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MitigationMomentum

Insights on NAMA development

MitigationMomentum phase 1

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Foreword

This is the 'final' report for the first phase of the MitigationMomentum project (2012-2014). The project worked on concrete NAMA proposals across 5 countries for almost 2 years, delivered 4 biannual status reports on NAMAs and 3 research pieces on surrounding issues. It would not be feasible to recreate that here, so instead we present a concise and to-the-point report covering three topics: a reflection on what happened in the NAMA space over the past two years, based on the Status Reports, a presentation of case studies for the five countries in the project, and selected practical insights on starting NAMA development.

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Glossary of Terms

BAU	Business as Usual
BUR	Biannual Update Report
COP	Conference of the Parties (to the UNFCCC)
ECN	Energy research Centre of the Netherlands
GCF	Green Climate Fund
GDC	Geothermal Development Company (Kenya)
GEF	Global Environment Facility
GHG	Greenhouse Gas
ICA	International Consultation and Analysis
IPP	Independent Power Producer
LEDS	Low Emission Development Strategy
MINAG	Ministry of Agriculture (Peru)
MINAM	Ministry of Environment (Peru)
MINEM	Ministry of Energy and Mining (Peru)
MRV	Measurement, Reporting, and Verification
NAMA	Nationally Appropriate Mitigation Action
NCCAP	National Climate Change Action Plan (Kenya)
NCCRS	National Climate Change Response Strategy (Kenya)
NMM	New Market Mechanism
ODA	Official Development Assistance
RAD-GRK	Rencana Aksi Daerah Penurunan Emisi Gas Rumah Kaca (Provincial Mitigation Action Plan; Indonesia)
RAN-GRK	Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca (National Mitigation Action Plan; Indonesia)
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

NAMAs are here to stay. Over the past six years since their introduction, Nationally Appropriate Mitigation Actions (NAMAs) have stimulated a lot of strategic thinking and activity and continue to be a dynamic and evolving mechanism. They are still very timely and present an important paradigm shift by providing a way for developing countries to commit to and deliver mitigation action.

Given their flexible nature and applicability in various national contexts, NAMAs fit well into the emerging policy frameworks. NAMAs naturally link into strategic frameworks such as low emission development and green growth strategies. NAMAs can support the generation of a pipeline of fundable schemes for future support windows of the Green Climate Fund and may be used to shape national frameworks conducive to private sector investment.

Evolution of NAMAs

In the absence of a detailed formal UNFCCC definition, many organisations have started to converge around a definition that is flexible but includes common elements of: preference for sector wide policies and programmes, leveraging of private sector support using public funds and a need for close alignment to national development priorities.

High level reporting and verification of NAMAs through BUR and ICA process are agreed. However, detailed guidance and agreement on the measuring of NAMAs at the practical level is missing. Flexible approaches based on national circumstances and capacities stand against calls for standardisation. Wide agreement that MRV of NAMAs needs to be pragmatic to not become an obstacle for action.

Much can be learned from the development community. There is a need to share experiences from NAMAs that have recently received support and are moving into action. Also developing countries need to build more institutional capacity to transition from concepts to implemented NAMAs.

Case studies

MitigationMomentum provided support to five countries, Chile, Peru, Kenya, Tunisia and Indonesia, to develop NAMA concepts and proposals. The underlying idea was to pick up each country at their specific starting point and take a NAMA activity – existing or new – to the next level.

The NAMA proposal for *Kenya* combines a finance mechanism and capacity building to incentivize private sector engagement in large scale geothermal energy production. In *Indonesia*, the national and the provincial governments of North Sumatra and NTB work together to prepare a NAMA proposal for small scale renewable energy projects, as part of their climate change action plan process. In *Chile* the NAMA proposal centres around a finance mechanism and technical support programme to stimulate take up of renewable energy systems for self-supply across the industrial and commercial sectors. The NAMA proposal in *Peru* focuses on a comprehensive programme to scale up waste-to-energy activities in the agricultural sector in the context of the country's wider renewable strategy. In *Tunisia* a NAMA in the building sector is being developed which will drive energy efficiency and building integrated renewable measures.

What makes a good NAMA?

The question 'what makes a good NAMA?' cannot be answered in general terms, as the design is critically dependent on the national context. The number of proposals that have secured funding for implementation is limited and do not yet provide a sufficient basis to pass judgment.

Good NAMAs need to be embedded in existing policies and are based on sound analysis. They also have secured political ownership, typically underpinned through a process of stakeholder engagement. They are ambitious and fit in a comprehensive, long-term national or sectoral strategy or vision and target multiple mitigation and development benefits. Good NAMAs have a pragmatic but robust system for measurement, reporting and verification (MRV), clearly identified financing needs, and typically maximise the mobilisation of private finance with limited public finance means.

Outlook

Where are NAMAs going and what role will they to play in the context of future global mitigation efforts?

While NAMAs should and likely will remain a standalone mechanism, we also see that many of the approaches, skills and structures needed for the development and implementation of NAMAs are essentially very similar to many of the existing ODA activities which have a mitigation angle. There is increasing recognition that NAMAs are not really new or different but that NAMAs and ODA activities can mutually enhance and reinforce each other. More conceptual thinking may be needed to understand the roles of new and existing players in this context.

In the absence of a global climate agreement NAMAs can play an important role to enable bottom up action and increase the willingness and ability of developing countries to make and ultimately deliver the much needed ambitious mitigation pledges.

At the same time it is clear that NAMAs can only be part of the solution.

The current level of (public) finance available for NAMA implementation as well as the strong engagement of smaller middle income (and least developed) countries, suggests that for the large emerging economies other frameworks beyond NAMAs are needed to successfully drive mitigation in the long term.

There is a risk that there will be more supply of NAMAs than funding. If sufficient funding doesn't materialize fast, some of the initiatives may die, leading to skepticism with stakeholders. In that respect, the next two or three years are critical.

As indicated above, we firmly believe NAMAs are here to stay and can play an important role in LEDS, green growth planning, and more specifically filling the pipeline for the Green Climate Fund.

1. Introduction

The aim of this report is to present insights from the first phase of the MitigationMomentum project that ran from February 2012 to February 2014. The project has two main goals: Firstly, and across 5 countries, to support governments to bring a supported mitigation action to the next stage. The second goals is to engage the community of NAMA practitioners internationally, sharing and disseminating lessons and insights on NAMA development. It does so through side-events at climate negotiations, and through timely and concise research publications, country studies, and status reports. For example, the project has produced research papers on financing supported NAMAs, MRV, and the link with ODA. Also, it co-publishes the widely read annual "NAMA Status Report", which presents a snapshot of the state of play on NAMA development and expert contributions from ten leading organisations in the field.

Two notable highlights of the project are the support to the NAMA proposal for Chile, which was awarded implementation support through the first window of the BMU/DECC NAMA Facility, and support to the Kenya NAMA proposal, which was submitted to the UNFCCC NAMA Registry.

The aim of this report, is to share practical insights and experiences of two years of NAMA development and discussions with stakeholders and peers. For those involved in the design and support of NAMA proposals, this report provides reflections on the evolution and role of NAMAs now and in the future, and case studies and 'good practices'for consideration.

Chapter 2 shows the developments of NAMAs in the past years under four main headings of defining, financing, monitoring and operationalizing NAMAs. It builds on the findings of the first five NAMA Status Reports and experience gathered over the course of the project. Chapter 3 shows five examples of a NAMA proposal in the energy sector, that were developed as part of the MitigationMomentum project. Chapter 4 presents practical insights on developing NAMAs that cannot be captured in templates. The insights draw on the direct experience of the team and discussions with peers. Chapter 5 presents synthesis, and looks to the future considering the relevance of NAMAs and their role in national and international policy debates.

2. Evolution of NAMAs

This chapter presents the discussion and priority issues on NAMAs over the past years, building on the first five NAMA Status Reports between 2011 and 2013.

2.1 Defining NAMAs

In the absence of a detailed formal UNFCCC definition, many organisations have started to converge around a definition that is flexible but includes common elements of: preference for sector wide policies and programmes, leveraging of private sector support using public funds and a need for close alignment to national development priorities.

The discussions around the definition of NAMAs have been characterized by a dynamic between the desire to keep NAMAs as flexible as possible and the practical need to gain more clarity on what NAMAs can and should be, mainly in the interest of providing certainty and improving process efficiency.

The starting point were the distinction between unilateral NAMAs on the one hand and supported NAMAs on the other which emerged from the climate negotiations. It is widely accepted that this distinction is somewhat blurred as all supported NAMAs are likely to also have unilateral elements. It remains to be seen if and how the concept of credited NAMAs will evolve. The term itself has been coined outside the official negotiations context and its distinction from the New Market Mechanisms (NMM) is unclear.

Beyond the high level definitions from the Bali and later Copenhagen and Cancun negotiating texts, no further definition of NAMAs has been officially agreed, and it is unlikely that any detailed definitions of NAMAs will emerge from the UNFCCC process. Instead countries and practitioners started to use their own working definitions of NAMAs appropriate to the national context.

The classification of NAMAs has moved from the high level unilateral and supported NAMAs to a distinction based on activity types. Whilst official NAMA submissions by countries may also refer to national strategies and targets, at the practical level project and policy NAMAs prevail. Practice also suggests a preference for NAMAs that go beyond specific individual projects and comprise longer term strategic, transformative policy interventions. There is broad consensus on the potential of NAMAs to support transformative change. Clearly embedding NAMAs in the broader national policy decision making frameworks, such as development and green growth strategies, is seen to support this ambition especially by the donor community.

The loose definition of NAMAs allows for country driven, flexible approaches in the design of NAMAs, which is seen as one of their key strengths. However, the lack of definition has created confusion amongst countries and practitioners and in the worst case even inertia in the wait for further guidance. The UNFCCC NAMA Registry and the NAMA Facility submission templates have gone some way in moving the thinking on NAMAs forward by defining key information requirements and criteria. At the same time there is concern that ultimately NAMAs will be shaped by donors rather than countries, somewhat undermining the idea of national appropriateness. For example, the term 'transformational' itself appears to be a donor rather than a country driven concept.

What permeates the discussion around defining NAMAs is the sense that rather than official definitions and guidance it is the actual working practice which will define NAMAs. There is a continuous need for further bottom-up exchange on developing and piloting NAMAs as well as continued dialogue especially between countries and donors. A better understanding of the types of NAMAs and their role in initiating transformational change is needed. Much can be learned here from the long experience of development cooperation especially when moving from conceptualising to implementing NAMAs. It is becoming clear that NAMAs are in fact nothing new. What is new is the framing of the activities in the context of international climate finance and the clear emphasis on their contribution to the global climate change challenge.

2.2 Financing NAMAs

The past two years have been difficult for NAMA finance, without any earmarked sources of support to champion NAMAs. The success of the NAMA Facility and the increasing engagement of multilateral financial institutions is starting to change that. But there are still limited examples of successful structures and financing arrangements, certainly at large scale.

Box 1: Discussion paper: NAMAs and ODA

The paper *NAMAs and ODA* looks at the current perception of NAMAs from the development community, and at NAMA practitioners' understanding of development assistance and aid effectiveness. Based on interviews with a range of experts across the development and NAMA fields, the paper focuses on national ownership as one critical area where NAMA practitioners can learn from ODA experience. The paper goes on to discuss some of the key barriers faced in NAMA implementation (grouped under sustainable development, finance and MRV) and identifies experiences from ODA that can provide new insights to help overcome these.

NAMA finance is arguably the most important and critical issue to resolve in order to advance NAMAs. There is consensus that significant finance (and investment) is needed to achieve the level of mitigation demanded by science. Whilst developed countries reported to have exceeded the agreed fast start finance amount of US$30bn between 2010 to 2012, it is not clear in how far this finance has been new and additional. And the efforts need to be scaled up significantly in the next years to achieve the pledged mobilisation of US$ 100bn per annum until 2020. The key questions of where the finance will come from and how it will be spent remain largely unresolved, although some progress has been made recently.

It is clear that climate finance will have to come from a variety of public and private sources, including COP mandated funds (e.g. GEF, GCF), non-COP mandated public funds (multilateral, bilateral, domestic budgets), private investments and potentially the carbon market and 'alternative sources of finance'. There is some debate on the balance between public and private finance. However, reality shows that public funding is likely to be limited putting the emphasis on leveraging private finance. Potentially scarce public funds may best be used to establish legal, regulatory and policy frameworks which are conducive to private sector investment by removing investment barriers.

The private sector continues to struggle to find entry points to NAMAs as they are largely government driven, policy oriented interventions. NAMAs are rather about market opening, i.e. setting the framework under which the private sector invests more, in contrast to the CDM and JI mechanisms where the investment return dynamic was much clearer and more direct for the private sector. Much more efforts are needed to make the benefits of engagement transparent to the private sector and to better understand private sector needs. Open dialogues and concrete examples of successful private sector collaboration in the development and implementation of NAMAs is important.

The calls for reliable climate finance for NAMA implementation at a scale large enough to enable deep mitigation action continue to be voiced loud and clear by developing countries and practitioners. Finance has so far focussed on readiness activities, ie supporting countries to establish the necessary capacities, institutional structures and to conceptualise NAMA ideas and proposals. To move NAMAs forward and, very importantly, to recognise the level of effort some developing countries have made in terms of NAMA readiness, clear signals on available funds for NAMA implementation are required.

The call for proposals of the British German NAMA Facility in 2013 as well as the Global Environment Fund's announcement of NAMA support were important positive steps, including in gaining a better understanding of the criteria for fundable NAMA proposals. Ambition criteria of the NAMA Facility include the potential for transformational change, co benefits, financial ambition as well as mitigation impact. Observers warn that especially the latter should not be underestimated when looking for support.

NAMAs are in their infancy, and donors, countries and other practitioners are still in a learning phase. Apart from clear commitment to funding, further clarity on transparent criteria for fundable NAMA proposals which balance the needs and circumstances of developing countries with the interests and potential operational constraints of donors are required. At the same time developing countries need to ensure their readiness to receive climate finance.

Box 2: Discussion Paper: Financing Supported NAMAs

The paper *Financing Supported NAMAs* (Würtenberger, 2012) discusses a number of open issues regarding financing of supported NAMAs. It looks at how supported NAMAs fit into the larger climate finance context, the role of incremental costs in determining support requirements, the importance of cost-effectiveness of NAMAs and the choice of financial instruments which governments could consider. Incremental costs are often difficult to determine in an unambiguous manner; at least in the short to medium term, the level of public support for NAMAs is likely to be subject to case-by-case negotiation and agreement.

Barriers to mitigation actions	Type of financing	Public Finance Mechanisms
Low (or no) return on investment	Contribution to investment and operational costs	Up-front grant (e.g. direct subsidies, investment tax breaks, grant component of concessional loans) Funding during oeration (e.g. feed-in remuneration, carbon markets)
High up-front costs and lacking access to capital	Facilitating access to finance	Provision of debt, e.g. through loans or credit lines Provision of equity Incentivizing existing financing system*
High risk	Provision of risk coverage	Risk guarantees/insurance schemes
High transaction costs		standardization and aggregation*
Non-financial barriers (e.g. Regulatory barriers, lack of information and capacity)	(Financing) technical assistance	Mostly in the form of grants

Figure 1: Financial instruments to overcome barriers to mitigation actions (source: Würtenberger, 2012)
* These are not public finance mechanisms, but included for the sake of completeness.

2.3 Monitoring NAMAs

High level reporting and verification of NAMAs through BUR and ICA process have been agreed. However, detailed guidance and agreement on the measuring of NAMAs at the practical level is missing. Flexible approaches based on national circumstances and capacities stand against calls for standardisation. There is wide agreement that MRV of NAMAs needs to be pragmatic to not become an obstacle for action.

Measuring, Reporting and Verification (MRV) is a defining feature of NAMAs. The Cancun texts clearly state that "internationally supported mitigation actions will be measured, reported and verified domestically and will be subject to international measurement, reporting and verification in accordance with guidelines to be developed under the Convention".

Under the UNFCCC high level guidance for reporting and verification of mitigation actions (including NAMAs) have been produced linking NAMAs to Biennial Update Reporting (BUR) and International Consultation and Analysis (ICA), but these do not include requirements on the measurement of NAMAs. There is a lack of guidance, and perhaps agreement, on how NAMAs should be monitored on the ground in very practical terms.

It is clear that monitoring needs to go beyond direct greenhouse gas indicators to take account of wider, longer term GHG impacts as well as sustainable development benefits. The difficulties associated with the attribution of mitigation impacts to individual actions, especially for policy NAMAs, call for approaches that are flexible and potentially based on parameters beyond the individual NAMA relating to the entire sector or subsector.

Many practitioners call for pragmatic approaches to MRV of NAMAs which afford flexibility to countries in the metrics used to estimate emission reductions and to track NAMA success. In particular countries with less developed governance structures may need to build sufficient capacity to develop MRV systems as an ongoing, longer term process. Yet others, see a need for more standardized approaches to increase efficiency and comparability. However, there is wide agreement that MRV should not become an obstacle to action but be a supportive tool.

Despite various MRV tools and guidance documents, there is still a lack of concrete information on practical methodologies and approaches used for NAMAs. Examples of MRV of different types of NAMAs, for example in the form of published NAMA proposals, would be helpful. Also further sharing of experiences between countries and funders on expectations on the level of transparency, robustness and feasibility of MRV systems is important. With the lack of published NAMA proposals and experience with NAMA implementation it has been difficult to get a sense of the position of developing countries with regard to MRV. The concrete expectations of potential funders, beyond their emphasis on the importance of robust MRV, is also unclear.

Lastly, transparent systems for accounting NAMA support on the side of donors as well as country recipients are important. Sufficient attention to the MRV of NAMA support needs to be given in order to build trust and ensure the credibility of the NAMA concept.

Box 3: Discussion Paper: MRV of NAMAs

The paper discusses key dimensions of the MRV of NAMAs, namely: transparency, robustness, feasibility and cost-effectiveness reflecting experiences with developing NAMA proposals in the five Mitigation Momentum countries. It concludes that these MRV dimensions are of importance to different NAMA stakeholders, including host country and funders, but that expectations on how to operationalise these may differ. Whilst standardized approaches may provide useful common grounds for certain MRV aspects, in most cases the diversity of NAMAs is likely to require approaches tailored to the selected purpose of the MRV system and, very importantly, to the capacities of the country. Countries' capacities could be developed overtime, potentially applying a tiered approach to MRV.

Pragmatism should be the guiding principle for the design of NAMA MRV systems to ensure that MRV becomes a useful tool for all stakeholders rather than a burden or even a barrier to action. Through gaining and sharing further experience with NAMA design and implementation common good practices are likely to emerge over time.

2.4 Operationalising NAMAs

There are limited implemented NAMAs to learn from and to showcase as success stories but much can be learned from the development community. There is a need to share experiences from NAMAs that have recently received support and are moving into action. Also developing countries need to build more institutional capacity to transition from NAMA concepts to implemented NAMAs.

At the UNFCCC level one of the tools to operationalise NAMAs, ie to move NAMAs towards implementation, is the NAMA Registry. After a prototype phase during 2013 the NAMA Registry is now fully operational. The Registry seeks to provide more transparency on available sources of support for the development and implementation of NAMAs as well as on NAMA activities undertaken in countries. Although an increasing number of countries are using the Registry to submit information on their proposed NAMAs, few information on support has been made available. It remains to yet be seen how successful the Registry will be as a 'clearing house' for actions and support.

There is an abundance of guidance on how to prioritise and prepare NAMAs, but the majority of this guidance is rather general – pointing towards ways to get started on individual aspects of a NAMA development process (Cameron, 2013). Information and guidance on operationalizing NAMAs is still very limited given the lack of advanced NAMAs as well as publicly available NAMA proposals to scrutinize.

Bottom-up approaches in NAMA development have encouraged countries to share experiences through various fora outside the UNFCCC realm. Such dialogues have proven to be crucial because they help to identify solutions to institutional and technical challenges while promoting a common understanding of NAMAs. More of these exchanges on sharing experiences also on the use of available tools, templates and guides and their applicability across different country and sector contexts would be helpful. In addition, communication between NAMA practitioners and negotiators continues to be important to ensure that practical experiences are duly reflected in the international policy process.

In terms of operationalizing NAMAs weak institutions and capacity gaps of some developing countries remain a key barrier. In many cases there are simply not enough physical resources on the ground to ensure smooth transition from development to implementation. Better coordination of NAMA (and other development) activities is also important. Setting up a central body or focal point for NAMA coordination is proving to be effective in some countries. At the same time bureaucratic hurdles can be significant in particular with regard to receiving climate finance. The need to involve finance ministries and other relevant institutions early on in the NAMA development process cannot be overemphasized.

3. Country case studies

The Mitigation Momentum project provided support to five countries, Chile, Peru, Kenya, Tunisia and Indonesia, to develop NAMA concepts and proposals. The underlying idea of all in country work was to pick up each country at their specific starting point and take a NAMA activity – existing or new – to the next level. In some cases this meant focusing more heavily on initial prioritisation processes and associated capacity building, in others – where NAMA activities were already much further advanced – the project helped to develop fully fledged NAMA proposals. The aim was always to push NAMAs as far as possible within the project and specific country context, ideally to produce a 'bankable' NAMA proposal, ready to take to funders to seek and ultimately obtain finance for implementation.

The selection of the countries was determined by a number of factors, including existing level of engagement with NAMAs, government commitment, mitigation potential, as well as geographical diversity. As a result the group of countries provide an interesting mix of different circumstances, economic profiles and national approaches to NAMAs. Also the NAMA sectors covered under this project provided diverse insights, ranging from building energy efficiency, to large scale geothermal energy, smaller scale renewable technologies for self-supply to waste to energy applications with linkages to the land use sector. Despite the many differences in the level of readiness, the specific sector and national circumstances, there were many commonalities, and the project was able to use the lessons learned in one country to apply to another. So the outcomes of each country process – ie the NAMA proposal – will have certain commonalities in approach but at the same time be quite different in terms of content and scope, reflecting the different starting points mentioned earlier.

The following section will provide a snapshot of the NAMAs that were developed under this project including a description of the context and the activities of the NAMA as well as the current status. Reflections of the lessons learned during the NAMA development work and country engagements are included in the subsequent section, "Insights on selected topics".

3.1 Chile - renewable energy systems for self-supply

Chile has been one of the front runners in terms of NAMA development. NAMAs form a central part of the country's climate mitigation strategy to support the implementation of national policy objectives. At the start of the project Chile had already undertaken a NAMA prioritisation process and various NAMA activities were underway. Through Mitigation Momentum Ecofys supported the Chilean government with the development of a NAMA for self-supply renewable energy in cooperation with Fundación Chile and the national counterparts, the Ministries of Environment and Energy as well as the Centre for Renewable Energy. The result was a fully-fledged NAMA proposal which will now move into implementation supported by international finance from the NAMA Facility.

National context and rationale

Chile has a goal to become the first developed nation in Latin America. To do so, the country will need to continue to develop its economy in the face of rising energy costs. Electricity prices in the central grid jumped by 75% over the last six years as generators were faced with a host of factors that included lower output from hydroelectric plants due to record droughts and domestic demand for energy that is growing at more than twice the global average. By 2020, some 8.000 MW new generation capacity is expected to be needed to satisfy demand. Chile has almost no fossil fuel resources and development of its hydro resources has been limited because of environmental concerns. At the same time the renewable energy potential is significant, encompassing mainly solar, wind, geothermal and biomass. The need to use this potential is recognised in the country's National Energy Strategy 2012 – 2030. The high energy costs in Chile present an opportunity to expand non-conventional renewable energy. Self-supply options are attractive because they compete with high retail energy costs and hedge consumers against rising prices during the operation of the system, which can be 20–30 years.

Stakeholders and their involvement

It is crucial to involve stakeholders throughout the entire NAMA development process. Extensive consultations were undertaken with representatives from the private sector, government and civil society. In particular representatives from the private sector, including agro-industries, energy service companies and retail banks, provided hands on expertise on barriers to investment and potential ways to address these. Consultations early on with financial institutes, both national as well as international, significantly helped shape an effective finance mechanism.

Barrier analysis and NAMA design

The NAMA comprises three components – finance, technical support and outreach – which bundle a range of interconnecting activities. The finance component includes grants for pre-feasibility studies, co-investment grants for certain technologies as well as a guarantee fund which enables the establishment of a subsidized loan scheme delivered by commercial banks. This is supported by a range of capacity building and outreach activities targeting different levels of the value chain. The design of the NAMA components and activities was informed by an in depth barrier analysis. This concluded that financial barriers are significant, however, that barriers related to knowledge, technical capacity and technology confidence are equally relevant.

Figure 2: NAMA structure SSRE proposal Chile

Impacts: GHG and co-benefits

Whilst the reduction of greenhouse gas emissions is the main objective of any NAMA it is often wider economic or social benefits that drive the needed policy change and prompt governments to act. The NAMA for self-supply renewable energy is expected to reduce between 1.5 to 2 $MtCO_2e$ over the lifetime of the projects at an average cost for the programme of USD 9 to USD 12 per tonne thus contributing to Chile's goal to achieve a 20% deviation below the business as usual emissions trajectory by 2020. In addition, the NAMA will support the long term development of the nascent renewable energy industry thus contributing to employment and economic growth, as well as providing a solid basis for further emission reductions in the future. Improving energy security and decreasing the dependence on fossil fuel imports brings another important benefit.

Current Status

The NAMA proposal was submitted to the NAMA Facility in 2013 and was selected as one of five NAMAs to receive funding for implementation. Implementation is expected to start in 2014.

3.2 Indonesia – small and medium scale renewable electricity

Indonesia has one of the world's largest potentials of renewable energy sources: hydropower, geothermal, solar, and biomass each have estimated potentials of over 10 GW. However, much of this potential is currently unexploited. The Energy research Centre of the Netherlands (ECN) and local partners are supporting the Indonesian government in developing a NAMA proposal to stimulate private sector investments in renewable energy.

National context and rationale

Indonesia, with a population of 240 mln spread out over 6000 inhabited islands, faces multiple challenges in its electricity system. Economic growth and increasing energy access is projected to increase power demand by more than 8% annually until 2020. Indonesia also needs new capacity to reduce its use of oil based (diesel) power generation, because of rising fuel and subsidy costs. Furthermore, Indonesia has communicated ambitions with regard to reducing greenhouse gas emissions and increasing the share of new and renewable energy technologies. The government of Indonesia seeks to scale up small and medium size renewable energy capacity by 3 GW in 2020 - almost of quarter of total growth.

IPPs (Independent Power Producers) will be a vital part of Indonesia's energy system in the future. They provide an effective way to grow the electricity infrastructure using private investment, not public budgets, and are a central component of Indonesia's power planning. Against this background, ECN is working with the government of Indonesia to develop a NAMA that aims to support and expand on existing efforts, and to create an enabling environment for a significant up-scaling of private investment necessary to achieve the desired accelerated growth.

Stakeholders and their involvement

The development of the NAMA is supervised by the Ministry of Energy and Mineral Resources (*ESDM*) and the Ministry of Planning *(Bappenas)*. A wide range of stakeholders have been involved early on in the development process through bilateral meetings, focus group discussions, interviews, and through sharing of preliminary findings and analytical results.

Due to the size and governance structure of Indonesia, two 'pilot provinces' were chosen for the NAMA: North Sumatera and West Nusa Tenggara (NTB). In both provinces a team of local experts is established and the local counterparts of the lead ministries are involved (i.e. Distamben and Bappeda).

Barrier analysis and NAMA design

Interviews were conducted with over 20 project developers and local banks, as well as development partners and government officials. This shows that that the government's feed-in tariff for small and medium scale renewables provides a strong 'pull' mechanism, but that IPPs still face a number of barriers that prevent or delay many projects. Challenges range from technical and organisational skills, to availability of project finance. Analysis shows that existing policies need to be complemented to be effective, and that there is no single solution. The components of the NAMA cover technical capacity, project revenues and financing:.

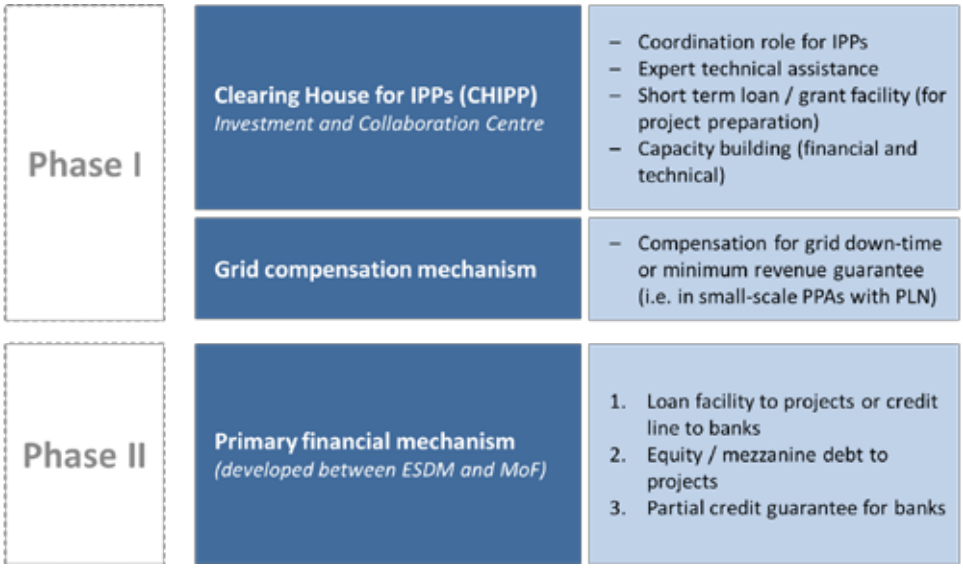

Figure 3: NAMA structure renewable energy proposal Indonesia

Impacts: GHG and co-benefits

A national scale NAMA supporting 1.8 GW would reduce GHG emissions up to 6.5 Mton CO_2-eq. per year by 2020. A more modest pilot in one or two provinces could support 180 MW with a reduction of 0.65 Mton CO2-eq. The development impacts are considerable: improved energy security, increased power for economic growth, reduced costs of fossil fuel subsidies, targeted skilled labour, and reduced local air pollution.

Current Status

The NAMA concept note is under review in preparation for seeking internal approval for submission to the National Council on Climate Change (DNPI) who provide a central registry of NAMAs in Indonesia. Work will continue in parallel with ESDM and MoF in 2014 to further define the financial support that projects or banks could receive. The medium term objective is that the NAMA receives support from government and the international community to run as a pilot, to demonstrate its operation and impact. In the longer term, these ideas can become part of ongoing policy in Indonesia, to support and expand the sector, and provide cost-effective low-carbon electricity and other benefits to the local economy.

3.3 Kenya - accelerated geothermal electricity development

Accelerating geothermal power generation was identified as a priority mitigation action in the context of the Kenyan National Climate Change Action Plan (NCCAP), launched in 2013. The NCCAP is a holistic plan to implement the National Climate Change Response Strategy (NCCRS), which was developed in 2010. The NCCAP aims to ensure that Kenya takes steps to reduce vulnerability to climate change and adopts a low-carbon development pathway. This NAMA proposal is a concrete step towards the acceleration of geothermal development and associated reductions in GHG emissions. ECN and local partners have supported the Kenyan government in developing this NAMA proposal.

National context and rationale

According to the Business As Usual (BAU) scenario in the NCCAP, geothermal will continue to expand to 2,500 MW by 2030 (NCCAP, 2012). There is however an accelerated growth scenario which will lead to 5,000 MW of installed geothermal power by 2030. If this accelerated growth does not materialize, Kenya is likely to explore other options for power production, including developing more of its domestic coal resources than provided for in the Least Cost Power Development Plan, with a corresponding negative climate impact. The NAMA aims to support and expand on existing efforts undertaken by the Government of Kenya in the geothermal sector to accelerate development.

Stakeholders and their involvement

This proposal was completed in a consultative process involving the key stakeholders in the sector. The process involved a detailed background study, several phases of iterations on the concept during stakeholder workshops and in-depth collaboration on the proposal.

Barrier analysis and NAMA design

Research in preparation of the NAMA proposal has revealed that several key challenges and barriers exist that hinder private sector investment (Falzon et al., 2013). These barriers relate predominantly to capital limitations of the two main geothermal developers, KenGen and GDC, which limits further investment and the long lead-time for bringing additional capacity online which means other actors are needed to develop sites in parallel.

The government of Kenya initiated a transformation of the sector that aims to increase private participation in the sector in 2009, with the creation of GDC, to try and overcome the challenges faced by the sector. However, stakeholder consultations indicated that more efforts are needed to create an enabling environment for a significant up-scaling of private investment and entry of new private developers necessary to achieve the desired accelerated growth.

The NAMA thus includes four instruments focused on addressing these barriers by delivering financial support and increasing capacity to facilitate increased private sector investment: drilling risk mitigation instruments, a premium payment mechanism, IPP engagement and transaction support, and a national geothermal capacity building programme.

Figure 4: Proposed NAMA structure to accelerate geothermal development in Kenya

Impacts: GHG and co-benefits

Approximately 820 MW of geothermal developments could feasibly be enabled by the NAMA by 2020 and the corresponding total emissions reductions are estimated to be approximately 3.77 $MtCO_2$ per year in 2020.

The NAMA will however also have significant economic impacts, including contributing to lower average electricity tariffs, greater energy security and improved balance of trade. The fast-tracking of geothermal development is a top priority for the Government of Kenya, who recognise the potential contribution of geothermal energy to achieving Kenya's sustainable development aspirations.

Current Status

The work to develop the geothermal NAMA actually followed on directly from the Kenya Climate Change Action Plan process. Accelerated geothermal development was one of six priority actions identified in the plan. Under the MitigationMomentum project, the main contribution was to bring the concept to a concrete plan required a bottom-up analysis of the challenges facing the sector, identification of gaps in current support (government and international) and detailing a realistic set of additional instruments that could be part of the NAMA. Buy-in from key stakeholders also needed to be sought in the development of the action. Before the end of the project, a concrete proposal was developed which was supported by major stakeholders, and the NAMA proposal submitted to the UNFCCC NAMA registry.

The next step for the Kenya NAMA is to secure funding for implementation of the first (of two) phases. This will involve political, institutional and technical steps to be taken. If support can be secured in 2014, the NAMA implementation can kick-off early 2015.

3.4 Tunisia - energy conservation in the building sector

Over the past 30 years, Tunisia has been proactively developing energy conservation policies and initiatives in order to manage final energy consumption in various sectors. The proposed NAMA for energy conservation (energy efficiency and renewable energy) in the building sector aims to reduce the demand for fossil fuel based energy in buildings, in particular that used for heating and cooling of buildings. It sits within the wider Tunisian national energy strategy (Tunisian Solar Plan) and builds on existing national energy conservation programmes in the sector. At the start of the project, Tunisia had just begun to engage with NAMAs. The country has now evolved into one of most active players in the region with several NAMA activities being pursued.

National context and rationale

In 2008, the biggest share of emissions (67.7%) in Tunisia was attributed to energy. As Tunisia's population grows (at around 1% per year on average) and poverty headcount ratio decreases (from 32.4 % of the population in 2000 to 15.5% in 2010), CO_2 emissions per capita have constantly increased (from 1.8 metric tonnes per capita in 1995 to 2.4 in 2009) (World Bank, 2013).

Between 2010 and 2030, final energy demand from the building sector is expected to double and will contribute to the overall increase of the final energy consumption in Tunisia. The energy conservation NAMA in the Tunisian building sector will aim to tackle this increase in both existing and new buildings. This will help reduce energy consumption and associated GHG emissions as compared to the business as usual (BAU) scenario while delivering sustainable development co-benefits and reinforcing the current Tunisian energy strategy.

Stakeholders and their involvement

Ecofys and the team of local experts worked with representatives from the National Energy Conservation Agency, the Ministry of Equipment, professional orders (e.g. architects) and business associations, amongst others, to identify barriers to current energy conservation programmes and technologies in the building sector and potential ways to overcome them. Consultations early on with regulatory institutions in charge of policy design and with organisations involved in programme implementation, including funders and the private sector, resulted in the identification of the NAMA components and activities.

Barrier analysis and NAMA design

The NAMA will comprise a programme of activities and measures to address key financial, technology, knowledge barriers to the implementation of sustainable energy measures in the building sector. It includes three technological components: a solar component (including solar water heaters and solar panels), an insulation component and a research component focusing on innovative technologies for air conditioning. Under each component several specific activities will be carried out building on existing programmes and measures. The aim is to implement a comprehensive set of activities to drive the transformation of the sector.

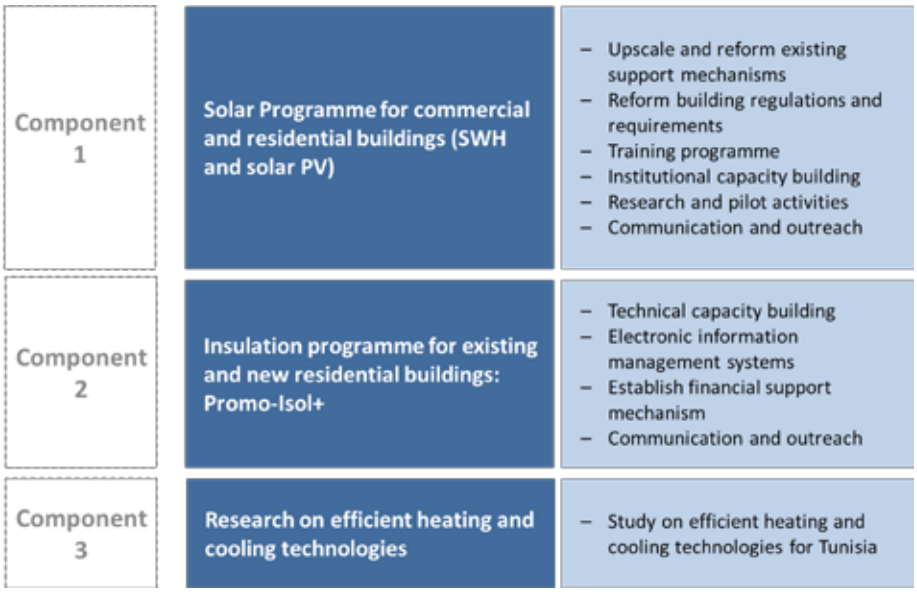

Figure 5: Proposed NAMA structure energy conservation proposal Tunisia

Impacts: GHG and co-benefits

The NAMA is expected to achieve GHG emission reductions of 1.2 mio tCO2e by 2020 and 6.8 mio tCO2e by 2030. The majority of the emission reductions can be attributed to the insulation programme of the NAMA. In addition, activities will result in a range of sustainable development benefits, including economic, social and health benefits. Regarding economic benefits, the NAMA aims to strengthen the business sector that provides energy conservation services/products for buildings, to create jobs and to reduce energy costs for both the government and the final energy consumers. Regarding social and health benefits, the NAMA will ensure a more reliable domestic electricity supply and improved access to energy services, especially in the social housing segment. The NAMA will also strengthen Tunisia's mitigative capacity by building institutional and technical capacities, including enforcement capacities of the government and technical capacities of products and service providers. Research activities to be funded under the NAMA will provide the basis for decisions to support promising energy conservation technologies.

Current Status

The NAMA proposal has been approved by national stakeholders. Further activities will include the detailed design of the financial mechanism which will be supported by Ecofys under the second phase of Mitigation Momentum. The proposal is expected to be submitted to international funders for implementation support during 2014.

3.5 Peru – agriculture waste to energy

NAMA development in Peru has increasingly gained attention over the last two years. In various sectors, NAMA proposals are under preparation. Having set the target of supplying 40 per cent of its energy demand by renewable energy, Peru has a strong interest in activities in the energy sector. Ecofys and national consultants supported the Peruvian government with the development of a NAMA proposal that aims to use agricultural waste to produce energy. The proposal considers waste availability in different regions of Peru, the energy generation and GHG emission reduction potential, institutional scenarios for NAMA implementation and sustainability aspects of waste-to-energy generation.

National context and rationale

Energy supply in Peru is still critical, especially in remote rural areas. Agricultural waste-to-energy activities have the potential to fill the energy gap in areas which the national grid does not reach. Substantial amounts of agricultural waste are disposed of locally, either burnt or left to rot on the fields. Thirteen of the most important crops of Peru produce an estimated amount of waste of 8.68 million tonnes annually. The objective of the proposed NAMA is to promote the scaling up of agricultural waste-to-energy production in Peru to contribute to rural sustainable development and global climate change mitigation.

Stakeholders and their involvement

The Ministry of Environment (MINAM) initiated work on the NAMA proposal in 2012 as one of the members of the national Multisectoral Bioenergy Commission. The commission was established in 2009 by MINAM, the Ministry of Agriculture (MINAG), the Ministry of Energy and Mines (MINEM) and the Ministry of Production (PRODUCE) to strengthen inter-ministerial cooperation in the area of bioenergy. Stakeholder consultations were carried out at different stages of the proposal development both at national and regional level.

Several other NAMAs are currently under development in Peru, for example, NAMAs on energy efficiency, renewable energy production and solid waste management. MINAM is making a significant effort to align the development processes of NAMAs with similar objectives to ensure an efficient use of available resources and to maximize their impact.

Barrier analysis and NAMA design

Research and consultations with representatives from the financial sector, agro-industries, national and local governments, renewable energy experts and NGOs working in rural development revealed a number of barriers that impede the scaling up of waste-to-energy projects in Peru. Main barriers are a lack of knowledge on the energy production potential of agricultural waste as well as unavailability of loans and risk mitigation strategies. The NAMA proposes three main components to support investments in waste-to-energy activities: (1) building of national capacities to establish, operate and maintain renewable energy technologies and infrastructure; (2) establishing a grant and loan programme to support pre-feasibility studies and technology investments, respectively; and (3) promoting the establishment of a national renewable energy market.

NAMA design

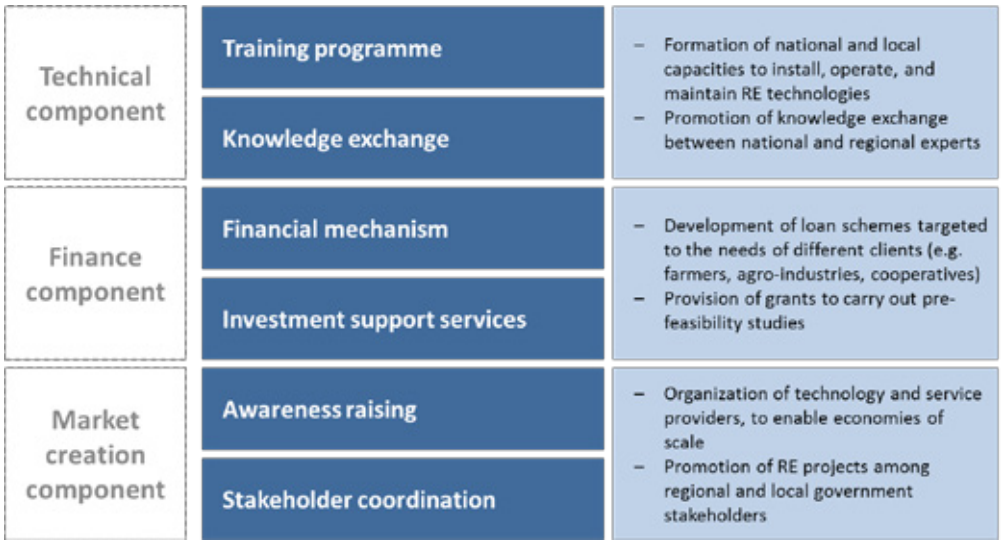

Figure 6: Proposed NAMA structure agricultural waste to energy proposal Peru

Impacts: GHG and co-benefits

The available primary energy from agricultural waste is an estimated 83 PJ, equivalent to a potential of 820 MW electric capacity. Depending on underlying assumptions, the implementation of agricultural waste-to-energy activities has the potential to generate 5.8 TWh of electricity per year. The use of this electricity has an annual GHG emission reduction potential of up to 1.6 $MtCO_2e$. Waste-to-energy activities also score high in supporting sustainable rural development, for example, by increasing access to modern energy sources, improving competitiveness of agricultural businesses and reducing detrimental impacts on natural resources caused by waste disposal.

Current Status

The NAMA proposal has been approved by national stakeholders and MINAM is preparing the hand-over of the proposal to MINAG. MINAG has expressed interest in seeking international support for its implementation.

4. Insights on selected topics

This chapter presents a number of practical insights, or good practices, for those involved in the design and support of NAMA proposals, based on experiences in five countries (see previous chapter) and continued discussions with peers. These insights have been presented and discussed at a parallel event at the COP19 in Warsaw (December 2013).

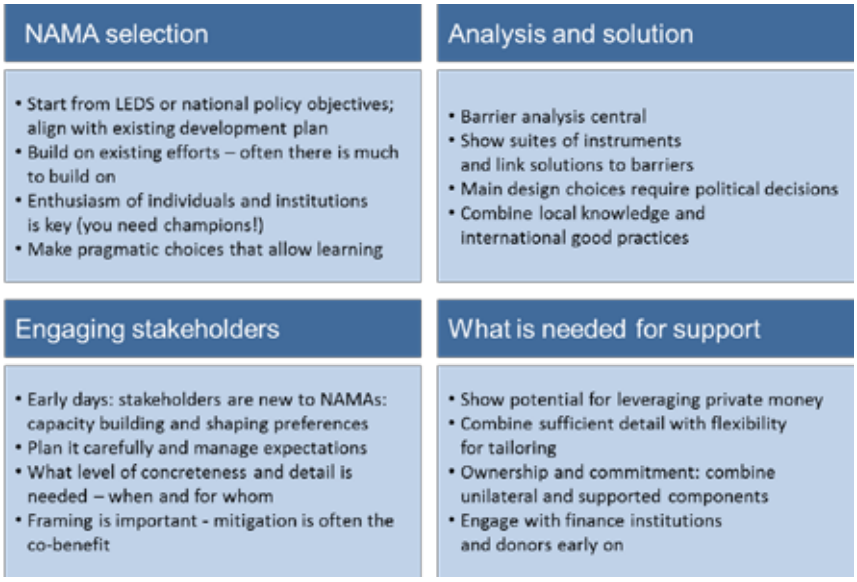

Figure 7: Selected 'good practices' when starting to develop a NAMA proposal (December 2013)

The topics are not chosen to cover the whole process of NAMA proposal development. It is a collection of issues that have been discussed within and across the teams working in the countries. No attempt has been made to explicitly link the insights to specific cases, because giving these links the appropriate context would go beyond the scope of this concise report.

4.1 Selection

The first step in the process of developing a NAMA is selecting and agreeing on a sector and/or action. In some cases the government already has a preference for a sector, or even a concrete action. In other cases some form of identification and prioritization is needed. Developing a NAMA proposal requires serious effort and resources, and raises expectations with stakeholders. For the NAMA to be successful, i.e. to be funded and implemented, it needs buy-in and ownership from government and non-government actors. It is therefore advisable to have a clear idea of the benefits the NAMA could bring, and its costs and impact, even in the early stages of proposal development. A benefits analysis can be rather simple at first, and iteratively become more detailed over the course of the NAMA design.

Start from LEDS or national policy objectives; align with existing development plan

A strategic framework, such as a low-emission development strategy (LEDS), can provide a good starting point for the selection of a NAMA and its level of ambition. NAMAs can be thought of as building blocks to implement a LEDS. NAMAs as building blocks can also contribute to reaching sectoral ambitions, for example renewable energy targets. NAMA and LEDS development processes can exist in parallel and inform one another. Technology and policy neutral assistance, as in our project, adds to the credibility when presenting the options and trade-offs in the design of the NAMA.

When selecting a NAMA topic, it can be helpful to make an explicit assessment of how the NAMA would contribute to reaching the objectives established in the LEDS or the development plan. What are the costs, benefits, and impacts? This is good for communication of the NAMA outside the small circle of direct stakeholders.

Build on existing efforts – often there is much to build on

In many developing countries both government and donors are active in sectors such as energy, transport, or agriculture. Building on *existing efforts* has several advantages including efficiency of knowledge and resources, policy coordination, synergy and mutual reinforcement, and using existing networks to secure buy-in.

NAMAs can be a packaging concept to scale up or enhance existing efforts. As such they may be introduced as new, but the activities, the low carbon technologies, etc., are not. Often, there are policies in place to achieve low carbon goals in a sector, but these are not as effective as they need to be or their ambition could be expanded. This makes an appealing argument for line ministries, increasing the impact of what they are already trying to do. New initiatives, without clear buy-in, may not get this consideration.

Box 4: Tunisia NAMA building on existing efforts

The proposed NAMA for energy conservation in the building sector in *Tunisia* builds on existing support schemes and initiatives in the sector, some of which have been operational for a number of years. The idea is to streamline and enhance existing efforts, to improve implementation and to increase the scale and reach of the activities. The result will be a comprehensive programme of interlinking activities which address barriers to mitigation in a holistic way. The NAMA is thus expected to drive the transformation of the building sector and associated industries.

Another reason for building on existing efforts, is that one starts from a set of policies and programmes that people know of. Institutions, networks, and working relations exist and by tapping into that you get a step up versus starting from scratch.

One of the first steps in developing a NAMA is getting familiar with the *current policy context*. This ranges from the institutional arrangements in government, to strategic documents on climate and development, and specific policies that are effective or planned in the sector. If private sector actors are to play a role in the NAMA implementation, it is insightful to assess the current policy context from their perspective. This can help to get a first understanding of the barriers and opportunities in the field.

Equally important is an *inventory of initiatives* by government and/or development partners, past and current. A round of meetings with the different donors can be clarifying, and reveal how they are involved in related activities, and what their priorities are. Individual meetings are a very efficient way to establish this, and can be helpful in mapping and getting to know the main stakeholders. In some countries, the coordination between and with ministries and agencies is not self-evident. There it makes sense to actively meet and query policy makers and technical staff if you have a chance.

Be aware that the *framing* of the NAMA is important. Those who run existing initiatives may be cautious that the NAMA will hinder or claim their successes. It is advisable to openly discuss the objectives and activities of the NAMA as well as interests and roles of relevant stakeholders/actors. Also, being clear about the added value of the NAMA and interactions with other initiatives makes a convincing argument for support at any stage. NAMAs – especially if transformational – are likely to involve various sectors and hence cut across different ministries/ institutions horizontally as well as vertically (national – subnational). It is therefore advisable to prepare a convincing narrative on costs, benefits, and impacts of the NAMA for different audiences.

Box 5: The importance of framing and coordination between institutions in Peru

Framing of the NAMA as well as inter-institutional cooperation are important elements of successful NAMA development, particularly when developing cross-sectoral NAMAs like the Peruvian agricultural waste-to energy NAMA. The NAMA cuts across topics like climate change, renewable energy production, energy access in rural areas, sustainable agricultural production and agro-industrial processing which are located in different ministries. An inter-institutional body like the Multisectoral Bioenergy Commission can facilitate communication, distribution of responsibilities and coordination of NAMA development and implementation. However, the selection of one member that leads the process is important; different members may take the lead during different stages of NAMA development.

Enthusiasm of individuals and institutions (you need champions!)

NAMAs can be seen as abstract, and often lack *a priori* certainty on funding. This may lead to a wait-and-see attitude with stakeholders. International technical assistance cannot adequately address this without a local team that is always present and is trusted in the local context. To get stakeholders involved, create buy-in, and build ownership, it helps to have '*champions*' who represent the NAMA. These can be individuals, but in order to be effective the institutions need to follow shortly.

Having one or more enthusiastic and convincing *individuals* to support the NAMA can make all the difference. This could be someone on the development team, or someone in government. This person would be a driving force and can help to convene meetings and address bottlenecks in the process. Since networking has proven to be important for a smooth process, the 'champion' should be a good networker, a credible messenger towards stakeholders, and have access to or be a decision maker.

Governments are involved in NAMA development in different roles and capacities. There may be a high-level political leader, a coordinating body on mitigation or NAMAs, and a ministry (and department) that deals with the actual implementation of the NAMA. For all of these *government stakeholders*, ownership and buy-in need to be established. Proactive involvement at key moments in the process can be helpful for this (for example through briefings or meetings), as well as communicating the benefits of the NAMA. Having a signed letter of support from a leading policy maker, such as the permanent secretary, helps to open doors to people in the ministries and agencies.

Obtaining high-level support for NAMAs can be difficult given that many stakeholders' previous experience with climate finance, and donor finance in general, has not necessarily been positive. Stakeholders may express concerns about the conditions associated with disbursement of funds under a NAMA. As with anything that is new, stakeholders (in particular private actors) are quite cautious to throw their weight behind something that is poorly defined and for which the details have not been agreed upon. The rapidity of disbursement is also often cited as a key concern, based on previous experience with climate/donor funds.

The *donor community* plays an important role during the NAMA development. There is a good chance that some are already involved in (supported) activities related to the NAMA, and to avoid duplication and overlap it is necessary to coordinate. If the development partners have a sector working group that meets regularly, this could be a good starting point for engagement. Otherwise every effort should be made to meet them regularly. There is a need for an enthusiastic donor community when looking for support – consequently their buy-in throughout is needed. Donors often have an interest in the goals that the NAMA pursues, and can also play a role as potential funders. Before there is a decision on finance for the implementation of the NAMA, potential donors may be cautious to show too much commitment.

What makes a good pilot

The word pilot in this context means a first of its kind, and is not related to scale or ambition. A first initiative can help governments learn how to handle NAMAs, and a good pilot is a *show case*. It needs to be feasible, ready to start implementation in the short term, and have clear and visible impacts. A convincing case for implementation funding needs to *'tick all the boxes'* in terms of current donor priorities: ambition and transformational change, emission reduction, development impacts, size, and scalability. If there is a need to show results fast, building on existing efforts and addressing current priorities often makes sense. It may be preferable to *respond pragmatically to opportunities*, rather than choosing something less developed, one could choose a NAMA that doesn't have to start from scratch.

4.2 Engaging stakeholders

Government led processes that seek to transform sectors and industries must gain the trust and cooperation of those inside and outside of government. NAMA stakeholders include government bodies (e.g. coordinating body and sector line ministry or agency), sector representatives (e.g. utilities, project developers), financing sector (e.g. banks and investors), NGOs and members of the general public, and international development actors (e.g. donors and agencies). Engagement is necessary for obtaining knowledge and information, for creative input during the NAMA development process, for validation of findings, buying in to the NAMA, and (for some) signing off on the proposal. Stakeholders have different roles and their degree of influence and engagement varies: some may only provide information and share view points, while others may have decision power and implementation responsibility.

We observe that stakeholder processes around NAMAs are generally not well established and that pre-planning at the outset is important. This makes the role of 'champions' (see previous section) more important in bringing people together and maintaining momentum

Early days: stakeholders are new to NAMAs: capacity building and shaping preferences

NAMAs are new, and because they are taking shape in a bottom-up way, as a result of a dialogue, there is little guidance. It needs to be recognized that depending on the country context, there may not be well established stakeholder consultation processes in place for private sector and civil society, or even among public bodies. In the absence of concrete examples, the concept can be abstract at first. For the stakeholders this means a combination of *getting familiar* with the conceptual side of NAMAs, and shaping their *preferences and attitudes* towards it as an instrument. This holds for all stakeholders, but the degree in which they are confronted with the conceptual side of it differs: don't be attached to the term NAMAs when dealing with stakeholders that don't link to the negotiations. "Supported mitigation action" is a step down, but for example a "renewable energy programme" is often best.

A basic ingredient for a good dialogue on choice and design of the NAMA, is that there is a *common understanding* of the concept and its goals. Getting on the same page is a necessity, but levels of understanding vary across individuals. Well-communicated, evidence based analyses can help. Either through policy briefs and presentations, or background reports for specific audiences.

Figure 8: Stakeholders provide context specific input for the NAMA proposal and validate the results

One of the major concerns for private actors is a perceived potential clash with the Clean Development Mechanism (CDM). Although prices are currently depressed, many private developers in the energy sector anticipate that there is great value with future CER revenue, and are thus reluctant to put this at risk by being 'involved' in a NAMA. Given that many private actors, in particular in the energy sector, have a large influence on policy makers, if they perceive a risk, they can derail the whole NAMA development process. Care should thus be taken when framing the NAMA to stakeholders to not link it too closely to the CDM. Although the origins are similar (UNFCCC), even mentioning it in the same sentence can put actors on the defensive immediately. Relating it to the GEF or CTF is a much more suitable approach.

Also for private actors that are familiar with CDM, MRV requirements are a major point of concern. They understand from the CDM that MRV can be onerous and complex, and can carry risks. Although highlighting the differences between CDM and NAMAs helps (market based vs. not market based instrument), being as specific as possible about the level of detail of information required and who will be responsible for gathering it should be communicated as early as possible.

Plan carefully and manage expectations

Having a clear and agreed process to engage stakeholders can help avoid surprises. Designing a stakeholder process is determined mainly by the *plan for engagement* (in meetings, milestones and decision points) and the *roles and influence* of the different stakeholders. Is group consensus or individual consent needed, or is it sufficient to present and solicit feedback? Which stakeholders are involved, and when? How is feedback handled? Is there a communication strategy? These questions need to be addressed from the outset to allow an orderly process.

Since there is not much experience with NAMA development, and ownership and buy-in should not be compromised, there is a need for *flexibility in the process* of developing the NAMA. It is important to respond to signals of discomfort with the process, and if necessary .reconsider the approach. Getting the attention of the right people requires a *convincing argument* on why they should be involved in the NAMA. NAMAs and traditional development plans differ: NAMAs are developed with donors at a distance, while ODA programmes have much clearer direction from donors (either through tenders or direct involvement). We expect this to be temporary, but at present it affects what can be credibly promised and expected. The absence of committed financial means for the implementation can make government people cautious to invest time in it. The other way around, uncertainty on the outcome/impact of the NAMA being developed leads to cautious donors.

One of the biggest challenges is inter-ministerial coordination and defining who is in the 'lead'. Early in the process, there may be some benefits in terms of access for the NAMA developers in not insisting on clear ownership between the two (or more) ministries, however at a later stage it could lead to conflict and miscommunication, in particular when finance is on the table. Bringing the different ministries together, at as high level as possible as early in the process as possible to define roles is crucial.

A critical part of managing expectations is being realistic about the kind of money that is available for NAMAs. The challenge for practitioners is that there are no NAMAs that have received significant amounts of finance to date, and although there is a big potential, this is (for the moment) speculation. Underlining a 'first-mover' advantage is useful, however many stakeholders may not necessarily be convinced by such an argument.

What level of concreteness and detail is needed – when and for whom

Over time, scope, scale and interventions are agreed and therefore the level of available detail increases as the NAMA shapes up. There will be one key stakeholder, the line ministry, who is leading in determining the detail required. Not everyone needs to read the full proposal, or is interested in technical details. Often it is sufficient to show that the analysis was robust, and present only findings relevant to the interest of the audience. Good communication practices apply, but experience shows a wide range of national and cultural preferences on communication.

There are several *logical moments* in the process to present results. At the initial stages, when the NAMA is chosen, a one or two page information note can be made as general introduction. After the background- and barrier analyses are completed, a concept note of 20-30 pages can provide an update on progress and possible ways forward. When the government decides to present the proposal to the public, the format depends on the audience: it can be anything from an extensive/detailed document with background analyses to an executive summary, or submission formats (e.g. for the NAMA Facility or the UNFCCC Registry).

Technical stakeholder meetings and workshops can be useful to get input for the analysis and to verify the results. At these meetings, topics are typically discussed at a *high level of detail.* For this, it can be useful to conduct additional analyses such as options and pathways analysis, benefits analysis etc, and communicate the findings in technical notes and reports.

Framing is important - mitigation is often the co-benefit

Coming from the climate change community, NAMAs have a focus on mitigation. The reality is, that at the national level mitigation is often only a key driver of action for a small group of people, but not so directly relevant for others. The focus of the NAMA should balance mitigation and development benefits. Too much focus on *mitigation, as suggested by the term NAMAs, may distract* or damage buy-in. To capture interest of all stakeholders, the NAMA has to show clear benefits in terms of wealth (e.g. lower prices) or wellbeing (e.g. less pollution or congestion) for affected stakeholders. How prominently mitigation should feature, depends on the stakeholders and the context, and is a matter of trying out.

Use results to tell and *illustrate a story*, don't let the numbers speak for themselves – readers need context. Do the analysis, but avoid technical details in presentations and reporting where possible (unless it is a technical report). Be clear about costs and benefits, and the impacts of the 'transformation' that the NAMA may cause or support. Some actions are win-win, but if there are losers they will need to be acknowledged.

Box 6: Indonesia: framing mitigation as a co-benefit

While Indonesia's climate pledges (see Chapter 3) are starting to lead to action, there have been more fundamental economic drivers of renewable energy for a longer period. Indonesia needs new domestic energy sources to reduce the role of oil-based (diesel) power generation, because of rising fuel and subsidy costs. In many smaller grids or remote areas, there is a large presence of oil-based generation, providing roughly 12% of total electricity in 2011. The regulated tariffs that the public TSO/DSO can charge to customers means that these types of plants effectively run at a loss. Moreover, the exposure to international oil prices means that these subsidies can unexpectedly increase.

A key objective of the government has therefore been to reduce dependence on oil by expanding the use of coal, gas and renewable energy sources. Regulation in 2006 set a goal for new and renewable energy to contribute 17% of total energy supply in 2025, up from roughly 6% today, and this was recently expanded under draft legislation to a target of 23%.

Not only does the share of renewable energy need to triple or quadruple, but the entire sector is growing quickly as well. This means that the capacity of renewable energy will need to grow enormously over the coming decade, a huge challenge. Placing these two primary drivers of renewables, energy diversification and sector growth, at the centre of the Indonesian NAMA is key to winning the broad support of the associated ministries and agencies. In this framing, mitigation is an important, but secondary, co-benefit of existing strategies.

4.3 Analysis and solution

Analysis (such as cost and benefits, barriers, impacts, risks) lies at the heart of the NAMA development, and directly feeds into decision making and design. Which analyses are needed, and how elaborate they are depends on the objective of the NAMA and the information that is already available.

Barrier analysis central

After narrowing down the scope of the NAMA, the logical next question is to see why a technology or action with apparent impact in terms of GHG emission reduction and delivery of co-benefits has not been implemented so far, or only been implemented on a scale too small to achieve transformational change This can be broken down into analysis of barriers, with the assumption that resolving these barriers brings us closer to the goal. Chapter 3 presents some concrete examples of barriers.

Barriers need to be thoroughly understood, validated and cross-checked. A barrier analysis is a central piece of the NAMA development and gives insight into the scope and nature of the problem.

Box 7: Barrier analysis in Chile

The process to develop and design the NAMA for self-supply renewable energy in *Chile* involved a detailed analysis of barriers. The project team undertook a series of consultations and in depth face to face interviews with representative from the private sector and government. In particular, industry representatives with experience in investing in self-supply renewable energy systems were interviewed to understand the specific barriers they faced at the time. This resulted in valuable insights which later informed the design of the NAMA components.

Show suites of instruments – direct link to barriers

Often barriers can be overcome in different ways, and the choice is not a simple one. There are various combinations of policy instruments and elements of the financial delivery structure that can work (finance is often a significant part of a NAMA). The solution the NAMA offers typically has one or more components, across the UNFCCC categories of finance, technology transfer, and capacity building. What these components will look like, and the choice and design of policy instruments or funding mechanisms, is decided by policy makers and can depend on institutions and donor preferences etc.

It is important to note, that all too often financial or economic barriers are considered to be the most significant barriers to investment in mitigation technologies and measures. Whilst these are indeed important obstacles which need to be addressed, in many countries and sectors they are not the main ones. Capacity barriers, information and knowledge barriers can be equally if not more significant. Only by addressing multiple barriers at the same time through different types of interventions can long term change be achieved.

Main design choices require political decision

During the process of developing a NAMA, there are several steps that require approval from policy makers. These include: mandate and process approval, choice of priority technologies and actions, choice of policy instruments, choice of scale and modalities for finance, validation of drafts and final report, and framing the NAMA and communicating results. Be clear about the planning and the moments where you require a decision or sign-off. Having a steering committee improves the ownership and can give the process a bit more weight and stability (from ad-hoc changes)

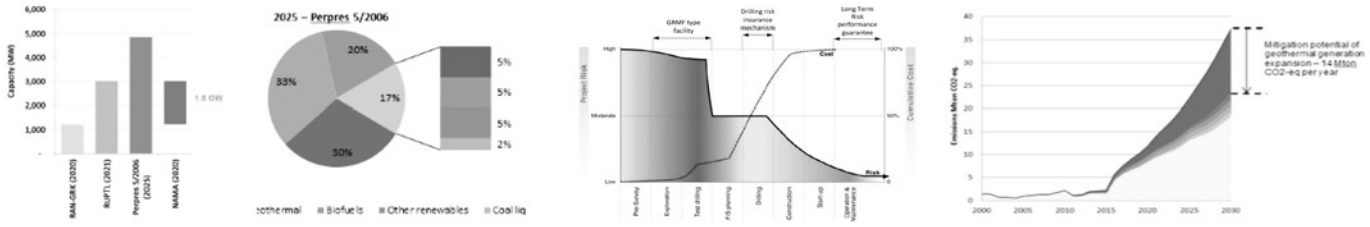

Figure 9: Evidence based analysis is needed to support design decisions

Although not directly involved in much of the technical work, it is important to keep in mind that any intervention that does not rely 100% on grant finance will need some kind of approval/support from the treasury / ministry of finance. In 'developing' countries, the ministry of finance is a powerful ministry that needs to be on board for any kind of decision about, for example, concessional finance or guarantee mechanisms (government supported guarantee mechanisms can have implications with the IMF). The ministry of finance should be consulted as early on in the process as possible, and go-ahead sought on any decision about instruments.

Combine local knowledge and international practices

Developing a NAMA proposal typically requires a team of people in government and supported by external experts. Since the NAMA work is new and specialized, most of the time the readiness assistance is conducted by international experts. Working with local experts is important: they have different and often better access to information, and they can be credible representatives of the team and the proposal. Moreover, it is necessary for government and other stakeholders to have access to information on the proposal, and contacting a local expert is often perceived as easier than getting in touch with the international team.

As discussed above, the NAMA field is relatively new and there is only limited documented experience. It is nevertheless helpful to combine local knowledge and needs with emerging good practices in NAMA development. This can include setting up a process, but also looking at other countries for practices on getting buy-in, and making a convincing case for support.

4.4 What is needed for support

Support needs are very case specific and there is no single recipe to developing a NAMA proposal that successfully attracts support. That said, there are some aspects that can be helpful. This section discusses four: the potential for leveraging resources, the combination of detail and room for tailoring, combining unilateral and supported elements, and early engagement with donors and financial institutions.

Recently, the transformational nature of the NAMA has been coined as indicator for attractive NAMAs. At present this doesn't resonate with recipient countries and there aren't clear definitions. National decision makers want to see the trade-off between short and long term costs and benefits, which is inherent in policy making and not new to NAMAs. Transformation is a difficult indicator in itself as it needs to be expressed through other indicators – e.g. scale, complexity, longevity.

Potential for leveraging private money

Global investments needed for mitigation require large share of private money. The term leveraging private money is used in the climate change discourse to indicate actions by which a limited amount of public money directs a larger sum of private (or public) money towards climate technologies. However problematic in terms of attribution, leverage is an *important indicator* for donors.

Box 8: NAMA Finance in Chile

The financial mechanism of the NAMA for self-supply renewable energy in *Chile* is centered around a guarantee fund and associated preferential loan scheme. The guarantee reserve, funded by an international donor, will cover the majority share of any loan defaults. This enables development banks and commercial financial institutions to capitalize a loan programme for renewable energy projects with attractive conditions for participants. A relatively small injection of public finance to populate the guarantee fund thus allows for around ten times the volume of investment in renewable energy technologies by the private sector.

Combine sufficient detail with flexibility for tailoring

There are not many NAMA proposals available in the public domain to show the *level of detail* used. The NAMA Facility used a relatively comprehensive template, but there was no guidance on the level of detail required per item. The notion that there is one specific NAMA proposal that fits all purposes may be false: the proposal should be seen as a statement of intent from the government, which needs to be tailored to the audience. The proposal should therefore be sufficiently detailed to serve the purpose of being convincing, but at the same time leave room for detailing and tailoring according to specific future (support) requirements.

Ownership and commitment: combine unilateral and supported components

Government ownership and commitment are important criteria for funders before promising to support a NAMA. But they are difficult to measure, and a signed letter may not be sufficient to determine the level of commitment. By combining unilateral and supported components, the host government reveals its *own commitments* in terms of policies, finance, and institutional structure. The limited support funds available will require that many supported NAMAs are complemented by national public budgets, depending on the capacity of a country to find these resources and the scale of funding required.

Box 9: Kenya NAMA – Integrating domestic, international and NAMA finance

In Kenya, significant domestic and international funds are already being directed at geothermal development, with 2-3 billion USD of concessional/ sovereign loans from domestic and international sources, and 100's of millions USD of grant finance, currently 'mobilised', not to mention the myriad of policies, institutional and regulatory reforms already put in place. Clearly, the NAMA needed to take these efforts into account explicitly in its design.

The approach of the NAMA was to integrate the on-going domestically and internationally supported efforts that shared a common objective, in this case to support transformation to private sector driven development, as a 'unilateral' component. This approximated to 1.15 billion USD. Additional actions identified as part of the NAMA development process were 'new, complimentary actions seeking additional support under the NAMA'. This amounts to approximately 250 million USD.

Engage with finance institutions and donors early on

It is good to engage with financial institutions (e.g. national/commercial banks, MDBs, national funds) early on in the process. It will help get an understanding of the requirements and interests, for example on MRV and on sector and technology preferences. Also, financial institutions and donors have long standing experience with financial cooperation to draw from and increase the robustness of the proposal. National finance institutions that have a role in the implementation will need to ensure their readiness to receive and channel finance.

5. Outlook

We can now look back on around six years of experience with NAMAs, initially within the theoretical context of the climate negotiations and increasingly of concrete practical action on the ground. At the international level a broad framework for NAMAs has been set up, including the NAMA Registry and guidelines on reporting of NAMAs through the national and international reporting channels. At the national level a great number of countries have started to prioritise, develop and in a few cases even implement NAMAs. NAMA offices and focal points have been set up and institutional capacity and knowledge on NAMAs is steadily increasing. A range of dialogues and peer to peer exchanges have taken place, complemented by more formalised networks to promote NAMAs, such as the NAMA Partnership. And last but not least, we finally saw the first dedicated NAMA fund for implementation finance starting operations. This is an outstanding example where the UNFCCC process has generated change on the national level in a very short period of time.

So what does this mean for the future of NAMAs? Where are NAMAs going and what role will they play in the context of future global mitigation efforts?

First of all, we firmly believe that NAMAs are here to stay. NAMAs have stimulated a lot of strategic thinking and activity and continue to be a dynamic and evolving mechanism. They are still very timely and present an important paradigm shift by providing a way for developing countries to commit to and deliver mitigation action. At present NAMAs are the only support mechanism available that is fully dedicated to climate mitigation beyond the existing ODA channels which typically serve other primary purposes.

Given their flexible nature and applicability in various national contexts, NAMAs fit well into the current policy thinking and emerging policy framework. NAMAs naturally link into strategic frameworks such as low emission development and green growth strategies as one of the mechanisms to implement the strategies. In the context of finance, NAMAs support the generation of a pipeline of fundable schemes for future support windows of the Green Climate Fund and may be used to shape national frameworks conducive to private sector investment, albeit more is needed to engage the private sector to understand the dynamics.

While NAMAs should and likely will remain a standalone mechanism, we also see that many of the approaches, skills and structures needed for the development and implementation of NAMAs are essentially very similar to many of the existing ODA activities which have a mitigation angle. There is increasing recognition that NAMAs are not really new or different but that NAMAs and ODA activities can mutually enhance and reinforce each other. More conceptual thinking may be need to understand the roles of new and existing players in this context.

In the absence of a global climate agreement NAMAs can play an important role to enable bottom up action and increase the willingness and ability of developing countries to make and ultimately deliver the much needed ambitious mitigation pledges. At the same time it is clear that NAMAs can only be part of the solution. The current level of (public) finance available for NAMA implementation as well as the strong engagement of smaller middle income as well as least developed countries, suggests that for the large emerging economies other frameworks beyond NAMAs are needed to successfully drive mitigation in the long term.

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