will be introduced to the Framework by TSU in the Detailed Preparation Phase (DPP) and Implementation Phase 1. Additionally, the NSP Virtual Meetings will be explored as a potential channel to raise the NSPs' awareness about the Framework. Information on the Framework is to be provided to the NSPs in the ELE introductory calls, too.	TSU	2023 onward
Recommendation 2: Additional guidance and definitions should be developed to help the NAMA Support Organisations (NSOs) to understand and interpret the TC Measurement Framework for their specific project.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. This will include clearer definitions and guidance for both NSOs and evaluators. Discussions between the ELE Team and TSU will be conducted to better align the	ELE Team/TSU	December 2022

	TC Measurement Framework with the updated NAMA Facility Theory of Change (ToC).		
Recommendation 3: The TC Measurement Framework should be explicit in how the three dimensions are expected to feature within the future NSPs' ToCs.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. This will include clearer definitions and guidance for future NSOs.	ELE Team	December 2022
Recommendation 4: The NSPs should develop a strategy specifically for how they will ensure the project itself gets scaled up or replicated and/or how they will ensure the systemic change gets sustained.	Recommendation accepted. NSPs are required to define the phase-out and upscaling strategy during the DPP. Further details on phase-out and upscaling are required from NSPs, as per standard implementation conditions, too. The NAMA Facility is currently defining a portfolio-level indicator to be incorporated in NSPs' M&E plans that would monitor the upscaling and replication efforts. NSPs are required to report on the achieved and planned milestones for replication and/or scaling with the Annual Report 2022.	NSOs	Ongoing
Recommendation 5: The ELE Theoretical Framework should go into more detail on what is expected in terms of evaluating progress towards impact and how to rate it.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. This will include clearer definitions and guidance for evaluators to use the framework to assess NSPs' impact and rate it.	ELE Team	December 2022
Recommendation 6: Self-learning should be removed from the TC Measurement Framework but still feature in the NAMA Facility's Knowledge Creation Strategy, as it relates more to effective programme management than TC. The connection between learning,	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. The updated framework will rethink the place of NSPs' self-learning in NSP-induced TC. The ELE Team will discuss with the TSU ways to integrate the relevant lessons from the Learning Study in the	ELE Team/TSU	December 2022

knowledge creation and capacity development should also be explored.	Knowledge Creation Strategy and avoid inconsistencies between this and the TC Measurement Framework.		
Recommendation 7: More focus on promoting learning externally is required within NSPs' ToCs and work plans, as well as monitoring and reporting on these efforts.	Recommendation partially accepted. NSPs are already required to discuss the learning that could be shared externally as part of Semi-Annual and Annual Reports. The NSPs will be encouraged to share their key learnings with other NSPs during the thematic group exchanges, NSP Virtual Meetings, and other learning events.	NSOs	Ongoing
Recommendation 8: Clarify in the TC Measurement Framework what type of learning is to be promoted externally. This logically should be learning about the project itself (not the actual solution, given that this features elsewhere in the TC Measurement Framework), but the exact purpose of this learning needs to be made clearer.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. The updated framework will rethink the role of learning in NSP-induced TC.	ELE Team	December 2022
Recommendation 9: The Knowledge Creation Strategy of the NAMA Facility should be reviewed with a lens on how to provide clearer guidance to NSP on how to integrate learning into project design (as part of dimension 1), as well as into the day-to-day operations and in the context of internal and cross-NSP learning.	Recommendation accepted. This recommendation will be taken up during the ongoing review of the Knowledge Creation Strategy and afterwards presented and discussed with the NSPs during the NSP Virtual Meetings.	TSU	December 2022
Recommendation 10: Support should be provided to NSPs to	Recommendation partially accepted.	TSU	2023 onward

integrate the Knowledge Creation Strategy into their ToC and work plan, particularly in terms of why and how learning is important for achieving TC.	This recommendation will be taken up during the ongoing review of the Knowledge Creation Strategy. Additionally, since the 5th Call a specific section on "learning" has been introduced to the NSP Proposal templates to outline how learning processes are supposed to trigger Transformational Change, which is evaluated as part of NSP Proposal assessments. More guidance on integrating learning within NSP ToCs shall be provided once the TC Measurement Framework is updated based on the findings of the Learning Study.		
Recommendation 11: Amend the diagram of the three Dimensions to make it clearer which parts of each are interconnected and build on each other.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. It is to be expected that the diagram will be updated too.	ELE Team	December 2022
Recommendation 12: Make it clearer that the demonstration effects relate to the adoption of low-carbon technologies and practices and, as such, should not also be referenced as a systemic change.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. These aspects will be looked into.	ELE Team	December 2022
Recommendation 13: Provide additional guidance on the criteria which should be used for evaluating and scoring the dimensions (and how these fit within the overall ELE questions). For example, assessing direct emission savings results as part of Dimension 1 and potentially including a summary score for TC is required.	Recommendation accepted. The ELE Team will prepare an updated version of the TC Measurement Framework taking into account the lessons from the Learning Study. This will include clearer definitions and guidance for evaluators to use the framework to assess NSPs' impact and rate it.	ELE Team	December 2022

Recommendation 14: Emphasise the need to integrate all key stakeholders into project design, especially the private sector. This could be, for instance, achieved by drawing up an overarching private sector engagement strategy.	Recommendation partially accepted The extent to which the NSP integrates the key stakeholders is assessed during the In-depth Assessments of the NSP concept before entering DPP, as well as during the NSP Proposal assessment stage, where NSPs are explicitly required to submit target group and sector analysis, which are often based on the market studies. The TSU Desk Officers shall remain in close contact with NSPs during the DPP and implementation to advise the NSPs on optimal private-sector engagement.	TSU	Ongoing
Recommendation 15: Improve NSP design flexibility, on the one hand, by ensuring that NSPs periodically re-assess key contextual aspects (e.g., as part of annual reporting) and, on the other hand, by having an uncomplicated process for well-justified design changes to be implemented when certain NSP elements become ineffective or obsolete.	Recommendation partially accepted Reporting on NSP context and relevant changes is already a mandatory aspect of Semi-Annual and Annual Reports. Also, the NAMA Facility has an Amendment Policy, which allows the NSPs to change their original design. The NSPs are briefed on the Amendment Policy during the NSP Virtual Meetings, as well as by the responsible TSU Desk Officers. Additionally, Desk officers hold regular meetings with NSPs in which the context changes, challenging situations and possible solutions are discussed.	TSU	Ongoing
Recommendation 16: The TSU could consider providing a close follow-up to the implementation of mid-term evaluation recommendations, which to date are only re-assessed at the final evaluation stage (ex-post).	Recommendation accepted The NSPs shall be required to report on the follow-up of the ELE recommendations with the next reporting cycle after the ELE report is finalised. A close follow-up is to be ensured by the TSU Desk Officers.	TSU	2023 onward
Recommendation 17: Promote evidence-based and realistic time planning, including appropriate use of "buffers" to account for unexpected delays	Recommendation partially accepted. Since the 5th Call, the NAMA Facility has introduced a phased implementation approach, which divides the NSP implementation stage into two phases, implying the upper limit of 18 months for addressing the relevant contractual	TSU	Ongoing

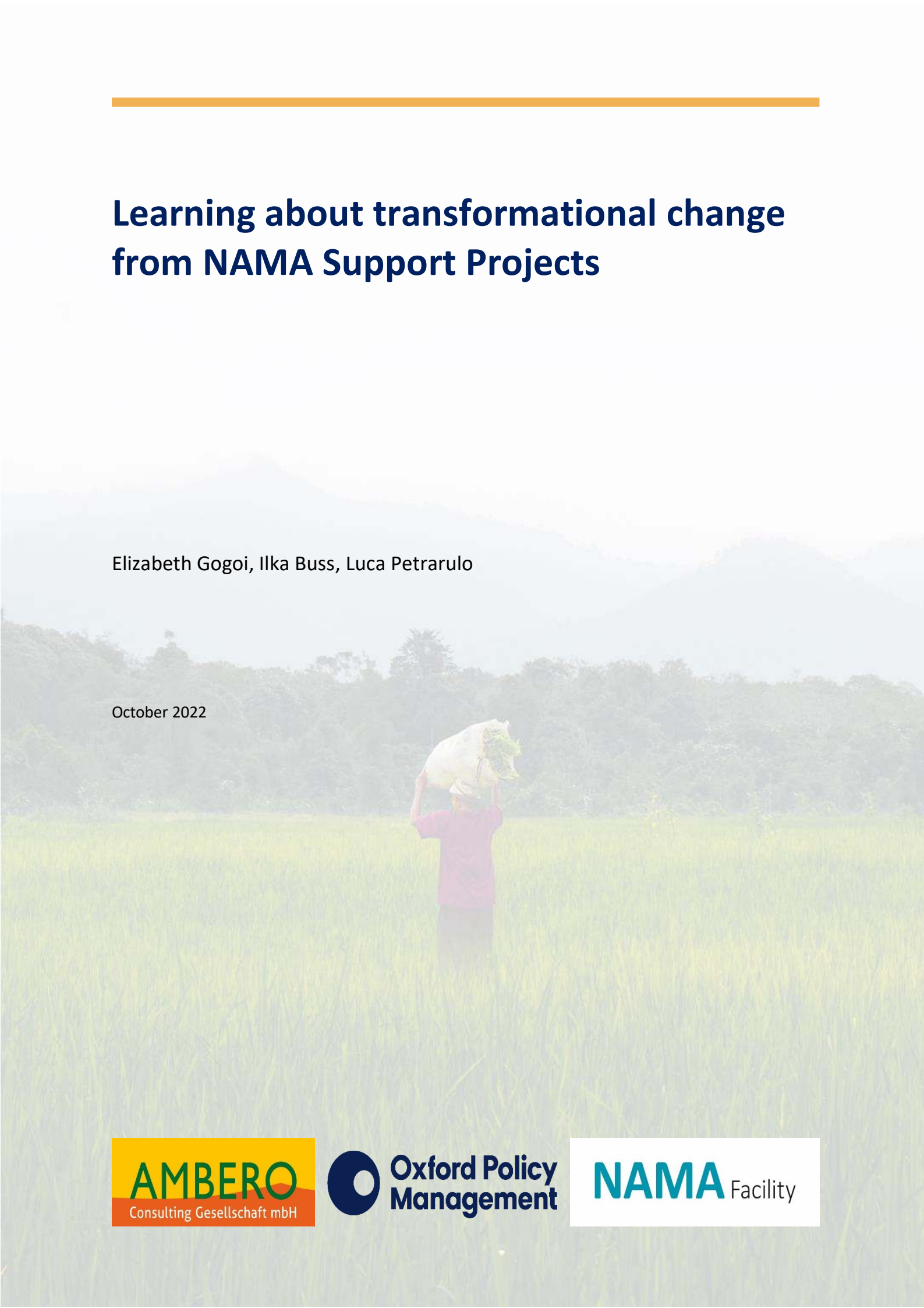
and backed with robust strategies to meaningfully deal with delays when they materialise.	issues in Implementation Phase 1 to ensure the successful continuation to Implementation Phase 2. None of the NSPs included in the Learning Study was subject to such a phased approach, hence its effectiveness shall be evaluated with the future ELEs and subsequent learning studies.		
Recommendation 18: Ask key implementing partners to provide or work with them to map processes and procedures that will affect the project timeline to facilitate realistic time planning. Known diplomatic processes in the lead-up to NSP implementation start should also be accounted for. Internal processes should also be sufficiently mapped and timed.	Recommendation accepted. NSPs are encouraged to undertake and present realistic timelines as part of the NSP Proposal and related Annexes (e.g., Gantt chart, M&E plan) preparation. Additional safeguards against delays are put in place as part of the phased implementation approach as discussed above. Additionally, NSOs assess the risks every year as part of the Annual Report. External factors that may cause delays are also assessed (e.g., COVID-19-related risks).	NSOs	Ongoing
Recommendation 19: Include a specific analysis of what could hinder technical and financial component coordination and synchronicity in the risk assessment, with clear mitigation actions and flexibility mechanisms to avoid larger shocks to the NSP's effectiveness.	Recommendation accepted. The NSPs shall be prompted to consider these aspects in DPP by the TSU Desk Officers and to specifically investigate the timeframes and/or potential bottlenecks related to the legal establishment of the financial support mechanism. As discussed above, safeguards to avoid delays and ensure the synchronicity of the implementation of the technical and financial cooperation components are put in place as part of the phased implementation approach.	NSOs	Ongoing
Recommendation 20: The ELE Report Section "How external factors impacted the NSP's effectiveness" could be better used to capture the needed information to assess trends across NSP.	Recommendation accepted. Some of the ELEs have used a participatory exercise to identify and prioritise the positive/negative impact of different external factors on NSPs' effectiveness. The ELE Team will present this option to all future evaluators and emphasise the importance of properly	ELE Team	November 2022

The focus should be expanded from mostly external and mostly negative factors to include a more comprehensive analysis of factors influencing success, also in a positive way, and also with a more inwards view.	discussing the contribution of external factors in ELE reports.

Learning about transformational change from NAMA Support Projects

Elizabeth Gogoi, Ilka Buss, Luca Petrarulo

October 2022



AMBERO Consulting Gesellschaft mbH
Oxford Policy Management
NAMA Facility

About AMBERO Consulting Gesellschaft mbH

AMBERO Consulting provides services to clients in the field of international development. Since 2003, we have supported national and international development agencies in the design, preparation, implementation, and monitoring of small and large projects that improve living conditions around the world.

At the heart of our work is a dynamic team integrated into interdisciplinary networks worldwide. Our strength is to generate, mobilise, and apply tailor-made knowledge. As a result, we are able to quickly initiate projects together with internationally recognised experts and established partners in many places around the world. The technical focus of our work is: good governance and civil society, climate, environment, biodiversity, and regional and economic development.

About Oxford Policy Management

Oxford Policy Management (OPM) is committed to helping low and middle-income countries achieve growth and reduce poverty and disadvantage through public policy reform.

We seek to bring about lasting positive change using analytical and practical policy expertise. Through our global network of offices, we work in partnership with national decision-makers to research, design, implement, and evaluate impactful public policy.

We work in all areas of social and economic policy and governance, including health, finance, education, climate change, and public sector management. We draw on our local and international sector experts to provide the very best evidence-based support.

Disclaimer

The results and analyses included in the report are based on external and independent evaluations conducted by the consortium AMBERO-OPM. The conclusions drawn in the report do not necessarily reflect the official views of the NAMA Facility.

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This is a summary of a Learning Study produced in September 2022, which explores what the NAMA Facility has learned about catalysing transformational change through its Nationally Appropriate Mitigation Actions (NAMA) Support Projects (NSPs). This paper is an example of the NAMA Facility's spirit of fearless learning and will inform the ongoing adjustments and improvements of how it supports the transition to carbon-neutral pathways.

Background

The NAMA Facility funds NSPs that effect sector-wide shifts toward sustainable, irreversible, carbon-neutral pathways in line with Nationally Determined Contributions (NDCs) in developing countries and emerging economies. The Technical Support Unit (TSU) promotes the exchange of lessons learnt from the NAMA Facility and oversees the Evaluation and Learning Exercises (ELEs) of the NSPs.

This document is a summary of a meta-analysis of nine NSP ELEs completed by the end of 2021 and the reports prepared by the respective ELE teams. Of these, six were final ELEs of completed projects, and three were mid-term ELEs. The Learning Study focused on the main research question: "What are the different pathways NSPs pursue towards Transformational Change (TC), and how successful have NSPs been in contributing to TC?" This analysis used the TC Measurement Framework developed by the ELE programme team as the core analytical framework for drawing out trends across the NSPs (see Box 1).

Box 1: The definition of transformational change

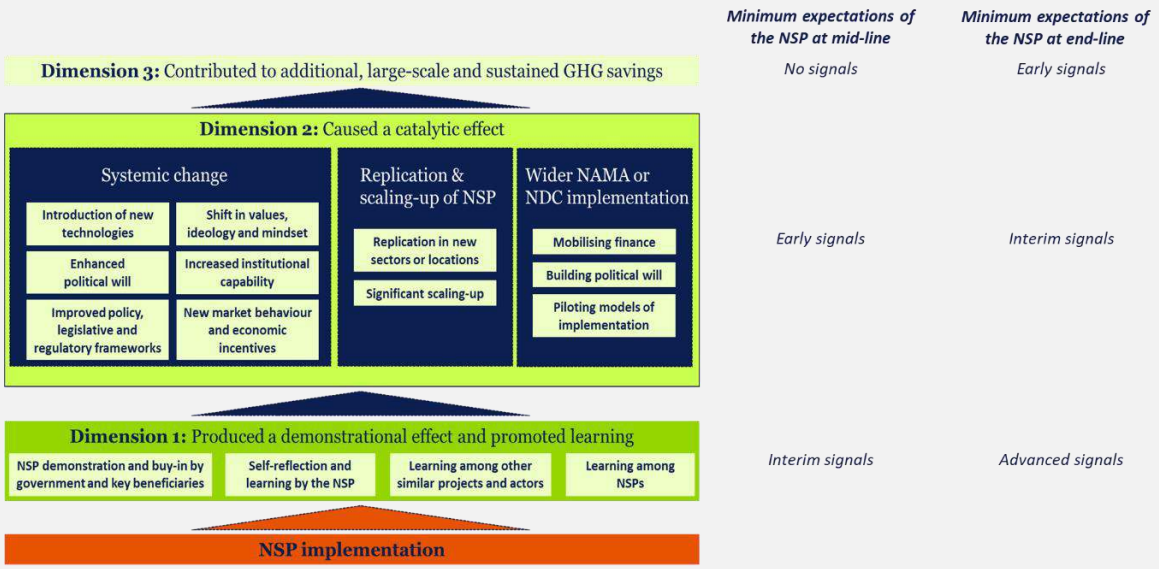
Transformational change is embedded in the NAMA Facility's goals and Theory of Change, and NSPs are the main way through which the NAMA Facility will support this at the national level. The TC Measurement Framework was developed in 2021 to help guide the ELE teams in evaluating whether and how the NSPs have supported TC. This was piloted during the ELEs conducted in 2021-22 and will be refined based on the Learning Study's findings. The Framework describes three dimensions that interact and reinforce each other to produce NSP-induced TC (see figure below).

Dimension 1: Produced a demonstrational effect and promoted learning. The most direct way in which an NSP can contribute to TC is to produce a demonstrational effect and learning process, which could imply that: a) the NSP's innovative approach has been proven valid and bought into by government and other key beneficiaries; b) self-reflection and learning by the NSP in a spirit of 'fearless learning' have been observed; c) effective sharing of lessons and experience with and by other similar projects and actors (including other NSPs) has occurred.

Dimension 2: Causing catalytic effect. In order to achieve additional, large-scale and sustained GHG emission reductions (Dimension 3), the NSP needs to cause a virtuous catalytic effect that could include: Kick-starting wider NAMA or NDC implementation (e.g. by mobilising finance, building political will, and/or piloting models of implementation); Replication of the NSP's demonstrated approach in other sectors or locations, and/or significant scaling-up of the NSP; 'Systemic' change enabled by the NSP through increased institutional capability, improved policy, enhanced political will, new market behaviour and economic incentives etc.

Dimension 3: Contribution to additional greenhouse gas (GHG) savings. This measures the NSP's influence and contribution to *additional, large-scale and sustained* GHG savings.

The Framework also indicates the minimum level of signals that these changes have occurred or look likely expected by the mid-line and end-line of the NSP.



The NSPs' interpretation of transformational change

All nine NSPs in the sample of this study were very clearly designed to support TC and aimed at leveraging Greenhouse Gas (GHG) savings at a scale that can be considered transformational, including additional, indirect GHG savings that they expected to influence. However, the TC Measurement Framework has no benchmark or guidance to define what should be considered 'large scale'. The NSPs also had different visions for when they will achieve GHG savings (during the course of the project versus in the future) and the extent to which these would be directly delivered or indirectly influenced by the NSP.

All NSPs expected to produce a 'demonstration effect' by proving the benefits and viability of a particular low-carbon 'solution', which would then be scaled up by the market or different stakeholders (see Table 1). This was expected to deliver between 0.002 to 4.01 $MtCO_2e$ of direct GHG emissions savings by the end of each NSP's lifetime.

Table 1: Summary of low-carbon solutions and milestones for viability (including links to project website for more details)

NSP	'Solution' being demonstrated	Target for demonstrating viability
Costa Rica 'Coffee'	Low-emission and sustainable coffee production and processing practices.	6,000 producers on at least 25,000ha, and 50 coffee mills, apply at least two of the promoted practices.
Colombia 'Transport'	A model of urban development ('Transit Oriented Development') that maximises the amount of residential, business and leisure	3 cities adopt the model of urban development.

	space within walking distance of public transport.	
Chile 'Renewable Energy'	A set of renewable energy technologies that enable self-supply of energy.	10 companies implement projects using this technology, which includes 200MW reaching pre-feasibility stage.
China 'waste'	A model of Integrated Waste Management that emphasises material and energy recovery from recyclables and organics.	5 cities adopt the model of waste management.
Thailand 'refrigeration'	Climate-friendly (i.e., low global warming potential) and energy-efficient cooling technologies which use natural refrigerants.	20% of all devices in the air conditioning, commercial refrigerator and chiller sub-sector use this technology.
Thailand 'Rice'	Low-emission rice production practices, including 'basic' practices (e.g., land levelling) and 'site-specific' practices (e.g., cropping system).	2,900 farmers implement 'basic' low-emission practices, and 900 implement 'site-specific' practices in 6 pilot provinces.
Peru 'Transport'	A model of low-carbon transport system, including integrated urban transport systems, non-motorised transport, and modernised vehicle fleet.	A publicly available index measuring the social, economic, environmental and institutional performance of the urban transport system in Lima/Callao has improved by at least 10%.
Mexico 'Housing'	Low-carbon and energy-efficient residential building construction practices (used by small and medium-sized building developers).	8,000 NAMA-subsidised housing units built, and 3,000 leveraged units built.
Colombia 'Refrigeration'	Low global warming potential and energy-efficient technologies for domestic refrigeration, including the use of natural refrigerants.	35% of domestic refrigerators sold in Colombia use these technologies.

The NSPs also expected to create 'systemic change', which would help get the low-carbon solution scaled up and produce additional, indirect GHG emissions. This included supporting policy, legislative and regulatory framework improvements, new market behaviour and economic incentives, increased institutional capacity and management practices, shifts in values, ideology, and mindset, and enhanced political will. The specific systemic change being targeted differed and reflected the specific purpose and local context of each NSP.

However, only a few of the NSPs explicitly aimed at influencing the investments and actions of other funders and similar programmes and/or expected the project to be expanded or replicated. This challenges the assumption in the TC Measurement Framework that promoting learning would be an explicit strategy of the NSP to have a wider influence.

Box 2: Expected pathways to transformational change in the agriculture sector

Two NSPs in the sample targeted the agriculture sector: the Costa Rica Coffee NSP – which aimed at transforming the production and processing of coffee in a low-emission and sustainable manner – and the Thailand Rice NSP – which aimed at transforming the rice sector towards a low-carbon profile. There were similarities and differences in how they expected to support TC.

They had some similarities in the pathways they pursued to support TC. They both expected to support farmers in adopting low-carbon practices in the form of 'pilots', and the demonstrated benefits realised by farmers would then influence other farmers to adopt the same. The Thailand Rice NSP was more explicit in how the NSP would pilot its approach in six focus provinces, and it then assumed there would be 'spill-over' effects on the entire rice sector of Thailand. The Costa Rica Coffee NSP had a target of 6,000 farmers to adopt the practice by the end of the project but was less clear on the geographic targeting and the potential scope for scaling.

They both expected systemic change to be the primary driver for additional GHG savings. The Costa Rica NSP expected to use market forces to build demand and supply for a new premium low-carbon coffee 'product', which would continue to grow and catalyse further emission savings beyond the project lifetime. The Thailand Rice NSP put more emphasis on the public sector, incentivising a shift to low-carbon rice production through the supply of finance and capacity building to farmers. The project expected to build these policy and finance instruments that would then be applied at a national level and catalyse the emission savings beyond the pilot provinces of the project.

Lastly, neither of the NSPs emphasised learning processes as a means of supporting these pathways to achieving TC. The Thailand Rice NSP mentioned that the delivery partner could use their network of offices outside the target provinces to have a wider impact. The Costa Rica Coffee NSP referenced working with other stakeholders on capacity building, evidence building and knowledge sharing on low-emissions technologies and other issues. However, how this translates into concrete activities is not explained in the NSP Proposals.

The impact of NSPs in supporting transformational change

The results of the nine NSPs in catalysing TC varied significantly and are difficult to judge. The main benchmark is whether the NSPs are on track to meet the target for indirect GHG savings. However, these are to be realised during the ten years after the completion of the project – and so, while the NSPs had achieved only between 0 and 16.3%[1] of their targets by 2021, it is difficult to judge how likely these savings will be realised in the future based on the ELE information alone. See **Error! Reference source not found.** for NSP-specific results.

There were also clear differences in the volume of GHG emissions savings attributed to the project by 2021. Six NSPs succeeded in demonstrating the viability of the low-carbon solution with relatively large-scale piloting and adoption, which resulted in direct GHG emissions savings between 0.017 and 4.01 $MtCO_2e$. However, three NSPs had not led to any actual uptake of the solution by 2021, meaning

[1] This does not include results from two of the NSPs in the sample – Mexico housing NSP and China IWM – whose targets were set in a different way and were therefore not comparable.

they resulted in zero direct GHG emissions savings. The amount of public and private investment that an NSP mobilised for the scaling of the low-carbon solution also indicates the success of the 'demonstration effect'. The amount of public investment mobilised by 2021 ranged from EUR 0.3 million to 183 million, and private investment ranged from EUR 1 million to 712.4 million.

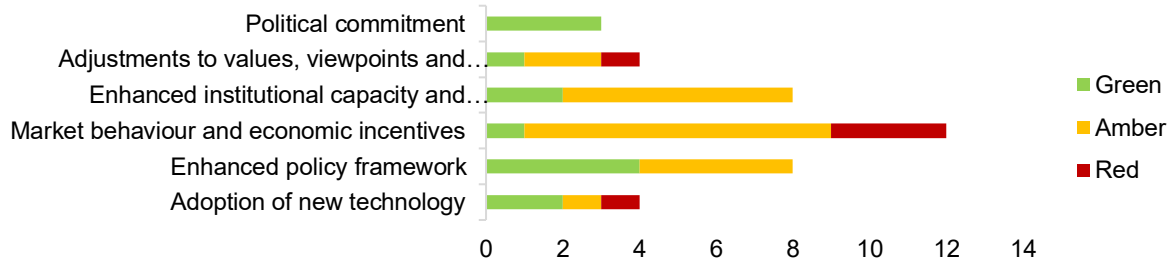
Box 3: The demonstration effect of the Mexico 'Housing' NSP

The NSP successfully demonstrated that low-carbon housing delivers benefits of financial savings, emission reductions and increased comfort. The Financial Component achieved this by mobilising finance to construct low-carbon residential homes by small and medium-sized building contractors. It only achieved 43% of the targeted total low-carbon housing units built and registered, and only 33% of the targeted GHG emissions savings. However, the ELE concluded that the benefits had been 'proven'.

The NSP achieved this primarily by enhancing the knowledge and capacities of developers in low-carbon construction practices and strengthening the supply of eco-technologies, which include insulation materials, bioclimatic design measures and efficient and renewable equipment (e.g., solar water heaters). In addition, the NSP supported systemic change, which was expected to sustain and advance the market for low-carbon housing, ultimately leading to additional GHG savings (and transformational change). However, the ELE raised concerns about the extent to which enabling conditions at project end would sustain the market's development. In particular, it stressed the lack of sufficient financial incentives following the removal of the government subsidy for new housing projects.

All the NSPs supported significant changes in the wider system and enabling environment, although the changes required were still underway and not yet complete. Figure 1 illustrates how the ELEs scored progress for intermediate outcomes related to different categories of 'systemic change' across the nine NSPs. For example, of the specific changes targeted across the NSPs related to market behaviour and economic incentives, 25% had not happened, 67% were underway, and only 8% had been achieved.

Figure 1: Number of Intermediate Outcomes across all nine NSPs, for different categories of 'systemic change' with different RAG ratings[2] in ELE report

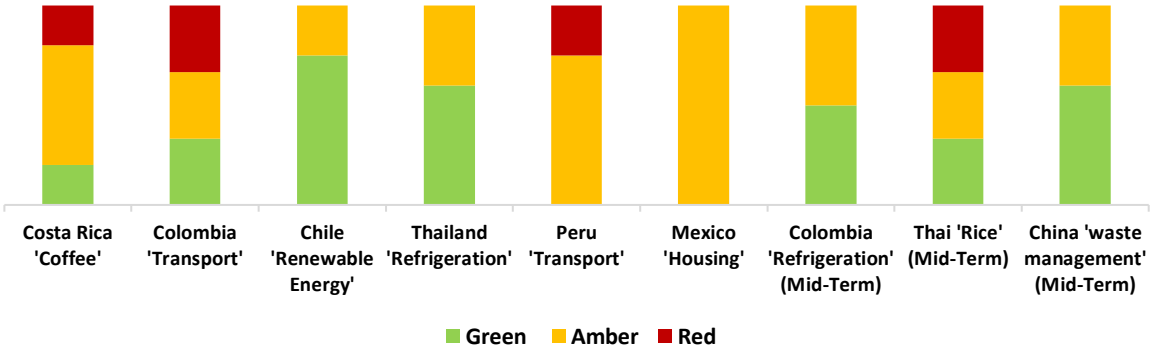


[2] Definition of RAG ratings: Red (R): Evidence suggests little to no progress is being made in line with the causal pathways and significant challenges are noted, and underlying assumptions appear tenuous and are not holding as valid and

Each NSP had made at least some progress in achieving the systemic changes they were targeting, as demonstrated by Figure 2. Therefore, across the board, the NSPs met the TC Measurement Framework's expectation that systemic change will likely be realised in the near future. For example, while the Chile 'Renewable Energy' NSP did not directly contribute to any new renewable energy installation during its lifetime, it did result in an improved enabling environment that should influence the wider uptake of the technology. In particular, it played a key role in the Net Billing Law, which should incentivise self-supply technologies and mobilised EUR 12.8 million of public sector funding.

There was more limited evidence that the NSPs had supported a catalytic effect through the other expected routes of kick-starting wider NAMA or NDC implementation, and through replication and scaling-up of the NSP itself. In Costa Rica, the government has scaled up some of the training components of the 'Coffee' NSP and replicated the Monitoring, Reporting and Verification (MRV) system for the NAMA in the livestock sector. However, this and other examples have not yet led to any known influence on additional GHG emissions savings.

Figure 2: Proportion NSP Intermediate Outcomes with different RAG ratings in ELE report



Trend analysis of factors contributing to the success of NSPs

A mapping exercise highlighted 27 factors that impacted the NSPs' ability to support TC, 12 of which were considered the 'most significant' given they were mentioned in five or more ELEs. The factors fell into three categories: those related to the NSP's enabling environment, structural issues, and design features of the NSP.

Factors related to the enabling environment were external, contextual factors that were not under the project team's control. This included negative factors, such as a clear lack of political commitment to transformational change in the target sector or high staff turnover in public institutions. Going forward, such factors should be considered when assessing the feasibility of any potential new NSP and integrated into the NSP's risk management strategy. However, it also included positive factors, such as the existence of conducive regulations or government incentives.

accurate; Amber (A): Evidence suggests some progress is being made in line with the causal pathways but with challenges, and underlying assumptions are tenuous without sufficient evidence to confirm or refute as valid and accurate; Green (G): Evidence suggests positive progress is being made in line with the causal pathways, and underlying assumptions are holding as valid and accurate.

Structural issues were internal and external structures and procedures that influenced the project's success while being outside the (immediate) control of the NSP. These include, for instance, the bureaucratic culture within the government partner or the requirement to exchange diplomatic notes between the donor and beneficiary countries, both of which delayed progress in many cases. These may also include prerequisites imposed by the NAMA Facility, such as the need to include a technical and a financial component in all NSPs, which in some cases led to implementation challenges in coordinating between the two components and respective implementing partners.

Factors related to NSP design are internal factors under the control of the NSP. Several design features of NSPs were very important in enabling progress, for example, establishing a Steering Committee, working on the MRV systems and capacities of partners and countries. However, common design weaknesses included some mismatch of the NSP design with contextual realities, often due to wrong assumptions, inaccurate data, or delays at the start of the NSP, meaning the context had changed. Over half of the NSPs did not sufficiently include stakeholder groups relevant to success, which in all cases was the private sector and/or end users.

Uncoordinated implementation of the technical and financial components in NSPs was an important cross-cutting factor. Of the eight NSPs that had two components, none were able to implement both in parallel or as planned. 75% had some overlap, with the financial component always starting late, while the rest implemented the two components after each other with no overlap. Five of the NSPs reported that the lack of coordination, cooperation and/or overlap between the two components negatively affected the NSPs' effectiveness, with those NSPs with the same implementing partner delivering both components appearing to be able to overcome these challenges more easily.

Box 4: Case study on systemic change achieved in Thailand's refrigeration sector

The Thailand 'Refrigeration' NSP is an interesting case study of how success in promoting two different low-carbon technologies can vary considerably, despite being part of the same project. The project aimed to initiate a sector-wide transition towards the use of low 'global warming potential' (GWP) and energy-efficient cooling technologies. It expected to influence systemic change in similar ways for two products – refrigerators and air conditioners. The NSP Proposal assumed that by removing various legal, technical and financial barriers that existed, climate-friendly and energy-efficient versions of these products would be developed and widely accepted and, in turn, represent an increasing proportion of the market. However, by the end of the project, the level of success was very different for each technology:

- *Refrigerators:* Several manufacturers had converted their production lines and shifted to the low-carbon model. 14,600 units of climate-friendly, energy-efficient domestic refrigerators were sold in 2018, and 265,700 commercial refrigerators in 2019- 2020.
- *Air-conditioners:* There was still no low-GWP product and processing technology commercially available, and in fact, it remained illegal to use the key technology (a 'natural refrigerant' R-290) required.

The project delivered similar outputs to both market segments. It supported 10 manufacturers of different types of technology with the manufacturing and financial skills required to adapt their

product lines. It provided technical assistance and knowledge support to the government, which significantly raised its awareness of the benefits and process of shifting to this technology.

However, the actual outcomes differed primarily due to two factors. Firstly, when the NSP started, Thailand's air conditioning sector had recently shifted to 'R-32' refrigerants, prompted by international companies needing to comply with the Montreal Protocol. Therefore, there was little motivation/incentive to engage in another technological shift (and the investments in skills and technology needed) in the absence of compulsory requirements. In contrast, refrigerator manufacturers were already aware of the benefits of natural refrigerants and had the technical capacity to switch to the new technology relatively easily. Secondly, it was illegal under the Building Control Act of 1979 to use R-290 refrigerant within high-rise buildings, given it is considered a highly flammable hydrocarbon. Government officials were not convinced of the safety record of using natural refrigerants, and this regulatory barrier proved a major hurdle for the air conditioning segment.

Key lessons from the NSPs

Seven overall lessons emerged from the analysis described above, from which a set of targeted recommendations were put forward to key NAMA Facility stakeholders.

Lesson 1: There is some misalignment between the TC Measurement Framework and NSPs' Theories of Change. The TC Measurement Framework is a guide for the ELE Team to evaluate the effectiveness and impact of the NSP and should be flexible enough to allow NSPs to support TC in different ways. However, some elements of the Framework do not match how most of the NSPs expect to support change, and it, therefore, could be confusing for the ELE teams to use it to evaluate the NSPs.

Lesson 2: Impact is not being comprehensively monitored and evaluated. The ELEs provide a clear evaluation of whether the expected NSPs' causal pathways have held up, up until the outcome level, but then go into much less detail on the signs towards wider impact. There are also inconsistencies in how the NSPs used the NAMA Facility's mandatory core indicators to monitor their influence on additional indirect GHG emissions savings.

Lesson 3: It is not clear whether and how learning plays an integral role in contributing to TC. The TC Measurement Framework assumes that promoting learning, internally and externally, is a crucial enabler of TC. However, this looks at odds with the ELE findings, and there is confusion about the connection between learning, raising awareness about a particular low-carbon solution, and capacity building.

Lesson 4: The TC Measurement Framework contains some inconsistencies and confusion, which makes it harder to measure progress against it. Even for those ELEs that used the TC Measurement Framework to evaluate impact, there were some inconsistencies in how it was applied. In particular, there appeared to be confusion in the sequencing of the Framework's different dimensions, and whether and how a summary rating of impact is possible.

Lesson 5: The extent to which NSPs are adapted to the context, respond to real needs, and involve the right stakeholders can be improved. Key interventions and/or mechanisms of some NSPs appeared to be based on faulty assumptions or had not been sufficiently adapted to the context. This

often overlapped with crucial stakeholders not being included in NSP design and/or implementation, the non-participation of whom clearly blocks the path to TC.

Lesson 6: Unrealistic time planning and/or time delays can greatly affect the relevance and effectiveness of the NSP. Time delays, caused by various issues, have often affected the projects' relevance and effectiveness (e.g., stakeholders losing interest in the project, certain activities becoming obsolete, etc.).

Lesson 7: Most ELEs recorded the interplay between the technical and the financial components as critical for NSP effectiveness and, ultimately, for achieving TC. As such, it is critical to clearly understand what can affect the planned implementation order and how to counteract possible delays.

Next steps

The NAMA Facility's key stakeholders reviewed, discussed, and are in the process of translating the detailed recommendations included in the full Learning Study into actions. This includes updating the TC Measurement Framework to address the inconsistencies and lack of clarity in some areas, particularly concerning the role of 'learning' within the framework. The TSU is also refreshing the NAMA Facility's Knowledge Creation Strategy, partly informed by the findings of the Learning Study.

This was the first in a series of Learning Studies planned, and future studies will include additional insights from newly conducted ELEs. The larger sample size will help improve the significance and granularity of the findings and allow the use of more quantitative research methods, such as Qualitative Comparative Analysis. They will pursue additional lines of enquiry that have emerged as areas of interest in this study, for example, the linkages and interplay between technical and financial components.