MitigationMomentum

Annual Status Report

on Nationally Appropriate Mitigation Actions (NAMAs)

2013

ECN ECOFYS sustainable energy for everyone giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH CCAP CENTER FOR CLEAN AIR POLICY teri UNEP RISØ CENTRE ENERGY, CLIMATE AND SUSTAINABLE DEVELOPMENT OECC

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Annual Status Report
on Nationally Appropriate Mitigation Actions

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Acronyms and abbreviations

AF	Adaptation Fund
BAU	business as usual
BMU	Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Germany)
BUR	Biennial Update Report
CCAP	Center for Clean Air Policy
CDM	Clean Development Mechanism
CGER	Center for Global Environmental Research
COP	Conference of the Parties
CTCN	Climate Technology Centre and Network
DA	Designated Authority
DECC	Department of Energy and Climate Change (UK)
DNA	Designated National Authority
JCM	Joint Crediting Mechanism
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	greenhouse gas
GIZ	German Society for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit)
ICA	international consultation and analysis
KfW	KfW Development Bank
KPTAP	Kyoto Target Achievement Plan
LCDS	Low Carbon Development Strategy
LDC	least developed country
LEDS	Low Emission Development Strategy
M&E	monitoring and evaluation
MLP	multi-level perspective
MOEJ	Ministry of the Environment, Japan
MRV	measurement, reporting and verification
NAMA	Nationally Appropriate Mitigation Action
NC	National Consultation
NDE	National Designated Entity
NIE	National Implementing Entity
NMM	new market mechanism
ODA	overseas development assistance
OECC	Overseas Environmental Cooperation Center (Japan)
TERI	The Energy and Resources Institute
TSU	Technical Support Unit
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard

Foreword

The editors are pleased to present the Annual Status Report on Nationally Appropriate Mitigation Actions (NAMAs) 2013. This is the third edition in a series that seeks to provide up-to-date snapshots and analyses of recent developments in the world of NAMAs.

With the first dedicated fund for NAMA implementation launched earlier this year, NAMAs are moving gradually from concept to concrete action. This is an encouraging first step, although more evidence of finance and real action is needed to establish NAMAs firmly as a mitigation mechanism and ease the emerging scepticism in some quarters.

Like previous editions, this report is a joint effort by a number of organisations involved in NAMAs, be it through research, readiness activities or supporting NAMA development on the ground. The circle of contributing authors was expanded this year to take account of the growing expertise and different global perspectives. The editors, Ecofys and the Energy research Centre of the Netherlands (ECN), are joined by the Center for Clean Air Policy (CCAP), the World Resources Institute (WRI), the Gesellschaft für Internationale Zusammenarbeit (GIZ), the UNEP Risoe Centre, the Energy and Resources Institute (TERI) and the Overseas Environmental Cooperation Center of Japan (OECC) as contributing authors. A special contribution is made by the British German NAMA Facility to replace the previous chapter on recent trends in NAMA support, as the launch of the Facility represents the most significant development in this area.

The report begins with an overview of the latest statistics in NAMA development, drawing from the Ecofys NAMA Database as well as the UNFCCC NAMA registry. This is followed by an analysis of areas in which progress is most needed. The subsequent contributions on specific NAMA related topics are authored by the different contributing organisations and hence may not represent the views of the entire group of authors.

The Status Report is produced as part of the Mitigation Momentum project supported by the International Climate Initiative of the German government.

Executive summary

NAMAs are moving gradually from concept to concrete action. A fully functional and publicly available version of the UNFCCC NAMA registry was released on 16 October 2013, and the first dedicated fund for NAMA implementation was launched earlier this year. Countries with no previous NAMA activities engaged in NAMA development and new NAMAs emerged around the world. These are encouraging steps, although more evidence of finance and NAMA implementation is needed to establish NAMAs firmly as a mitigation mechanism and ease the emerging scepticism in some quarters.

The reports begins with an overview of the latest statistics in NAMA development, drawing from the UNFCCC NAMA registry and the Ecofys NAMA Database. Currently, 40 NAMAs are included in the registry, and the database contains information on 82 NAMAs and 33 feasibility studies from 34 countries. This is followed by an analysis of areas in which progress is most needed to create widespread acceptance of the NAMA mechanism and implement actions that achieve significant GHG emissions reductions within the context of sustainable development. The chapter has four main sections, on: defining, financing, monitoring and operationalising NAMAs.

The subsequent contributions on specific NAMA related topics are authored by different organisations. The Center for Clean Air Policy (CCAP) discusses the role of finance in advancing transformational NAMAs. The Energy research Centre of the Netherlands (ECN) takes a close look at the convergence in the structure and level of detail of current NAMA proposals. Ecofys defines transformational change and shows how transformational elements can be identified and incorporated into the design and implementation of a NAMA. GIZ highlights experiences and lessons learnt from applications of the NAMA Tool that has been presented and used as methodology for NAMA development in a variety of workshops and trainings all over the world. The Energy and Resources Institute (TERI) presents the results of an online survey that collected respondents' considerations taken when designing and implementing NAMAs and elements perceived as key in operationalising a NAMA registry. UNEP Risoe Centre reflects on the linkages between low-carbon development strategies, nationally appropriate mitigation actions and measuring, reporting and verification processes. The Overseas Environmental Cooperation Center (OECC) reflects on domestic institutional arrangement instead as essential elements in the development, coordination and implementation of NAMAs and their MRV. The contribution of the World Resources Institute (WRI) seeks to unpack MRV needs for estimating the greenhouse gas emissions reductions associated with NAMAs, as well as existing resources available to assist countries. The NAMA Facility presents an overview of its objectives, governance structure and selection and implementation procedures for NAMA support projects.

1. NAMA development

Hanna Fekete, Ecofys

This section provides an update on the development of Nationally Appropriate Mitigation Actions (NAMAs) around the world. This includes up-to-date statistics on NAMA activities, emerging ideas and feasibility studies. Furthermore, it gives an overview of NAMA submissions to the UNFCCC NAMA registry. The statistics focus on supported NAMAs across different sectors and types of NAMAs.

1.1 A closer look at NAMAs submitted to the UNFCCC NAMA registry

The 16th Conference of the Parties (COP) in Cancun decided to set up a registry to provide a platform for countries to publish NAMAs seeking international support in order to facilitate matchmaking of NAMAs with available finance, technology and capacity-building support. Countries may also use the registry to communicate unilateral NAMAs for recognition (UNFCCC 2013).

The UNFCCC Secretariat published a prototype of the registry, which was only open to Parties of the UNFCCC. Following the successful completion of the prototype phase of the registry, a fully functional and publicly available version of the registry was released on 16 October 2013.

Currently, 40 NAMAs are included in the registry, of which four are unilateral NAMAs and not included in the statistics of this report. Although parties use a common template to submit NAMAs, the submissions vary strongly in their level of detail and volume of information. The submissions range from providing NAMA titles and contact details to comprehensive ideas on the activities, impacts and support requirements.

With the UNFCCC NAMA registry now being fully operational, its visibility may increase, triggering the interest of a broader range of countries to submit information. Currently only a few countries have submitted NAMAs to the registry. Serbia submitted 12 NAMAs and Jordan 8, meaning that half of the NAMA submissions originate from only these two countries. It is therefore difficult to derive trends in the registry regarding type of actions, regional distribution and sectors. In general, the trends seem similar to the overall direction of current NAMA development as noted in Section 1.2, although there is an apparent tendency towards a stronger focus on project-based activities in the registry.

1.2 Supported NAMAs under development

The scope of this section includes NAMAs submitted to the UNFCCC NAMA registry prototype (hereafter "NAMA registry") as well as NAMAs where public information has been made available. The focus is on supported NAMAs, in line with the international perspective of this report. Some countries have additionally put forward unilateral NAMAs, which are not considered here.

This section of the report provides an overview of ongoing NAMA activities. For the 2013 NAMA Status Report, information and feasibility studies on NAMAs were collected between June and October 2013. As in previous NAMA Status Reports (Röser et al. 2011; van Tilburg et al. 2012; Hänsel et al. 2012; van Tilburg et al. 2013), information was taken from the NAMA Database which tracks ongoing NAMA activities ranging from feasibility studies to implemented actions based on publicly available sources (Ecofys 2013).[1]

1 The NAMA Database is maintained by Ecofys. The database does not represent official NAMA submissions and may not reflect the priorities of the country government. The criteria for including NAMAs in this database can be found on the NAMA Database website (http://nama-database.org/index.php/What's_included_in_the_database%3F).

Current status of NAMA development

The database currently contains information on 82 NAMAs and 33 feasibility studies from 34 countries. This indicates a notable increase of NAMAs compared to the number presented in the recent 2013 mid-year update of the NAMA Status Report (which identified 66 NAMAs). Of these NAMAs, 35 have been submitted to the UNFCCC registry.[2] Figure 1 shows the distribution of NAMAs according to their stage of development. It also illustrates how many NAMAs have been submitted to the NAMA registry, according to their stage of development.

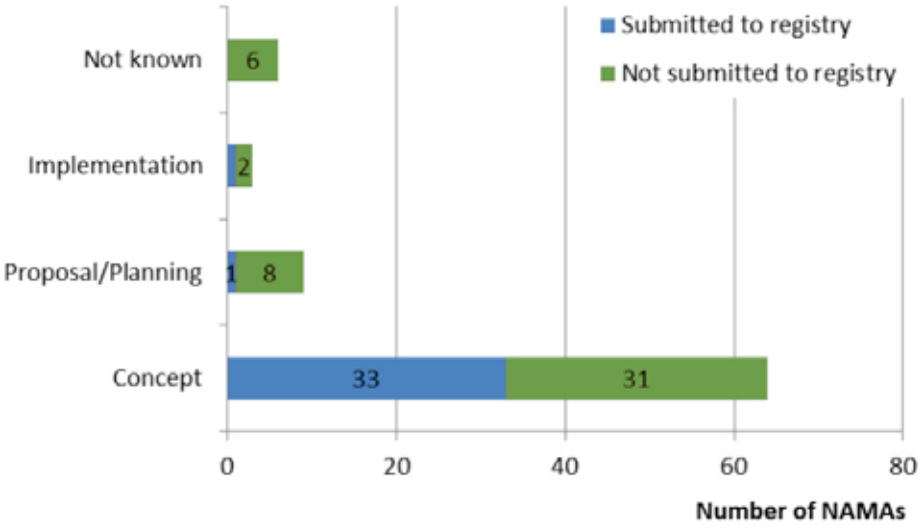


Figure 1 Number of NAMAs according to stage of development

Figure 1 shows that most NAMAs currently developed are in the concept stage. Of those, about half are included in the NAMA registry. Of the NAMAs in proposal or planning stage, only one of nine has been submitted to the registry (Chile's self-supply renewable energy NAMA). The registry appears more attractive to NAMAs in the earlier stages of development, reflecting the possibility of submitting NAMAs for preparation as well as implementation support.

The UNFCCC NAMA registry has become better known to stakeholders, showing an increased number of published NAMAs since the last status report. However, only a number of countries have made active use of the registry, most of which have reported multiple NAMAs.

Outside the registry, the number of NAMAs has increased only slightly. However, we find that various NAMAs have gained significant depth in their planning activities and have moved a step further towards implementation. Two NAMAs have moved from concept to proposal/planning stage since the mid-year update of the Status Report.

2 Note that Jordan has split one project into two NAMAs, one part for preparation and one for implementation. In the NAMA Database, this is listed as one NAMA. In the registry, there are therefore 36 NAMAs listed.

Regional overview on NAMA development

As in previous years, Latin America remains the region with most feasibility studies and NAMAs under development. Over 50% of NAMAs are currently located there. One quarter of NAMA initiatives are carried out in the Middle East and Africa, followed by Europe and Asia (Figure 2).

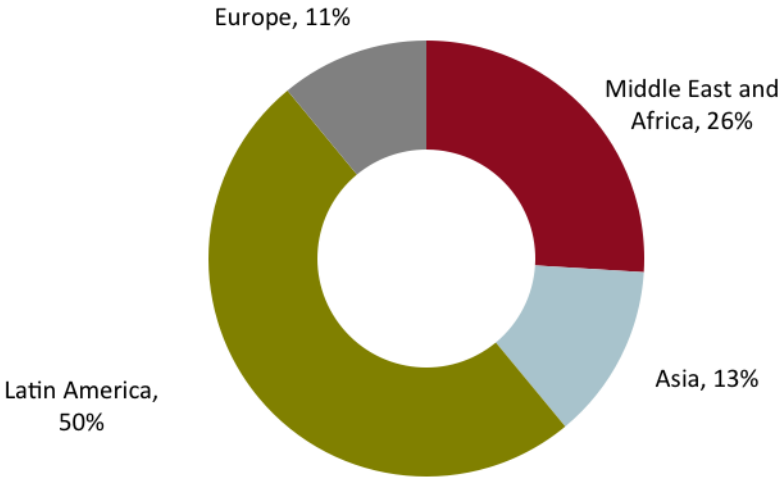


Figure 2: Regional development of NAMAs

As in earlier reports of this series, we observe a broader geographical distribution of NAMAs than is the case for Clean Development Mechanism (CDM) projects. The participation of African countries in NAMAs is particularly noteworthy, as well as the participation of several least developed countries (LDCs). This indicates that NAMAs are attractive for a broader range of countries, possibly related to their emphasis on national appropriateness and sustainable development as well as flexibility in the design.

The high number of NAMAs in Europe results from the submissions of NAMAs to the NAMA registry by Serbia, which put forward 12 NAMAs to the registry in spring 2013.

Sectoral overview

Current NAMA development is taking place across all economic sectors, showing no deviation from NAMA trends in previous years (Figure 3). The energy sector has currently the highest share, mainly related to renewable energy. The transport sector has the second-highest share, followed by the buildings sector. The sustained high level of activity in these two sectors is noteworthy, as these sectors were least covered by the CDM, again pointing to the more flexible framework that NAMAs present. NAMAs in the agricultural and the forestry sector still lag behind, with few NAMA activities to date.

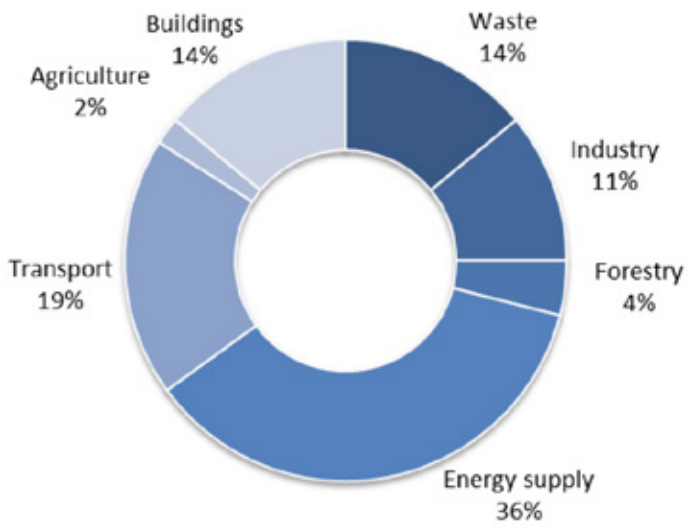


Figure 3: Sectoral distribution of NAMAs

Types of activities

NAMAs can be very different types of activities. The NAMA Database categorises NAMAs according to "strategy/plan", "policy/programme" and projects. Policies and strategies have a broader scope than projects, often in terms of both geography and time, and are likely to include longer-term objectives leading to transformational impacts. Of all NAMAs (Figure 4), one third are policies or programmes. Strategies or plans constitute another 26%, and 15% of the NAMAs are projects; 26% of NAMAs could not be attributed to a specific type.

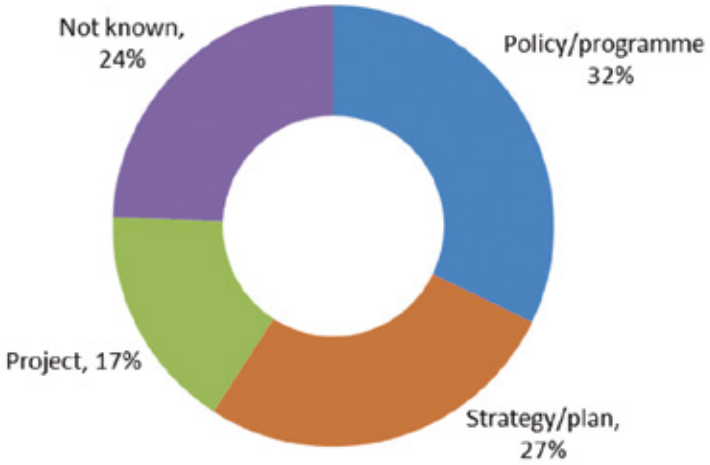


Figure 4: Type of NAMA activity

This result shows that many NAMAs aim to provide comprehensive solutions, indicating transformational change and long-term emissions reductions. At the same time, the large number of unspecified NAMAs illustrates that the scope of many NAMAs is still unclear, and the level of detail provided rather limited.

2. Where progress is most needed

Lachlan Cameron and Xander van Tilburg, ECN; Frauke Roeser and Gesine Hänsel, Ecofys[3]

As in previous editions of the NAMA Status Report, this chapter highlights areas where progress on NAMAs is needed to create widespread acceptance of the mechanism and implement actions that achieve significant GHG emissions reductions within the context of sustainable development. The chapter has four main sections, on: defining, financing, monitoring and operationalising NAMAs. The chapter is based on selected interviews with developing country representatives as well as experiences gained under the Mitigation Momentum project by the Ecofys and ECN project teams.

Defining NAMAs

NAMAs continue to be defined very broadly within the negotiations and it is unlikely that any more detailed or prescriptive definition of NAMAs will emerge from the UNFCCC process in the near future. Rather, it is expected that NAMAs will be defined by experience and practice. For supported NAMAs this could mean that donors may effectively be the defining force behind NAMAs, although this is not quite in line with the idea of national appropriateness. What may be viewed as nationally appropriate by countries may not be attractive to NAMA funders and vice versa. As an example, the term "transformational" is considered to be a donor driven concept that is not really being picked up by countries.

Both developing countries and donors can take measures to ensure that NAMAs are in line with national sustainable development goals and international efforts to mitigate climate change. Developing countries need to be transparent on their NAMA development approach and underlying assumptions. Continued outreach and capacity building is also essential in order to build up the ability of countries to develop NAMAs that will be credible and achieve real reductions. Amongst sources of support, there will need to be some convergence of understanding and coordination of support for NAMA development and implementation. This needs to be communicated in order to create buy-in from developing country governments and to ensure an efficient use of resources. It is not efficient to develop NAMAs for a wide audience of donors with differing or competing demands or to develop NAMAs that do not subsequently obtain support.

Earlier editions of this NAMA Status Report have argued that flexibility in the design of NAMAs is one of its key strengths; however, there are limits to the value of flexibility. A lack of agreement on minimum requirements for NAMA proposals adds uncertainty and makes the process less efficient. Compounding this, there are very few NAMA proposals or detailed background studies available in the public domain. These are needed for people to scrutinise, analyse and compare NAMA development processes in order to encourage and enable learning.

The UNFCCC NAMA registry template and the NAMA Facility submission requirements have been useful in progressing thinking on NAMAs. Other donors and countries should follow and clearly communicate their expectations on NAMA content. Notably, expectations on MRV from a donor or host-country perspective have rarely been made explicit – existing guidance comes mainly from practitioners, perhaps without the reality check of whether this is what is required by donors or countries.

3 The authors thank Vahakn Kabakian, Nejib Osman and Rym Sahli for their important contributions to this chapter.

There is an abundance of guidance on how to prioritise and prepare NAMAs, but the majority of this guidance is rather general – indicating ways to get started on individual aspects of a NAMA development process. There is generally insufficient detail to allow countries to implement the proposed approaches (Cameron 2013). Combined with a lack of agreement about format and a lack of existing proposals, this means that we still don't know what NAMAs should or must look like in practice.

Financing NAMAs

There have been some positive signals on NAMA Facility in 2013, notably with the call for proposals of the British German NAMA Facility as well as the announcement of the Global Environment Facility (GEF) of NAMA support. These are valuable first steps in bringing NAMAs closer to reality, but it is important that additional funding is made available in the short term, not least to recognise the level of effort countries have put into the development of NAMA proposals and readiness activities.

As the first dedicated source of funds for NAMA implementation, the NAMA Facility will be watched closely by the NAMA 'community'. The question is, whether other donors will follow suit, or whether they will wait and see if the facility is successful before they step in. If other donors wait to observe results, this is likely to lead to a delay in funding at scale. This is especially because it takes time to start implementation, even after proposals have been awarded funding. There are early signs of scepticism amongst some developing countries, who may feel that they have committed resources and effort to the concept of NAMAs, but cannot see examples of funding. There may even be a risk that the success of the NAMA concept relies too heavily on the NAMA Facility, which can support only a small number of NAMAs due to limited funding available.

Effective ways of disbursing NAMA funding will be needed if the mechanism is to achieve significant emissions reductions. Most developing countries are familiar with the processes of multilateral funds such as the GEF and their implementing agencies. As a result, some countries have expressed preference for a multilateral arrangement over bilateral NAMA funding. This may be a valid argument; it would be difficult to efficiently seek and allocate support if there is a proliferation of procedures, templates and criteria as different NAMA donors apply their own rules and guidelines. A more limited number of multilateral funding processes, which pool funds from various sources, may afford more transparency and make the process of seeking support more efficient and accessible.

Lastly, engaging the private sector in NAMAs remains challenging. There is generally low awareness of NAMAs within the private sector. They also seem to be struggling to find entry points, as NAMAs are often about "market opening or creation". Further effort is required to make the benefits of engagement in NAMA development clear to the private sector. Concrete examples of successful public-private sector collaborations in the development and implementation of NAMAs are needed.

Monitoring NAMAs

No additional UNFCCC level guidance on the MRV of NAMAs is expected at COP19 in Warsaw, except for broad guidelines on reporting of unilateral NAMAs. On the ground, several more detailed guidance documents are being developed, and practitioners and countries are working on designing MRV systems for specific NAMAs. The missing element is concrete examples of MRV systems, in the form of published NAMA proposals. It is therefore difficult to get a sense of developing countries' perspectives on MRV. Also, expectations of donors – beyond the emphasis of the importance of robust MRV – are unclear.

Several countries continue to emphasise the importance of more guidance on MRV. This needs to be balanced against the position of many countries who emphasise the need for flexibility and country- driven approaches in recognition of "national appropriateness". The authors note that there is a tendency amongst developing countries towards pragmatic, yet broadly accurate, approaches to MRV that are based on nationally available systems. What can be agreed is that MRV should not be an obstacle for NAMAs, but a supporting element.

Operationalising NAMAs

The above aspects, of defining, financing and monitoring, are necessary prerequisites to successfully operationalise NAMAs; i.e. to implement them at scale. In terms of specific activities that are needed for implementation, two aspects can be considered: (i) preparing for finance – the readiness stage – and, (ii) actually securing finance, be it from national or international sources.

A number of countries have undertaken readiness activities by participating in capacity building initiatives, setting up institutional structures, establishing national processes and defining NAMA focal points. However, there is a continued need for more information sharing on best practices of institutional design and on experiences of countries that are further down the line with developing NAMAs. Additionally, a general lack of tools and guidance on more concrete aspects related to the implementation of NAMAs is repeatedly stated.

Experience with implementation is still very limited. The NAMA Facility will play a pioneering role, but these lessons will only arise over time and will depend on the NAMAs that are awarded support. It will be important that successful proposals are grounded in, or integrated into, recognised domestic policy processes in order to have the greatest chance of achieving real impact and learning. There is tension between three competing priorities: (i) to seize the opportunity to obtain NAMA finance amongst the technical cooperation organisations involved in many submissions; (ii) the Facility's ambition for (short-term) visible impact; and (iii) the widely advocated notion that developing NAMAs is an involved process that emphasises ownership and buy-in of key stakeholders.

In terms of operationalising NAMAs capacity gaps of some developing countries were also stressed in interviews. In many cases there are simply not enough physical resources on the ground to ensure smooth transition from NAMA development to implementation. At the same time, bureaucratic hurdles, especially in the context of countries' abilities to receive finance, can be significant. The need to involve finance ministries and institutions early on the process cannot be overemphasised.

3. Selected contributions on NAMAs

3.1 The role of NAMA finance in advancing transformational NAMAs[4]

Stacey Davis, CCAP

Well-crafted NAMAs present a critical opportunity to transform a developing country's emissions profile at a sector-wide scale while making important progress towards core sustainable development and poverty reduction objectives. This could mean achieving substantial and permanent changes in a country's electricity investments, building efficiency practices or travel patterns that would realise significant emissions reductions within the target sector(s) compared with business-as-usual conditions. The following four elements should be fundamental to NAMAs in order to realise the potential for NAMAs to drive transformational change.

1. NAMAs must be host-country-driven and incorporate the dual goals of greenhouse gas mitigation and sustainable development.
2. NAMAs should strive to be sector-wide programmes that are national in scope, with the potential for regional or municipal elements.
3. NAMAs should include both policies and financial mechanisms targeted to address the main barriers to mitigation activities.
4. NAMAs that seek international support should use NAMA funding (in the form of grants or concessional finance) to mobilise additional climate finance from bilateral institutions, international and domestic development banks and financial institutions, and the private sector.

NAMAs can lead to transformational change by combining government policies with financial support instruments to catalyse a pipeline of mitigation projects and mobilise private-sector investment. Policies and regulations can drive private-sector investment in low-carbon technology through mandates, by removing policy barriers, and by influencing the relative risks and returns of investment choices. Financial mechanisms can be coupled with government policies to overcome more specific investment barriers such as lack of familiarity with the mitigation technology, high interest rates, or lack of capacity of local banks. In many cases, developing countries require international support to implement these policies and financial mechanisms and achieve the desired sector-wide climate mitigation and sustainable development outcomes.

The role of NAMA finance

International climate finance may be needed at four separate points – capacity building, NAMA design, NAMA implementation, and investment in low-carbon technology and infrastructure projects (Box 1) – to advance NAMA development and implementation and ultimately achieve transformational change through the realisation of new low-carbon projects across the target sector(s). However, international climate finance is especially critical at the stage of NAMA implementation. Grants or concessional support for NAMA implementation can enable the NAMA mechanism to realise transformational climate and sustainable development outcomes. At the same time, NAMA implementation finance will help motivate further advancement of the strong pipeline of NAMAs already under construction across the developing world.

4 This chapter draws from several CCAP documents and reflects the thinking of a number of my CCAP colleagues. For further information, see Policy *Brief: The NAMA Opportunity (July 2013), An Emerging Architecture for NAMA Finance* (May 2013), and CCAP's 'Submission on guidance to the operating entities of the financial mechanism of the Convention' (September 2013). These documents can be found at www.ccap.org.

Box 1: Four stages of international financial support to drive transformational NAMAs

1. **Capacity building.** This includes grant support and direct assistance to developing countries to develop the local capacity needed to advance climate actions. Prominent among these are investments to support low-emissions development strategies, which can include long-term economy-wide climate goals as well as identifying short-term actions. These short-term actions could form the basis for NAMAs. Other capacity support seeks to identify and characterise climate mitigation options within a specific sector, or provide more generalised support for the institutions and staff that will be called on to implement the climate actions.

2. **NAMA design.** At the NAMA design stage, donor governments and institutions make grants or issue contracts to support design and development of NAMAs, potentially including support for: technical analysis of mitigation actions, policies and financial mechanisms; stakeholder engagement; demonstration projects and pre-feasibility studies. This initial stage in the NAMA process draws on low-emissions development strategies and government sustainable-development priorities to create compelling and well-defined packages of policy designs and financial mechanisms to overcome identified barriers and win additional implementation-scale support.

3. **NAMA implementation.** In this stage, donor governments and institutions will invest funds to support implementation of NAMA policies and financial mechanisms. These investments are made possible by the prior work to build capacity and design NAMAs, and seek to encourage low-carbon technology and infrastructure investments by the public and private sectors. Importantly, through well-crafted policies and financial mechanisms, support for NAMA implementation can help shape the direction of more general public- and private-sector resources, attracting larger and more widespread investments consistent with the goals of the NAMA.

4. **Investment in low-carbon technology and infrastructure projects.** With new policies and financial mechanisms having created a favourable investment climate, international finance institutions, development banks and the private sector can invest directly in low-carbon technology and infrastructure projects. These institutions are generally restricted to financing projects that will achieve target rates of return. Development banks and agencies may issue concessionary (or no-interest) loans that will eventually be paid back, whereas the private sector (commercial banks and developers) invests where there are profit-making opportunities consistent with their risk-return objectives.

To drive transformational outcomes, NAMA finance must focus on mobilising private-sector and development resources towards desired low-carbon technology and infrastructure investments. The private sector provides almost three-quarters of all climate finance, with development institutions funding about 20% of all climate finance. These funding amounts have greatly exceeded the levels of direct finance offered by governments.[5] Through design of NAMA policies and financial mechanisms focused on overcoming barriers to low-carbon investments, and in financing those measures, NAMA finance serves to scale up climate mitigation by mobilising private-sector and development-related investments in low-carbon projects in ways that remain consistent with national poverty-reduction priorities.

5 According to Buchner et al. (2012), total climate finance flows to both developing and developed countries in 2010/2011 were estimated at USD 343-385 billion. The vast majority of this funding (USD 268 billion) came from the private sector, with the remainder from development finance institutions (USD 77 billion), and government budgets (USD 19 billion).

This central role in attracting private-sector and development resources to a country's low-carbon development priorities is possible because NAMA finance is unique in its flexibility. Private-sector finance and development finance (though to a lesser degree) are restricted to achieving target rates of return and payback periods that may depend on the level of real and perceived risk. NAMA support, however, can be deployed to finance policies or fund financial mechanisms that fundamentally modify the investment climate and risk profile for the desired low-carbon investments, making private investments more attractive. Importantly, the best use of international support is likely to differ from sector to sector, and from country to country, depending on the nature of the barriers that impede the desired types of low-carbon investment.

NAMA implementation finance should help attract investment towards priority national low-carbon development goals from the larger and more restricted funding sources, including from bilateral and multilateral development institutions, national development banks and the private sector (both commercial debt and private equity). A NAMA that combines government policies and international financial support to reduce risk and/or boost investment returns can be successful in channelling these larger and disparate investment resources towards the desired low-carbon technologies and infrastructure.

Differences from past climate and development financing strategies

This approach differs markedly from past credit-based approaches to engage the private sector in reducing emissions of greenhouse gases (GHGs) in developing countries. Under the Clean Development Mechanism (CDM), for example, the private sector is encouraged to undertake climate mitigation projects by the market value of the reduced greenhouse-gas emissions, which are sold to support compliance with developed-country commitments. If this value is enough to make the project economically viable and meet needed returns, it will move forward. In essence, the carbon value is applied to meet the financial gap for a single low-carbon investment. In contrast, a well-designed NAMA will couple government policies with financial support that together create new demand for, and target the barriers to, low-carbon investments across an entire sector, creating a pipeline of commercial investment opportunities credited towards a country's own mitigation goals.

This approach also differs from the separate procedures often used to distribute development aid to developing-country governments and private-sector interests. For example, whereas the World Bank's International Monetary Fund lends only to the private sector, other organisations within the World Bank Group (e.g., The International Bank for Reconstruction and Development and the International Development Association) focus exclusively on providing development assistance directly to governments. In contrast, well-crafted NAMAs seek to unite private- and public-sector investments behind a unified NAMA vision, coupling policies and financial mechanisms and private investments so that they all work in tandem to advance transformational change in the target sector. Further, in seeking to spur change at a broad, sector-wide scale, NAMAs can be differentiated from many public-private partnerships that jointly invest in and/or operate a specific infrastructure investment.

Implementation of the NAMA could then involve support to governments to implement policy changes and support for financial mechanisms that overcome the specific barriers faced by potential private investors. Further, any support for individual projects within a country should emphasise those that are consistent with the NAMA vision and financial mechanism. This represents a new paradigm for development assistance in that government policy changes are directly linked to financing mechanisms aimed at increasing the economic attractiveness of low-carbon investments to the private sector, and to the subsequent project-level investment.

Designing the Green Climate Fund to support transformational NAMAs

While some donor governments and institutions that provide international climate finance are set up specifically to facilitate implementation support for NAMAs (for example, the UK/Germany NAMA Facility), others may need to coordinate their financial support across more than one financing window. The Green Climate Fund (GCF), for example, offers a general mitigation window and a separate Private Sector Facility. To be successful in supporting transformational mitigation actions, both of these windows should as a minimum encourage coordinated public and private actions to achieve ambitious greenhouse-gas reductions. Further, most of the funds could be issued on a competitive basis, where the amount and type of support depend on the degree to which a proposal meets each of several selection criteria. Some suggested criteria are noted in Box 2. The first four criteria are similar to those used by the UK/German NAMA Facility, while the fifth seeks to overcome the discrete nature of the funding windows within the GCF structure.

Box 2: Suggested criteria to foster transformational action under the Green Climate Fund

- The degree to which the mitigation action is expected to fundamentally transform the target sector to a lower -development path.
- Sustainable development benefits to the host country.
- Whether the mitigation action is expected to attract additional investment from development banks or the private sector, and whether the NAMA includes unilateral contributions.
- Overall GHG mitigation potential.
- Evidence that the proposed policy change, financial mechanism, or low-carbon investment is part of a larger framework that creates demand for and overcomes key barriers to the desired low-carbon investments.
- Note: In the case of least developed countries, exceptions should be made to enable enhanced capacity support to develop NAMAs, and to facilitate funds for project-level investments.

A NAMA finance case study: Colombia's solid waste NAMA

Colombia's proposed NAMA in the solid waste sector illustrates how NAMA finance can advance transformational action. The goal of the solid waste NAMA is to transform Colombia's waste sector by creating an improved climate for investments in waste management projects that divert waste from landfill disposal towards more productive uses. This avoids methane emissions from landfills while promoting sustainable economic growth and improving the living conditions of informal recyclers. This is important as growing urbanisation means growing baseline emissions in a sector that already comprises more than 5% of the nation's greenhouse-gas emissions.

The proposed NAMA couples a government policy change with a financial mechanism, improving the economic viability of the desired solid waste management investments. Specifically, the Colombian government proposes to reform the waste tariff regulations (tipping fees) so that diverting waste for alternative uses such as recycling, composting or waste-to-energy plants can compete economically with landfill disposal. Under current fee regulations, mechanical biological treatment facilities accepting trash for these other beneficial uses cannot collect a tipping fee even though if that same trash was dumped in a landfill, the landfill could collect the fee.

The proposed financial mechanism is geared towards building in-country experience with integrated waste management technologies. The government proposes the creation of a national revolving NAMA equity fund to overcome investors' hesitation to invest due to the lack of familiarity with the waste technology and processes. The equity fund would contribute equity capital on a concessional basis to help build waste treatment facilities on a municipal level, contributing to projects in multiple cities and attracting other equity and debt investors to finance the facilities. Repayment of equity from project developers will remain in the fund and be available for equity investments in future projects. Over time, the contribution from the NAMA equity fund will be reduced as investors become more knowledgeable about the waste treatment technology and the associated operational and financial risks, with the eventual goal of not needing concessional support for integrated waste management projects. The Colombian waste NAMA is currently seeking concessional financing or grant support from donor governments and institutions to capitalise the NAMA equity fund, and the fund would help attract additional investment by market-rate investors.

To support the sector-wide transformation outlined in Colombia's solid waste NAMA, it is desirable for future market-based investments in the waste sector in Colombia to be consistent with this NAMA vision. Practically, for institutions like the Private Sector Facility of the Green Climate Fund seeking to invest in low-carbon projects, rather than funding landfill methane projects or other unrelated mitigation initiatives, this would mean giving strong preference for financing waste projects that align with Colombia's NAMA. Private companies proposing to build new integrated waste management facilities in Colombia would apply to the NAMA equity fund for concessional equity financing and could also apply to the Private Sector Facility for traditional market-based financing.

3.2 Developing NAMA proposals – is there convergence?

Xander van Tilburg, Lachlan Cameron and Matthew Halstead

Introduction

Almost four years ago, as part of the Copenhagen Accord (2009), developing countries were invited to put forward concrete Nationally Appropriate Mitigation Actions (NAMAs). Many did submit their ideas, often with the intention to detail these further, with or without internationally supported technical assistance. Since then, the definition of a NAMA has not been detailed. As argued before, this lack of a clear NAMA definition and the lack of explicit detailed 'official' guidance has been both the strength of, and challenge to, NAMA development (see for example van Tilburg et al. 2012). The strength comes from the notion that developing countries are free to identify and elaborate what is in their national interest (national appropriateness), whereas the challenge comes from the fact that there is little guidance as to what a NAMA proposal should look like to garner support.

Over the past years, developing countries and practitioners have started to prepare proposals for supported NAMAs, as well as guidance on developing NAMAs (handbooks, templates). However, there has been only a limited understanding of what potential sources of support will expect. Donors themselves have been trying to understand what role NAMAs should play in a broader mitigation architecture and many decisions around the final form of NAMAs will be closely tied to the negotiations. Only recently is more clarity starting to emerge on what submission formats look like for NAMA proposals: the UNFCCC launched its registry, and the NAMA Facility and the GEF accepted their first proposal submissions.

It is true that NAMA proposals are not solely made for submission to the UNFCCC or to donors; they can also be developed for domestic use to convince stakeholders and guide implementation. Nevertheless, for supported NAMAs, submission formats are important. This begs the following question: 'four years after the first call for NAMAs, do we see convergence in the structure and level of detail of NAMA proposals?' Below, we consider this question by looking first at NAMA guidance available, which would be expected to play a key role in defining the form of NAMA proposals, then at the submission formats for support and recognition, and finally at concrete NAMA proposals available in the public domain.

Guidance for developing NAMAs

There has been a large amount of guidance produced on NAMAs, covering aspects such as identification, prioritisation and development of proposals. This guidance has predominantly been produced by international organisations, often those involved in providing technical assistance for NAMAs. A recent study of guidance for NAMA proposals that compared eight guides (Table 1) had two main observations. First, there is broad agreement on the overall steps involved in NAMA development across the guides, despite being developed separately (Box 3). Second, nearly all guides could be considered as offering only high-level guidance on the different elements/steps they describe and, though some go into detail on specific topics, none cover the whole spectrum. In particular, there is only limited guidance provided as to the content and level of detail required in a NAMA proposal. Some guides give a proposed template, but most leave this open or suggest that sources of support be asked for this.

Box 3: Generalised steps in NAMA development from eight guides

1. Identification
2. Prioritisation
3. NAMA proposal detailing
4. MRV framework
5. Registration with UNFCCC
6. NAMA support/financing
7. Implementation
8. MRV reporting and adjustment

Table 1: An overview of current NAMA guidance[6]

	Title	Published by	Date & status	Summary
1	On developing a NAMA proposal	ECN	2011 Sep Published	High-level proposed steps for developing a NAMA towards implementation.
2	Navigating transport NAMAs	GIZ & Wuppertal	2012 Feb Published in draft form	High-level handbook describing steps for developing NAMAs in the transport sector with a link to transport planning. Provides further reading on most topics.
3	NAMAs: A technical assistance source book for practitioners	GIZ	2012 Aug Published	Sourcebook of GIZ experiences across five themes. Not a step-by-step approach, but gives guidance on many elements, each linked to a project-management model. Examples from projects and links to further resources.
4	NAMA tool	GIZ	2012 Oct DRAFT 8.0	High-level guide/tool that has 10 distinct steps, each with some further resources linked within the tool.
5	Handbook on Renewable Energy NAMAs for Policy Makers and Project Developers	IRENA	2012 Nov Published	High-level handbook listing a three-stage approach. Complemented by three examples of NAMA development. Assumes an agreed NAMA idea exists.
6	Building blocks for NAMAs	AfDB	2012 Nov Published	High-level guidance on NAMAs with a focus on the content of a proposal. Some additional resources listed in an annex.
7	Developing Financeable NAMAs: A practitioner's guide	IISD	2013 Mar Published	Guide for developing stand-alone NAMAs, or NAMAs within a low-carbon planning process. Predominantly focused on identifying, analysing and prioritising potential NAMAs.
8	Good practice guidance for preparation and implementation of NAMAs	UNDP	2013 Apr DRAFT	Provides guidance and good practices for preparation and implementation of NAMAs, including the policy framework, potential types of actions, institutional arrangements and the roles of different actors, MRV issues and financial considerations.

Source: Cameron 2013

6 These guides were published at the time, while the rest were either published in draft form or made available as a draft for the paper.

The study identifies a number of insufficiencies in the existing set of tools and guidance. These include: a lack of implementation guidance on NAMAs in host countries; insufficient attention to and emphasis on capacity building and awareness raising; lack of focus on private-sector involvement and lack of detail on how to assess development benefits of NAMA projects (Cameron 2013). There is also only limited use of common terminology across tools and guides regarding different phases of NAMA development and documents produced. What can be concluded, is that there are a significant number of guides available, which agree on the core elements of developing NAMAs; however, there is generally too little detail provided, a number of potentially important elements are not considered and the content of NAMA proposals is not clearly defined and agreed upon.

Submission formats for NAMAs

Using the UNFCCC NAMA registry, three submission formats can be found.[7] The first format is available through the registry website: the official UNFCCC registry template, which is solely aimed at international recognition. The second is the application form for the BMU/DECC NAMA Facility, which had the first call for NAMA proposals in September 2013. The third is the Global Environment Facility (GEF), which presents several approved NAMA submissions in the more broadly used 'PIF' template form.

The **UNFCCC registry Template** (UNFCCC 2013), for international recognition of NAMA activities, requires a summary of four or more pages in a template format. The format has limited flexibility in terms of detailing some of the conceptual issues surrounding NAMAs. The format does not leave much flexibility for explanation of the NAMA proposal in terms of highlighting key ambitions such as national appropriateness, transformational impacts, leveraging private-sector investments and MRV. There is a section entitled 'Other indicators of implementation' towards the end of the template, which provides room for additional information, but there is little emphasis on these issues. There is a dedicated section on financial support required for implementation, which identifies the type of support needed and leaves room for comments. However, details on the financing structure or incremental cost calculations are not required.

The **NAMA Facility** application format (NAMA Facility 2013) is more elaborate than the registry template and requires quite some detail. Several key NAMA issues feature prominently in the ambition criteria: evidence for broad national ownership, potential for transformational change, co-benefits, mitigation potential, and financial ambition. Under financial ambition, the focus is on contributions from outside the host country, additional donors, or the private sector. Details on the financing structure or incremental cost figures are not required. MRV is not specifically mentioned within the template – one reason may be that there is no international reporting requirement as yet for NAMAs. The application does require a log frame to be completed, but this seems to be purely focused on accountability towards the donor.

The **GEF Project Identification Form** (PIF) format has a much broader scope than the UNFCCC Registry and NAMA Facility templates, as it is not specifically geared towards NAMA support applications. That is not to say that the template cannot be tailored to NAMAs, and there are several examples of GEF-funded NAMAs (GEF 2013). Within the project justification section of the template, emphasis is placed upon defining the impacts/benefits of the project, and a separate section is dedicated to describing the project's consistency with national strategies and plans. However, there is no explicit requirement for MRV details, how private-sector investment can be leveraged or whether the project aims to bring about transformational change. All of these are key issues involved in NAMAs.

7 In addition to the 'Information on Support for NAMAs' in the NAMA Registry. Added August 2013, last accessed 25 October 2013.

Concrete NAMA proposals

An obvious first step in assessing whether there is any convergence in NAMA proposals would be to look at existing proposals in the public domain. However, currently very few full proposals are available. For the vast majority of the 80 NAMAs and 32 feasibility studies listed in the NAMA Database (Ecofys 2013), there is only a summary and there may, or may not, be an underlying full proposal or analysis. Summaries of 40 NAMAs in all stages of maturity can be found as UNFCCC submissions (most without reference to additional analysis), or in public presentations.[8] The NAMA Facility has received over 40 applications, but these are not publicly available (at least not at this stage). Although there are some elaborate proposals available (for example from Mexico and Chile), it is fair to say that at the moment a (comparative) analysis of NAMA proposals is impossible because there are not enough sufficiently detailed proposals publicly available.

Conclusion

Four years after the Copenhagen Accord called for the identification and development of NAMA proposals for implementation support, there has been an inspiring amount of preparatory work across the world. Available guidance for developing proposals roughly identify the same process steps and aspects to address, but at the same time the guidance is broad and without sufficient detail. From the side of development partners and donor institutions, only two concrete formats are available and the public has no insight into the applications to the NAMA Facility.

To move forward on NAMAs, building on the bottom-up approach of national appropriateness, we need to facilitate learning by doing. Key to this is the ability to scrutinise proposals and identify lessons and good practices. In addition to earmarked NAMA implementation support, this is exactly where the current bottleneck exists: there are hardly any full proposals to scrutinise, guidance is very high-level, and there has been only one call that asks for NAMA-specific applications. Consequently we don't really know what is expected by support providers, which presents a strong limitation to "learning by doing".

There is a need for host countries, supporting countries and development partners, and international organisations to state clearly what they think a good NAMA proposal comprises. In the absence of clearly stated preferences, the dialogue on NAMAs will be dominated by those who are prepared to say something, when other key actors keep quiet.

8 For example, at events such as SB, COP and in network meetings such as the MAIN dialogues, the MRV Partnership, and the LEDS-GP meetings.

3.3 Transformational change: what does it mean and how can it be assessed?

Donovan Escalante and Frauke Roeser, Ecofys

Introduction

Transformational change has become an important concept in the international discussions on climate finance. The Green Climate Fund (GCF), expected to play a leading role in mobilising USD 100 billion per year of climate finance for developing countries by 2020, has placed transformational change centrally in its agenda to "bring about a 'paradigm shift' towards low-emission and climate-resilient development pathways" (GCF, 2011). Other initiatives have similar ambitions. The recently launched NAMA Facility prioritised the "potential for transformational change" as a key criterion for funding NAMA support projects (NAMA Facility, 2013).

While the concept continues to gain prominence, there is little consensus on a definition and even less on the process by which to operationalise it in the context of NAMAs. This section will explore the ideas behind transformational change across several disciplines and derive key elements and insights. Much can be learned here from development cooperation where the concept of transformational change has been a strategic ambition for some time. The aim is to show how transformational elements can be identified and incorporated into the design and implementation of a NAMA.

The need for transformational change

The concept of transformational change presents a compelling opportunity: that new mitigation and adaptation pathways can be attained by investing in key activities that set in motion system transformations and thus enhance the overall impact of limited public funds. Nonetheless, it is not entirely clear what these key activities might be. Society and by extension social systems like the economy are affected by billions of individual decisions and defined by geography, institutions, regulations, technologies and markets. To direct a transformation, these components and their relationship must be understood. There is a need to identify in concrete terms how transformations might be managed and catalysed through specific actions.

Various disciplines have tackled the subject of transformational change, investigate its causes, processes and effects of it. In the context of social transformation, transformational change has been defined as "*alterations of society's systemic characteristics [that] encompass social, cultural, technological, political, economic and legal change*" (JPI Climate, 2013). There is a clear distinction between change and transformational change. Transformational change alters underlying structures and is irreversible so that a different equilibrium point is reached; in other words, a new path becomes the business-as-usual path. The following are characteristics of transformational change:

Transformational change in theory

- **Long-term** Transformational change happens over the long term, oftentimes spanning a generation or more.
- **System-oriented** Society and social institutions can be thought of as a system of interacting elements. These include technologies, regulations, user practices, markets, cultural meaning, infrastructure, maintenance networks and supply networks (Geels, 2004). System transformations occur as individual elements co-adapt to change and carve new network structures.

- **Irreversible** Transformation indicates irreversible change, as new elements and configurations are built and old structures are broken down (Loorbach, 2007). It involves fundamental changes that go beyond switching from one technology to another but also changes to user practices, regulations, industrial networks, infrastructure and cultural meaning.
- **Multi-level dynamics** Disruptions that initiate transformational change, such as new technologies or new governance models, often begin at a niche level. However, as their influence spreads it reaches macro levels that define long-term trends (Geels, 2011).

Transformation dynamics

Transformational change is not a linear or hierarchical process. It encompasses multiple elements that span various structural levels in society. It is useful to draw upon the Multi-Level Perspective (MLP) to describe these dynamics. The MLP views transitions as non-linear processes that result from the interplay of developments at three levels (Geels, 2011):

- **Landscape** The landscape is the wider context; it includes demographical trends, political ideologies, societal values and macro-economic patterns. It changes slowly and forms an external context that actors at levels below cannot influence in the short run.
- **Regime** The regime contains concrete rules of a system and user practices. Examples are institutional arrangements and regulations, capabilities and competences, and routines and shared beliefs.
- **Niche** Niches are protected spaces that foster innovations breaking from existing regimes. Examples are pilot projects, R&D laboratories or market niches that support emerging innovations.

MLP theory tells us that change begins at the niche level as opportunities open up and actors innovate in response to pressures at the landscape and regime levels. As a niche innovation strengthens, it may go on to affect the regime and eventually these may become embedded in the landscape level, influencing long-term patterns of social and technological change.

Transformational change through NAMAs

NAMAs are the main instrument under the UNFCCC to support concerted action on mitigation in developing countries. The advantage of the mechanism is its flexibility, as it allows various types of activities to take place in short, medium and long timeframes. This makes it possible to design comprehensive programmes with greater transformative potential.

Designing a transformative NAMA starts by analysing a mitigation problem from a system perspective, seeking to understand all the elements that contribute to the current situation. A mind map similar to that shown in Figure 5 can be used as a starting point. Based on this, mitigation barriers can be assessed and a set of actions defined to address them.

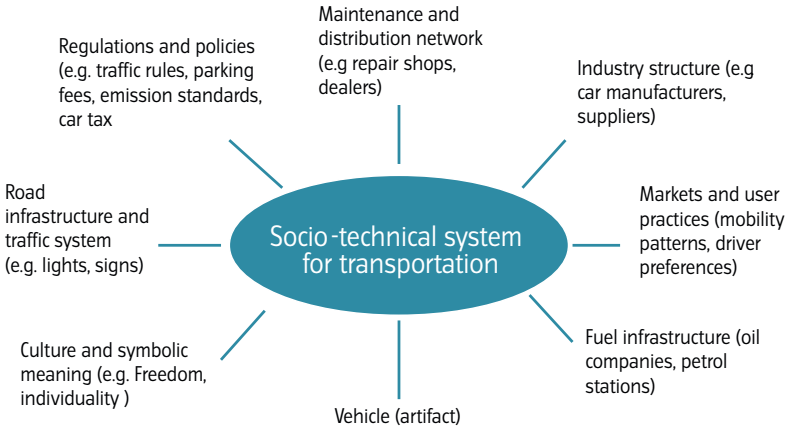


Figure 5: Examples of elements that define a socio-technical system for transportation
Source: (Geels, 2004)

Figure 5 shows several aspects that define the socio-technical system for transportation. A change in vehicle technologies implies changes in all other interdependent elements. NAMAs that aim for transformational change should consider a wider focus and define a comprehensive programme that addresses various elements and interdependencies. They should also consider multilevel transformation dynamics, building on niche innovations to scale up and institutionalise low-emission initiatives.

Designing comprehensive NAMAs

NAMAs submitted so far encompass strategies, public policies and projects which in themselves support a broad range of individual actions (Tilburg et al., 2013). This flexibility can be used to design NAMAs that target key elements and barriers in a comprehensive manner. Below are types of activities that can initiate, sustain and embed transformational change.

- **Strategies** define a long-term vision and the means to achieve it. They become embedded within a country's development planning and guide people, institutions and resources towards this vision. A strategy is tangible, and best enshrined in legislation, but also appeals to cultural identities and is symbolic and inspiring (Geurts, 2013).
- **Public policies** define economic and social objectives and specific measures to achieve them. Policies can be used to level the playing field or overcome a lock-in situation by forming a protected space that allows new technologies and institutions to compete with incumbents.
- **Institutional learning and innovation** involves a large variety of activities that embed and create knowledge in public and private institutions. This can include capacity-building programmes and innovations in business models and practices. Institutions play a key role in transformations as they anchor and systematise change.
- **Coalition-building** activities help bring people together and raise awareness and common goals.
- **Knowledge-creation** and diffusion activities such as research and development focus resources on solving problems needed to achieve a mitigation objective. Diffusion activities spread knowledge and catalyse the innovation process by increasing collaboration and learning.
- **Pilot projects** are experiments that help demonstrate new innovations, build institutional knowledge and increase public awareness. They help strengthen new technologies and practices so they can compete with incumbents.

This interplay of different interventions is illustrated in Figure 6 below echoing the importance of an approach targeted at different levels.

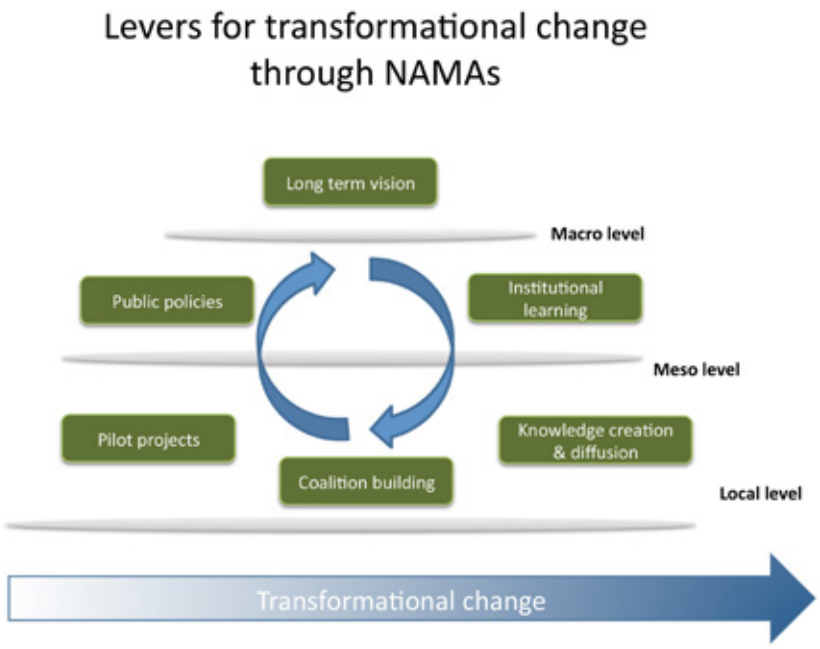


Figure 6: Types of transformational activities and dynamics

Evaluating transformational change

An important question in the context of NAMAs is how to operationalise the concept of transformational change. What criteria can be used to: assess transformational change of NAMAs, to inform their design, guide the decisions of funding institutions, and evaluate the actual transformational impact of NAMAs ex-post.

When considering criteria it is useful to revisit key characteristics of transformational change. In the context of development, UNDP defined transformational change as "the process whereby positive development results are achieved and sustained over time by institutionalising policies, programmes and projects within national strategies" (UNDP, 2011). Following from this and the characteristics of transformational change explored above, key dimensions of transformational change may be defined as time, scale, embeddedness, complexity and innovation. For each dimension a number of criteria can be identified which can guide the assessment of the likely transformational impact of a particular NAMA. An indicative list is proposed in the table on the next page.

Time	• Existence of a long-term vision and plan including long term objectives • Interventions are built along a time dimension including short, medium and longer term activities • Defined exit strategy to ensure continuity beyond the intervention
Scale	• Interventions are built along a geographic dimension including local, regional and national scale (e.g. allowing for scaling up and replication) • Inclusion of multiple activities and impacts beyond single projects and pilots
Embeddedness	• Strong national ownership and drive demonstrated through, e.g. political leadership, legislative change or budget allocation • Institutional sustainability demonstrated through capacity planning including external enabling environment, internal organisation and individual capabilities • Support of the interventions by different interest groups (evidence of stakeholder process)
Complexity	• Interventions address different layers including technology, regulation, behaviour and cultural values • Interventions target different levels of society including government, business and civil society
Innovation	• Proposed technology or system change challenges existing patterns

None of the above criteria on their own suffice to describe transformational change, nor is evidence of any or all of the criteria a guarantee that transformation can be achieved. But in their combination they may be guiding principles to move us closer to grasping essential ingredients for transformational change.

Conclusions

Academic theory provides guidance on the elements and characteristics that might be needed for NAMAs to contribute to transformational change. Transformational NAMAs should comprehensively address a climate change problem through a range of activities targeted at the short, medium and long terms. It is important to consider that transformations involve fundamental changes that go beyond switching from one technology to another; they alter user practices, regulations, industrial structures and cultural meaning, among other things. The flexibility in the definition of NAMAs gives leeway to design NAMAs that address various factors.

It is also important to consider that transformations are difficult and also unpredictable. Transformations happen over very long time frames and require a host of factors that may be outside of the control of the NAMA programme. NAMAs should address not only the elements that influence a system but also the dynamics at play, capitalising on opportunities and niches.

3.4 Capacity-building support for NAMAs

Dr Sebastian Wienges and Verena Bruer, GIZ

NAMAs are nothing substantially new. Comprehensive sustainable-development investment programmes have been around for quite some time, and so have mitigation actions and programmes with emission reductions. This understanding, this 'demystification' of NAMAs is probably the most effective driver in many countries to set out to develop a NAMA. This was at least the experience as well as the effect of the NAMA training developed by the German Society for International Cooperation (GIZ) in 2012 and conducted in more than 10 countries since then.

Clearly, the support for the implementation of NAMAs through finance and technology can be a strong driver, but often it seems policy makers simply need to understand the requirements of NAMAs and how to organise the whole process of developing NAMAs properly in order to engage and convince other ministries to plan and implement NAMAs. Indeed, there are only very few additional characteristics specific to NAMAs, but none is exclusive as there is no agreed definition for NAMAs under the UNFCCC. These specifics are that NAMAs shall be MRV'd (measured, reported and verified), NAMAs are supposed to have transformational impacts and contribute to sustainable development, and NAMAs may evolve in the context of long-term Low Emission Development Strategies (LEDS). Consequently, the development of NAMAs requires usual development planning like assessing framework conditions, prioritising ideas, defining baselines, developing concepts for monitoring and evaluation, detailing the planning, designing financing plans, developing implementation roadmaps, and continuously learning from implementation. However, exactly this demystification, the understanding of the few NAMA-specific characteristics and the structuring of the whole process is the support needed to establish the NAMA process in more countries.

Finance – as provided through the NAMA Facility, for instance – is obviously needed to incentivise the engagement of various actors in the development and implementation of NAMAs. Technologies are needed to implement the material physical changes – as identified and planned in Technology Needs Assessments and Technology Action Plans by UNEP, for instance. Nevertheless, the actual process of NAMAs does not evolve by itself, even if sufficient finance and accessible technologies are present. Countries need the human and institutional capacities to drive the whole process forward.

The GIZ NAMA training, often enabled through the International Partnership on Mitigation and MRV in collaboration with some ongoing national projects, helped to build these capacities. It delivers a clear structure and guiding questions along which NAMA implementers may identify what they still have to work on, how to do that, which barriers might block the further NAMA development and how to overcome them or where to find instruments to solve the problems encountered.

The training is based on the 10-step NAMA Tool[9] which leads national and local policy makers through the process of NAMA development from the initial idea of mitigating greenhouse-gas emissions to the stage of NAMA implementation. Usually, government officials from the operational level responsible for the actual implementation of NAMAs use the Tool and have attended the training. The NAMA Tool itself functioned as a reference work, providing guidance during this process. The NAMA training helped countries to define next steps for mitigation actions), and to identify issues to be taken into consideration. In Costa Rica, for instance, participants started during the training to work on a roadmap with milestones for when to develop which elements of a NAMA over the coming months.

9 http://mitigationpartnership.net/nama-tool-steps-moving-nama-idea-towards-implementation.

Practical applications of the NAMA Training and Tool: experiences and lessons learnt

Since its elaboration in 2012, the NAMA Tool has been presented and used as a methodology in a variety of workshops and trainings all over the world.

Table 2: Overview of NAMA trainings and Tool applications 2012–13

Country	Date	Format
Philippines	6/2012	National Training
Thailand	9/2012	National Workshop
Vietnam	10/2012	National Training
Costa Rica[10]	10/2012	National Training
Peru[11]	3/2013	National Training
South Africa	3/2013	National Workshop
Lesotho	4/2013	Regional Workshop (UNFCCC)
South Africa	5/2013	Regional Workshop
Lebanon	5/2013	National Workshop (UNDP)
Morocco	6/2013	National Workshop (UNDP)
Bangladesh	6/2013	National Training
Senegal	6/2013	Regional Training
Indonesia	7/2013	NAMA Capacity-Building Week
Georgia[12]	7/2013	National Training
Armenia	7/2013	National Training
Azerbaijan	7/2013	National Training

In order to reflect the experiences of the various NAMA Trainings and how the NAMA Tool is actually used, GIZ evaluated the trainings conducted so far and revised the NAMA Tool and training.

Among the **key lessons learnt** along this process, the following stand out.

- **Each training is unique.** Although there is a standardised NAMA training approach, in each application the methodology needed to be tailored to the specific country context, level of knowledge and particular priorities. Consequently, the tool applications ranged from a national to a regional focus where in some cases concrete NAMA ideas were already in place and the trainings served as a guided forum for multi-stakeholder discussions to define next steps. In other cases, the focus was more on the identification of NAMA potential and barriers to overcome.
- This implies the requirement of a very **clear definition of objectives and expected outputs** of the trainings. Furthermore, the milestones along the process, such as, for instance, the point of NAMA prioritisation and selection, need to be outlined clearly. In Indonesia, the workshop introduced a NAMA prioritisation approach and helped to apply that.

10 See training report at: http://mitigationpartnership.net/partnership-activities-2012.
11 See training report at: http://mitigationpartnership.net/partnership-activities-2013-0.
12 See information on NAMA workshop in the South Caucasus Region at: http://mitigationpartnership.net/partnership-activities-2013-0.

- Generally, the integration of more **concrete practical examples** was highly demanded, such as a clear definition of the different elements in each step and corresponding milestones. Many countries are very interested in what other countries do, both to learn from good practice, and to develop a benchmark.
- The process of **NAMA prioritisation and related criteria** and procedures turned out to be of particular relevance to participants in several trainings.
- The **methodological composition** of the training, comprising technical presentations with different interactive elements such as theatrical role-plays and groupwork sessions was very well received and contributed to an actively participating audience during the trainings.
- The **participation of sectoral experts** is highly recommended in order to work on and discuss technical questions of specific NAMA examples. The Tool and training themselves mainly reflect the climate-specific aspects of the NAMA process. All trainings proved that multi-stakeholder participation, including representatives from the public and private sectors, triggers the most fruitful discussions and clearer outputs due to joint expertise and the consideration of different points of view in the individual steps of the process.
- It is essential to **follow-up on the results** and provide technical guidance for discussion and evolution in national processes beyond the training.

The training is usually adapted to the individual demands and goals of the trainees in one country. So, the NAMA Tool can be used by more advanced as well as less experienced NAMA developers and implementers. According to participants' interests, the results can be the identification of potential NAMA ideas or the design of a roadmap for to proceed with NAMA development.

As a consequence of the above experiences, the 10 steps in the NAMA Tool have been recently restructured and partly rephrased to be more specific in the descriptions of what needs to be done or considered (Figure 7).

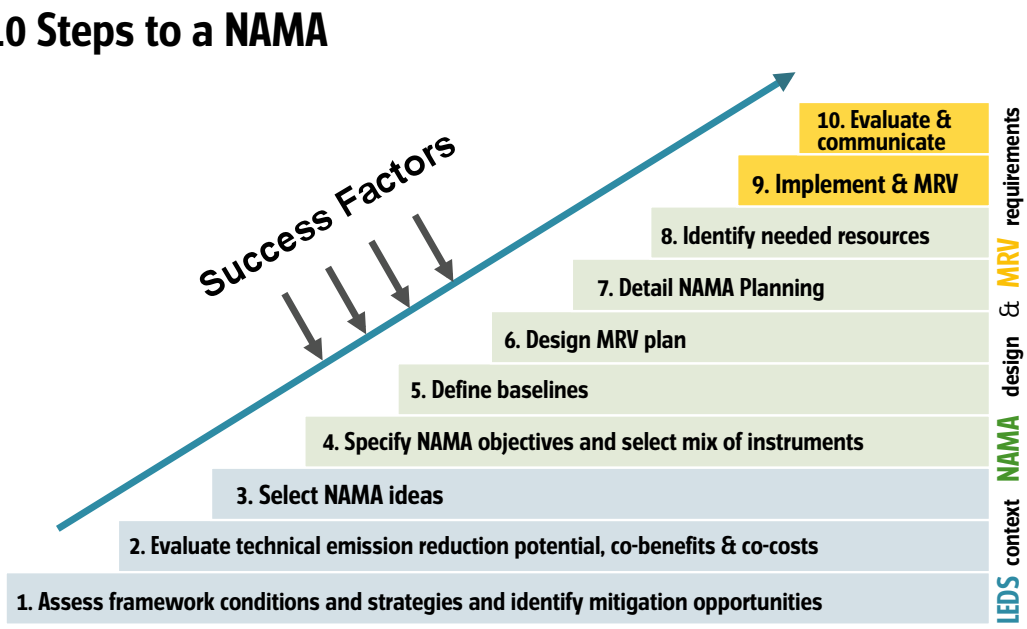


Figure 7: Overview of new 10-step sequence of the GIZ NAMA Tool (Version 9.0)

The assessing of framework conditions is now differentiated in:

a) stock-taking of existing policy goals (mitigation-relevant development strategies and targets at national and sectoral level)
b) assessment of emission structure of different sectors
c) assessment of framework conditions (including political, cultural, social, economic).

The assessment of impacts in step 2 enumerates the following selection criteria for NAMAs:

- GHG reduction
- sustainable development benefits
- costs
- co-costs.

For the prioritisation and selection of NAMA ideas, GIZ has developed a separate tool in eight revolving steps of prioritisation (Figure 8). In the detailed planning step, the aspect of risk management is considered in more detail. For each step in this process, a concrete example from practice will be included in order to illustrate the described procedure.

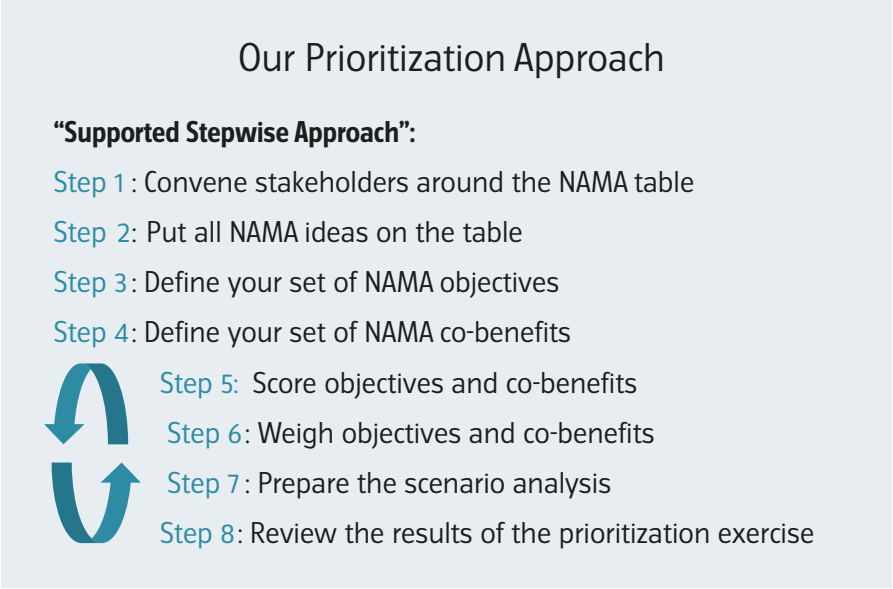


Figure 8: Steps for the prioritisation of NAMAs (GIZ 2013)

Next steps

The updated version of the NAMA Tool, and corresponding training materials, will be published in October 2013. In parallel, a tool and training for **setting-up national MRV systems** are currently under development and will be piloted soon in GIZ partner countries. To increase outreach of the NAMA Tool and training, they are currently being developed further as e-learning modules so that participants can be trained at their desks, immediately applying what they learn. The e-learning option allows tailoring of inputs yet more specifically to the trainees' demands, as well as reducing costs in terms of time and travel expenses for the training.

The NAMA training is intended particularly to foster ambition and action-maximising efforts within what is feasible. To this end, the experiences and lessons learnt from the national NAMA development processes will be disseminated internationally in peer-to-peer exchanges and fed into the negotiation process, as well as continuously improving national processes.

Conclusion

The successful implementation of NAMAs might depend on sufficient provision of public financial support and mobilisation of private finance, as well as access to appropriate technologies. However, the initial move of countries to start developing NAMAs and drive that process to a successful end depends strongly on the human and institutional capacities to do so. These capacities include:

- scientific and technical understanding, particularly for the long-term and sustainable development context
- the ability to reach out and integrate a range of stakeholders from different sectors
- personal, technical and organisational monitoring capacities
- institutions with responsibilities for planning oversight and coordination
- organisational and human capacities to mobilise, allocate and disburse needed resources
- the organisational structures to collect and make information accessible
- enabling individuals to learn and institutions to adjust in order to identify good practice and replicate it.

While the NAMA training aims to develop human capacities, the institutions in which individuals work must also reflect and allow the use of these capacities. The NAMA trainings to date have sometimes also strengthened collaboration among different actors and facilitated exchange between them.

All countries can develop these capacities, where they do not yet exist, and might do so during the process of NAMA development. To this end, the capacity-building support as, for instance, provided by the International Partnership on Mitigation and MRV has a much wider outreach than through the immediate support in workshops and trainings. It proves that capacity-building support is out there if needed, and the NAMA Tool offers guidance for everyone interested. This forms an environment in which individual ministries, or even non-governmental NAMA developers from the private sector or committed and able civil society organisations, can start to work on NAMAs. They should trust that the first obstacle they encounter will not end the whole NAMA but that they will find partners and instruments to overcome barriers.

3.5 Issues and options for designing and implementing NAMAs: findings from an online survey

Neha Pahuja, Associate Fellow and Area Convenor, and Swati Agarwal, Research Associate, CGER, TERI

The Bali Action Plan (2007) called for developing country parties to undertake Nationally Appropriate Mitigation Actions (NAMAs) in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner. Since then NAMAs have been discussed widely amongst negotiators, policy makers and researchers and have been, at the same time, subject to varied interpretation. Key issues, such as the nature, scope and definition of NAMAs, amongst others, are still open.

There has been, however, some progress in terms of operationalising a mechanism for NAMAs – the NAMA registry prototype. Since the launch of the prototype, there are only 12 proposals seeking international support, 4 proposals seeking recognition, and 4 recent proposals on support (as of 27 September 2013). In addition, there has been an increase in bottom-up preparatory activities in many countries wherein each proposal or activity varies in its scope and scale. While some are at the level of specific projects in a particular sector, some are large programmes or policies encompassing different sectors. Also, they vary in terms of the entity which is steering such activities.

An open online survey was conducted by The Energy and Resources Institute (TERI),[13] to gauge perceptions of the respondents on considerations important when designing NAMAs, elements key in operationalising a NAMA registry and implementing NAMAs. The results of this survey also informed the team in developing a tool/conceptual framework to facilitate designing and prioritising of NAMAs. There were 50 respondents of this online survey, of which 64% were from developing countries and 36% were from developed countries. Though the sample size was small, it was still representative of various interest groups. Figure 9 gives further details of the respondent profile. Most of the respondents (82%) indicated 'good' or 'very good' as their level of understanding on NAMAs, suggesting their role in designing NAMAs as researchers, consultants, funders or policy makers.

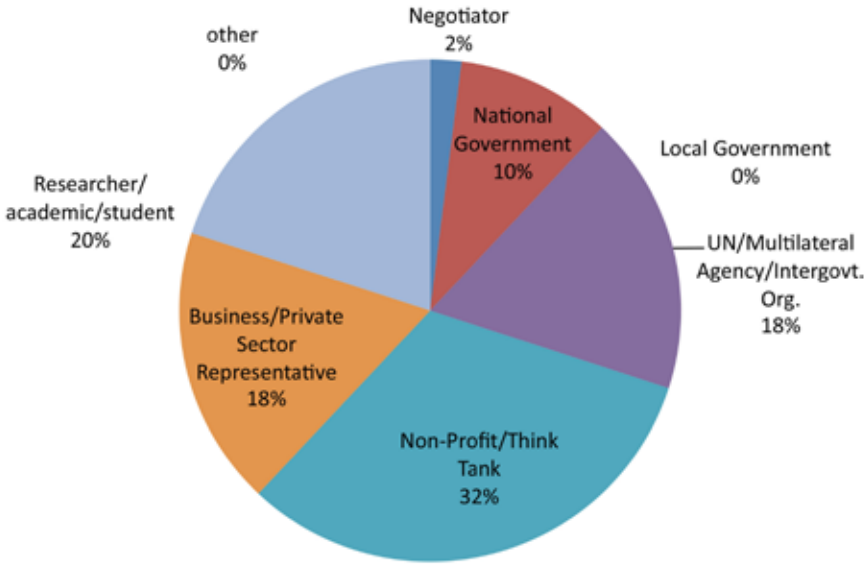


Figure 9: Respondent profile, online survey

Perceptions on considerations important while designing NAMAs

Environmental performance of actions, ability to maximise co-benefits, ease of implementation, and economic efficiency are important considerations while designing any mitigation action. These considerations will still be important in the context of NAMAs, although will be preferred over others. Further, there appear to be other key considerations in climate negotiations which might play an important role in designing NAMAs, such as consistency with national developmental goals, ambition level of actions, and ability to measure and quantify emission reductions achieved. The survey asked respondents to reflect on their perceptions of the importance of these considerations while designing NAMA proposals.[14]

'Consistency with national development goals' was considered the most important criterion in designing NAMAs, by both developed- and developing-country respondents (Figure 10). This reinforces the relevance of national circumstances in designing NAMA proposals, and the importance of flexibility in designing NAMAs. 'Environmental performance of actions' and 'ability to measure and quantify emissions reductions achieved' were considered the next most important criteria. Developing-country respondents considered 'ability to measure and quantify emissions reductions achieved' as more important. This highlights the continuing lack of clarity with respect to what, how, when, and to what extent the action should be MRVed, and the fear that MRV would be even more cumbersome for NAMAs compared to the CDM. It is therefore important to have clear and simple guidelines on MRV for both domestically and internationally supported NAMAs.

13 As part of a project, 'Developing country participation in addressing climate change: Analysing issues and options for implementing NAMAs and REDD Plus', supported by The Royal Norwegian Embassy in India. The online survey was open for almost four months and was circulated on various online groups/lists such as 'climate-l'. The full survey report will soon be available on http://www.teriin.org/projects/nfa/cc2bwp1.php.

14 The respondents were asked to rank the given parameters on the scale of 1 to 7 (forced ranking), with 1 indicating least important and 7 as the most important issue.

The developed-country respondents on the other hand considered 'environmental performance' as more important, clearly emphasising a results-based approach. At the same time, 'ambition level of actions' was chosen as the least important consideration while designing NAMAs by both developed- and developing-country respondents. This reinforces the argument that developed-country parties must take the lead and come up with higher ambition levels.

Respondents were further asked about their perception of what best describes 'environmental performance of actions'.[15] 'Direct contribution to GHG reduction' (84%) was considered the best indicator of environmental performance, followed by 'environmental co-benefits' (70%). Much of the literature emphasises systemic transformational change (Linnér and Pahuja, 2012) that NAMAs could realise, thereby assuming greater indirect benefits of NAMAs. Surprisingly, however, 'Indirect contributions to GHG reduction' was considered less important by the respondents.

Figure 10: Considerations important while designing NAMAs: summary of responses
Note: 7 indicating most important and 1 indicating least important

Perceptions on issues important to operationalise a NAMA registry

For a NAMA registry to function to its full match-making potential, would require key issues to be resolved – such as clarity on the definition of NAMAs, and availability of adequate finance and technology support. For more NAMA proposals to arise, clarity on the role of different actors (government, private sector and civil society amongst others) is necessary, and a national-level institutional arrangement with, and guidance from, national governments is also important. Given the existing CDM and the discussion on new market mechanisms, linkage between NAMAs and other market mechanisms is still not clear. Further, there are no agreed guidelines on how to develop and MRV NAMAs. The survey asked respondents to reflect on their perceptions of the importance of resolving some of these issues.[16]

'Availability of Finance and Technology Support' was considered the most important issue to be resolved by both developed- and developing-country respondents (Figure 11). This supports the current state of play in climate talks in the context of climate finance and on technology, and the fact that, until very recently, there was no proposal related to support in the NAMA Registry. This issue was followed by 'Definition of NAMAs' and 'Guidelines on how to prepare, develop and MRV NAMAs'. This probably would become clearer in the work programme on NAMAs under the SBI. It is also remarkable that most of the respondents from developing countries considered 'guidance from national government' as one of the important issues. This highlights that

15 The respondents were asked to choose from a given list (direct contribution to GHG reductions, technological reliability and safety, indirect contribution to GHG reductions (e.g. actions inducting behavioural change), contribution to other environmental co-benefits (e.g. reduction in local pollutants)). Multiple choices could be made.

16 The respondents were asked to rank the given issue on a scale of 1 to 7, with 1 indicating the least important and 7 the most important issue.

national-level institutional arrangements are required in developing countries to steer discussions and provide guidance at national level. Given that only 'NAMA approvers' will be able to approve all NAMAs for their country before they are recorded in the registry, this is the next step at national level as other readiness or preparatory activities continue.

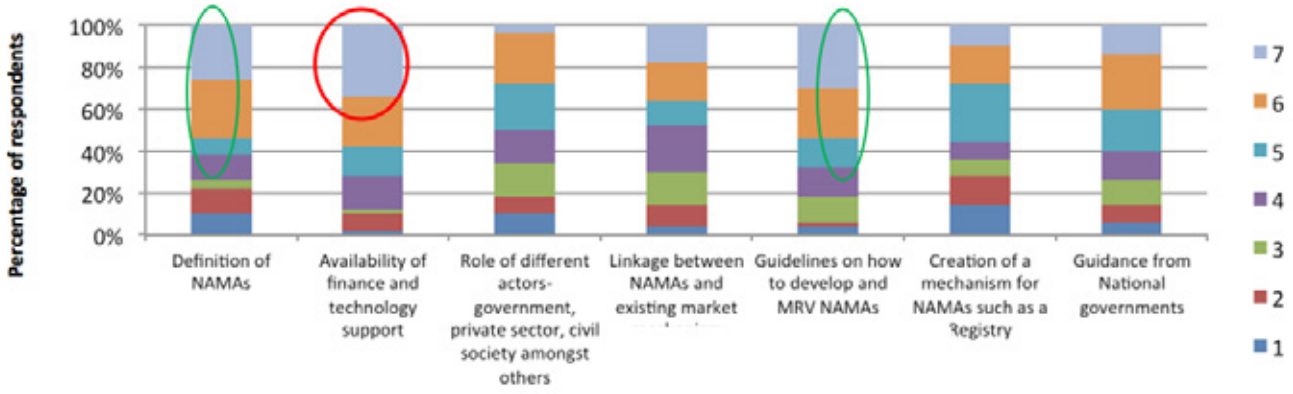


Figure 11: Issues important to operationalise a NAMA registry: summary of responses
Note: 7 indicating most important and 1 indicating least important

Also notable is the fact that, 'creation of NAMA registry' as such was not considered to be one of the most important issues. Perhaps the respondents believed that there is already considerable activity outside the NAMA registry, in a bilateral or unilateral manner, and that bilateral channels are better than a standardised central mechanism because they provide more flexibility. This, however, may give a rise to multiplicity of institutions.

Conclusion

One of the objectives of the survey was to gauge perceptions of the respondents on considerations important when designing NAMAs, and on key indicators that define some of the considerations. Findings suggest that national circumstances are pertinent when designing NAMA proposals, and thus that it is important to allow for flexibility when designing NAMAs to consider unique national circumstances appropriately. Ambition level of actions was cited as the least important consideration while designing NAMAs.

The survey also aimed to gauge perceptions of respondents on key issues in operationalising a NAMA registry, and implementing NAMAs. Findings suggest that availability of finance and technology support is key for operationalising a NAMA registry and implementing NAMAs. Further, national-level institutional arrangements in developing countries are important to provide guidance on issues related to NAMAs. Creation of a NAMA registry, however, is seen as the least important of the issues presented, possibly indicating preference for bilateral or unilateral channels over a standardised central mechanism.

3.6 Institutional challenges to develop and implement NAMAs

Miriam Hinostroza and Sudhir Sharma, UNEP Risoe Centre

Introduction and context

This section reflects on the linkages between low-carbon development strategies (LCDSs), nationally appropriate mitigation actions (NAMAs) and measuring, reporting and verification processes (MRVs), highlighting that NAMAs should flow from national strategies for development and/or climate change. It discusses the elements of MRV at different levels – NAMA level and GHG inventory, using the two as a basis for aggregating information for monitoring and evaluation (M&E) of climate strategies.

The section presents ideas on how coordination functions can be streamlined within countries to effectively interlink the LCDSs/LEDSs, NAMAs and MRV. It discusses the level of coordination required within the country in bringing together all decision-making institutions and multiple stakeholders for effective implementation of strategies and NAMAs, as well as feedback from evaluation of implementation.

The climate-change agenda within countries is driven strongly by international obligations. Therefore, by reflecting NAMAs' international requirements, the section argues how national institutions can be re-arranged at national level, in order to internalise UNFCCC requirements and enable developing countries' achievement of deviation from business-as-usual (BAU) emissions by 2020, while transforming national economies. This section will also present the various institutions, their inter-linkages and integration of international interactions with national coordination of climate change within countries.

Linkages between LCDSs/LEDSs, NAMAs and MRVs

LCDSs or LEDSs, NAMAs and MRV are all concepts that have emerged in the context of the UNFCCC climate-change regime as a response to calls from developing country parties for more articulated-long-term-transformational policies and actions to tackle climate-change mitigation in the context of sustainable development. Nationally appropriate mitigation actions (NAMAs), in measurable, reportable and verifiable (MRV) manner were first included in the Bali Action Plan (BAP) which started a new process to enhance implementation of the Convention.[17] The Cancun Agreement at COP 16 set the stage for action on mitigation, in order to achieve deviation of GHG emissions from BAU by 2020.[18] The agreements take into account the development priorities of developing-country parties by addressing future emissions, i.e. 2020 and beyond.

With regard to Low Carbon (or Emission) Development Strategies (LCDSs or LEDSs) the Cancun Agreement encourages developing countries to "develop low-carbon development strategies or plans in the context of sustainable development" in order toencompass sustainable economic growth, social development and environmental protection with low-carbon emissions. The Copenhagen and Cancun agreements both recognise and encourage the preparation of national LEDSs or LCDSs as a fundamental step to advance long-term sustainable development and reduce global emissions. From those decisions, it is inferred that the main interest pushed forward by developing countries is to put development priorities at the forefront of any mitigation efforts and establish targets for achieving development goals while lowering GHG-emission intensities.

17 Nationally appropriate mitigation actions "in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner", applicable to developing countries.

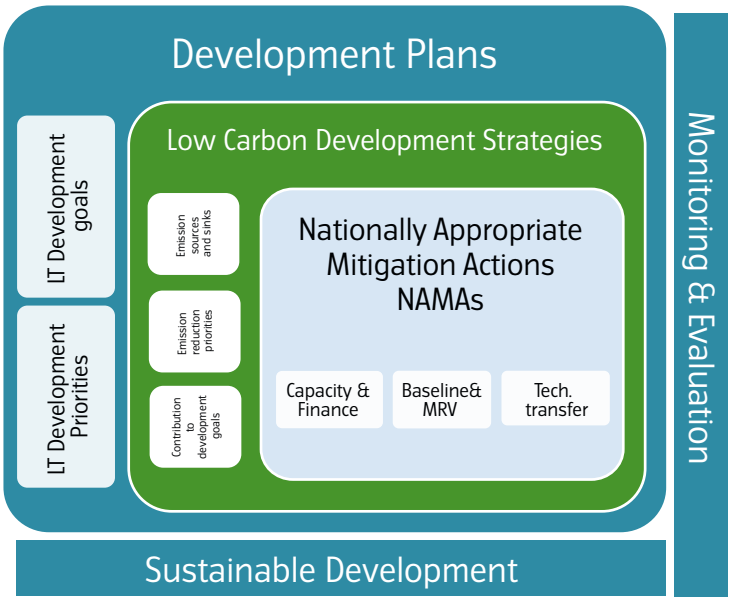
18 "developing country Parties will take nationally appropriate mitigation actions [...] aimed at achieving a deviation in emissions relative to 'business as usual' emissions in 2020".

Therefore, an LCDS/LEDS sets the policies, measures (e.g. emission targets), and priority areas where to decouple economic growth from emissions increases while establishing the means (action plans, such as NAMAs, financing, technology needs, stakeholder engagement and capacity building) to enable countries to embark on transformative development pathways with sustainable development benefits. An LEDS/LCDS may, hence, represent a framework embedded in an overall national development plan, while NAMAs, as actions, can be a main means of implementation of the LEDS/LCDS (Figure 12). The overall picture should be complemented by monitoring and evaluation processes to assess and adjust the LEDS/LCDS over time.

This is congruent with the general recommendation in the emerging literature (UNEP Risø Centre 2011; ECOFYS 2011; GIZ 2012) that NAMAs should emerge from national development planning to ensure buy-in of the countries and to achieve planned development through low-carbon options. As strategies, LEDSs/LCDSs should be designed for the medium to long term, while NAMAs can be for the short to medium term.

Development plans can provide an overarching policy framework for an LCDS/LEDS, and support the definition of mitigation targets and alignment with a country's long-term vision and national development goals – and can be implemented through NAMAs.

LCDSs/LEDSs can also ensure coherence across NAMAs, consider synergies across sectors, and build a foundation for longer-term technical assistance and investment. LCDSs/LEDSs and NAMAs can complement each other analytically. Cross-sectoral LCDS/LEDS analysis can provide a robust foundation for prioritising and choosing NAMAs. And vice versa: NAMAs can build on LCDS/LEDS analysis to provide more in-depth assessment of specific actions.



Milh, UNEP Risoe Centre©, 2011

Figure 12: Relationships between development plans and NAMAs

In this context, MRV can help coordinate the bottom-up emerging NAMA activities and provide the information on mitigation actions and their effects to reap synergies and avoid mutual interferences and secondary negative effects. MRV can also generate the information for planning and implementing NAMAs. Each country will address the scope of NAMAs, taking into account their national circumstances, data availability, and institutional capabilities to design and implement NAMAs. Nevertheless, the scope of a NAMA should be such that it has transformation impact but is also practicable to implement. MRV of NAMAs may support the quantification of transformational impacts. MRV of NAMAs can also help generate information for monitoring and evaluation of the LCDS or LEDS. In order to design and implement such NAMAs, some countries might need technical and other capacity-building support (Sharma and Desgain 2013). Overall, MRV can serve as a management tool in the process of developing NAMAs and LEDSs, with utility for the evaluation of NAMAs and LEDSs.

Table 3 shows how those inter-linkages are happening in practice, where different initiatives implemented by different agencies are contributing to strengthen them. They ratify not only the congruency in interlinking the three concepts but also the need to mainstream climate change in development planning.

Table 3: Linkages through implementation

Country	Instrument			
	LCDS	NAMA	MRV	GHG-inventory
China	✓✓	✓	✓	
South Africa	✓✓	✓	✓✓	
Mexico	✓✓✓	✓✓	✓✓	✓
Brazil	✓	✓	✓	
India	✓		✓	
Colombia	✓✓	✓✓✓	✓✓	
Chile	✓✓	✓	✓✓	✓✓
Peru	✓✓	✓✓	✓✓	✓
Dominican Republic	✓	✓		
Costa Rica	✓✓	✓✓	✓✓	
Indonesia	✓✓✓	✓✓✓	✓	
Philippines	✓✓✓	✓✓	✓	✓
Thailand	✓	✓	✓	
Vietnam	✓✓	✓✓	✓	
Morocco	✓✓✓✓	✓✓	✓✓	✓
Egypt	✓✓	✓	✓	✓
Tunisia		✓✓	✓	✓
Kenya	✓✓	✓	✓	✓
Ghana	✓✓	✓	✓	
Ethiopia	✓✓	✓	✓✓	
Ukraine	✓			
Kazakhstan				
Argentina	✓✓	✓✓	✓	✓
Ecuador		✓	✓	✓
Uganda	✓	✓	✓	✓
DR Congo	✓✓	✓	✓	✓
Zambia	✓	✓		✓
Turkey	✓	✓		
Maldives	✓			
Uruguay	✓	✓		
Panama		✓		
Israel		✓	✓	
Senegal	✓	✓	✓	

✓ UNDP LECB Programme
✓ GIZ
✓ Other technical implementing organisations
✓ FIRM – UNEP/URC

Institutional arrangements for effective NAMA implementation

Building the inter-linkages among the LCDSs/LEDSs, NAMAs and MRV requires embedding the inter-linkages in institutional designs. Institutional arrangements enabled to effectively coordinate the different functions and actors involved in policy making, implementation and monitoring. Reporting is key to ensure those inter-linkages. Furthermore, the internal coordination should also factor in the international obligations of the country to ensure most effective arrangement to deliver on international obligations. In re-arranging institutions, countries will build on several country-specific aspects such as planning styles, leadership, inclusiveness, participatory processes and ownership, so there is no a linear approach to it. Rather, it is important to focus on functional requirements for coordination, identifying within national situations the best way of sharing responsibilities across institutions.

In identifying the most appropriate governance structure for mainstreaming climate change into development and to make NAMA implementation more efficient, one could use the following perspective in designing institutional arrangements.

- NAMAs are to be implemented in the context of national sustainable development goals and contribute to national climate policy goals
- To ensure effective implementation of national climate policy, countries would need to develop an effective monitoring and evaluation system which could also serve the MRV of NAMAs.
- Coordinating different streams of finance for mitigation action, including national financing through budgets, could avoid duplication of effort.

Thus, in organising institutional arrangements, countries may consider the following coordination functions:

- climate-change policy coordination
- NAMA development and implementation coordination
- coordinating monitoring of climate policy and NAMAs for national and international reporting and evaluation
- coordinating national and international climate finance.

If governments are willing to embrace a model where NAMAs have a transformational role and support the implementation of broader low-carbon development strategies embedded in national development planning, rethinking the functions of current institutions and redistributing the roles and responsibilities so that institutional arrangements are reshaped could also be considered.

Reshaping the institutional structure for the above suggested coordination function may involve discussions on the following aspects:

- considering NAMAs as transformational drivers of development
- integration of NAMAs into broader (low-carbon) development planning processes
- planning NAMAs through a stakeholder-focused approach for identifying and prioritising NAMAs
- identifying clear roles for national and local governments
- no need to reinvent the wheel
- visualising leadership and enhancing management
- aligning the NAMAs with domestic policies and processes.

Encouraging NAMAs as instruments of transformation to low-carbon development pathways necessitates a climate-change policy framework at national level, originating with sustainable development goals. This is also a pre-requisite for a low-carbon development strategy. Such a framework provides the motivation for different actors, government and others, to integrate the climate-change-related aspects within the planning process at national and sectoral levels.

National strategy/policy on climate change also acts as an important tool for building consensus among stakeholders as well as providing political backing at the highest level. Thus, the climate-change policy is an instrument for setting goals for the medium-to-long term in managing national GHG emissions as well as the impacts of climate change. This provides a coordinating framework for various climate-change-related actions in different sectors and at different levels of government, and is important for ensuring synergies among actions to address climate change across different sectors/actors of the country.

NAMAs as discussed can be considered as the instrument for translating mitigation-related aspects of climate-change policy into implementation. As discussed above, a key element of effective NAMA identification and implementation is integrating it into development planning and implementation. To ensure that NAMAs deliver effectively on both national development and global GHG reduction, as mentioned above, countries will have to establish institutional arrangements for effective coordination. This should be both between NAMA development and its alignment with national sustainable development strategy and LCDS, and among different NAMAs to ensure synergistic actions.

The development and implementation of NAMAs is likely to be distributed across various governmental organisations. Likewise, individual NAMAs would ideally represent concerted activities that include several different actions. Potential measures under a NAMA are various and can become a mix of actions over various sectors, policies, measures and programmes. In many cases, such concerted actions involve more than one governing institution and lead to activities that involve a range of different stakeholders.

Integrating NAMAs within development planning would imply that responsibility for implementing them should be with ministries responsible for policy making and regulatory framework for respective sectors. This would naturally devolve the role of NAMA identification and development, in line with climate-change policy, to the sectoral ministries and different tiers of government as these are instrumental in development planning and implementation within the realm of their authority. Hence, NAMA identification and development processes are likely to be anchored in a number of different institutions.

Decentralised identification and implementation of NAMAs will benefit from common guidance. Further, as NAMA implementation should contribute to the implementation of climate-change policy, implementing institutes would also benefit from guidance on integrating climate-change policy into sectoral/regional development planning. Also, collation of information from NAMA implementation would be required to enable review of implementation of climate-change policy. Thus, an entity for overall coordinating and overseeing, especially in countries with clear definitions of priorities and declared ambitions, will be important. The host country will define responsibilities and procedures for authorisations of NAMAs.

An important management tool to track effectiveness of implementation and feedback is monitoring and evaluation (M&E). M&E of the climate policy would be critical in assessing the progress in achieving goals of climate-change policy as well as feedback for improvements as needed. An important element of the information is national GHG inventory, reporting of which is also a national obligation of countries to the UNFCCC. Further, a key element of NAMA is MRV. Key information to be reported by countries through Biennial Update Reports (BURs) includes the progress, outcomes, and impacts of NAMAs implemented by countries. As both the domestic and international NAMAs will be MRV'd domestically, countries at minimum will require establishing guidelines and procedures for MRV of NAMAs. Thus, institutional arrangements around M&E of climate-change policy, GHG inventory preparation and MRV of NAMAs could be organised to avoid duplication of efforts and meet the different requirements. This might also help reduce the costs of MRV of NAMAs.

Another important element to take into account for effective implementation of NAMAs is their financing. As NAMAs aim to achieve national sustainable development goals along with GHG reductions, one would expect national public finance, as well as international public finance, in implementing NAMAs. Further, it is expected that international support will come through

multiple channels, including bilateral, multilateral and GCF. Thus, coordinating international support with national public finance would be an important function in effective financing of NAMAs.

Establishing institutional frameworks and conducting processes for NAMAs should and will be country-driven, not only to ensure national appropriateness of mitigation actions and to secure ownership, but more importantly to make sure that NAMAs are being achieved through a strong and sound institutionalised process. It is important to stress that participatory processes develop and retain institutional and individual capacities created throughout the process. Only those participating in the process will guarantee a successful implementation and give continuity to the process towards improvements, operationalisation and consolidation of the institutions.

With regard to institutional arrangements that would enable the implementation of 'transformative' NAMAs, rearranging and strengthening current climate-change institutional structures may be necessary so that countries are empowered with capacities and skills for conducting dialogue and consultation while effectively coordinating NAMA development, submissions, finance and MRV processes. In that sense, it would be desirable to identify the coordination functions required for managing NAMA process in each country. In the absence of a UNFCCC mandate for countries to nominate an entity to oversee NAMAs nationally, countries may want to consider the following coordination bodies, which would also facilitate the identification and organisation of functions.

- Climate-change policy coordination.
- NAMA management entity.
- MRV management and international reporting – this institute would be responsible for MRV and preparing BURs. Internally, it feeds information into climate policy making for that institute to evaluate progress.
- Climate finance coordination – this looks at allocating resources to NAMAs and coordinating international climate-change finance.

Coordinating with UNFCCC institutions and national-level coordination

The climate-change agenda within countries is driven strongly by international obligations. An important obligation is reporting through BURs and NCs. Also, a number of institutions have been created internationally to support developing countries as well as reporting on obligations by developing countries. These include the existing institutions, such as the GEF, Adaptation Fund and CDM. The new institutions include GCF, CTCN, the UNFCCC Registry and one would expect institutions for NMMs.

Countries have focal points for interaction with the existing institutions, and are expected to appoint focal points. The existing focal points include: UNFCCC focal point, Designated National Authority (DNA) for CDM, focal point for GEF, and Designated Authority (DA) for Adaptation Fund (AF). The UNFCCC focal point is in most countries responsible for linking with the UNFCCC on the reporting through NCs. The DNAs are responsible for coordinating approval of CDM projects. The DA is responsible for letters of no objection to projects/proposals submitted to the AF, as well as endorsing National Implementing Entities (NIEs) seeking accreditation with the AF.
The GCF focal point will have three broad categories of tasks: country programming and coordination, as well as ensuring that proposals are aligned with national sustainable development objectives; identification of national implementing entities; and approval processes for proposals submitted to the GCF.

National Designated Entities (NDEs) will be the focal point of communication for Climate Technology Centre and Network (CTCN). CTCN will help strengthen capacity in developing countries to identify technology needs, to facilitate the preparation and implementation of technology projects and strategies to support action on mitigation and adaptation and enhance low emissions and climate-resilient development. NDEs will be responsible for communicating the country requests to CTCN and for ensuring that these requests are in line with national priorities as well with priority mitigation and adaptation actions.

The focal point for the UNFCCC Registry will be responsible for communicating NAMAs for uploading on the Registry. Further, there might also be a need for interface for international institutions developed for NMMs. The focal points for interfacing with various elements of UNFCCC and its institutions can be effective in leveraging the institutions if they are integrated in national-level institutional arrangements for NAMAs.

3.7 Domestic institutional arrangement for NAMAs

Makoto Kato, Overseas Environmental Cooperation Center, Japan (OECC)

Background

The Overseas Environmental Cooperation Center, Japan (OECC) is implementing a capacity-building programme for NAMAs with MRV for Cambodia, Lao PDR, Mongolia and Vietnam, funded by the Ministry of the Environment, Japan (MOEJ). Since its start in 2012, this programme has focused on identifying business-as-usual (BAU) and possible NAMAs in selected sectors, preparing for domestic institutional arrangements, elaborating domestic procedures for MRV, and proposing technology and finance options.[19] Among the topics of the focal area, the preparation for a domestic institutional arrangement is a matter of higher priority, given that it provides a national vehicle, as an essential mechanism to decide, coordinate and implement NAMAs and their MRV. In the four countries, NAMA working groups were established, respectively, and preparatory activities are being conducted for a formalised institutional arrangement (NAMA governing body)[20] in future.

Elements of domestic institutional arrangements

Implementation vehicle, including conducting MRV at policy level

The working groups established under the capacity-building programme have considered several technical topics concerned with governing NAMAs domestically. These include methodologies and assumptions of BAU and mitigation target by NAMAs, reference to key sectoral policies (including targeted mitigation technologies), cost implications and financial options including international market mechanisms, formats and contents of reporting from individual NAMA implementation body to a national governing body, and international reporting to the UNFCCC. Many of these are related to MRV to be conducted at policy level (Figure 13).[21]

19 Finance options include various kinds of domestic and international funds, including ODA, international market mechanisms (such as the Joint Crediting Mechanism), and private-sector finance. Information on use of such finances should be reported as part of BUR (2/CP.17 Annex III), and in MRV of each mitigation activity, respective MRV methodologies and procedures should apply.

20 The author does not suggest that countries should establish a new body for NAMAs necessarily. In practice, as stated in the later section, functions to govern NAMAs and MRV can be assumed by an existing national body, such as a national coordination committee on climate change.

21 Verification at policy level does not necessarily mean a third-party check, as in the CDM or ISO14065. It may be rather close to the concept of monitoring and evaluation (M&E) by a governing body. Also international MRV through BUR and ICA does not strictly fall within the concept as the above as well.

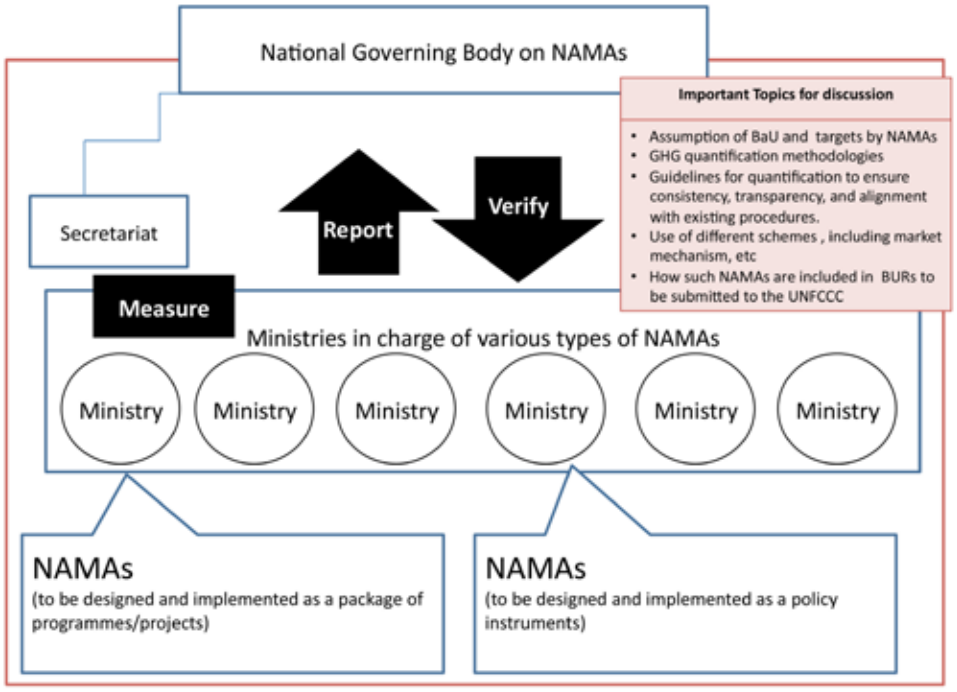


Figure 13: Possible domestic institutional arrangement and policy-level MRV

This institutional model is based on Japan's experiences with its Global Warming Prevention Headquarters, with necessary adjustments as appropriate. In this model, participating ministries implement NAMAs and conduct MRV at their activity level, and reports containing aggregated results with quantitative and qualitative indicators are submitted to the governing body for its verification, according to its national plan and guidelines.[22] The results of this policy-level MRV will be reflected in further mitigation action, on the understanding that shortcomings should be gradually improved, utilising the Plan-Do-Check-Act (PDCA) cycle.

Inter-ministerial process for consensus building and input for sectoral expertise

As encouraged by COP decisions, NAMAs are expected to be designed and implemented in the context of sustainable development, and more precisely of low-carbon development plans or strategies.[23] In this regard, it is important to plan NAMAs in alignment with national and sectoral development strategies, rather than as stand-alone endeavours, and the involvement of relevant line ministries is extremely important. Line ministries play key roles in prioritising areas of mitigation actions in light of their strategies, and also in providing activity data and policy information, through their existing domestic reporting system.

For example, in the case of Mongolia, in discussion on data collection (both ex-ante and ex-post) from Combined Heat and Power plants (CHPs), the Energy Regulatory Committee, under the Ministry of Energy, as a member of the Mongolian Advisory Committee for NAMAs[24] suggested the utilisation of the existing reporting line from CHPs to the Energy Regulatory Committee. In this way, the consistency of data/information would be ensured, and additional work for MRV reduced.

22 Kyoto Target Achievement Plan (KPTAP) of 2005, revised in 2006 and 2008.
23 Paragraphs 48 and 65 1/CP.16
24 WG established by the Ministry of Environment and Green Development (MEDG), Mongolia under the MOEJ/OECC Capacity-building Programme.

Secretariat ministry/agency

A secretariat function should be assumed by a key ministry or national agency to facilitate the governing body of NAMAs, as above. In the four countries involved in this programme, like other developing countries, the environment ministries are generally expected to take this role. To increase their preparedness, the four ministries have carried out intensive work to improve their technical knowledge of NAMAs, on documentation and archiving information and data, and elaborating draft procedures of policy level MRV for NAMAs. By convening member ministries for the working group, strong leadership has been shown, and the secretariat ministries and national agencies have begun to develop good relationships with other ministries.

In many countries, this work on NAMAs was built largely upon their experiences with developing national GHG inventories. Through the development of a GHG inventory, the countries have identified GHG emission sources in an exhaustive manner, collected data from them, and quantified GHG emissions. Also, their experiences with the CDM have been useful in providing a basis of GHG quantification at project level, and some methodologies may be applied more widely.

Way ahead

In the initial year of the capacity-building programme, intensive discussion was conducted on domestic institutional arrangements, considering how NAMAs would be designed and implemented, and methods or MRV at policy level. In this case, the establishment of the NAMA working group was extremely useful when countries were able to initiate the inter-ministerial coordination process at technical level, and demonstrated consensus-building, which would be done formally in future by a NAMA governing body. To realise this, the way ahead for these countries is either to formalise the working group into a NAMA governing body, or for this function to be assumed by another, existing body.

In this connection, Lao PDR is now in preparation for transferring the working group function established under the capacity-building programme into the Climate Change Working Group, under the National Environment Committee for its formalised work. This group would also carry out work on preparation of Biennial Update Reports (BURs), the CDM and others. Also, Cambodia is currently considering formalising its working group as a subordinate to the National Climate Change Committee, integrating its function together with GHG inventory, the CDM, and other related matters. In Mongolia and Vietnam, similar considerations are taking place. By utilising existing committees, developing countries can rely on their past experiences and save the transaction costs of a new establishment.

Finally, in order to facilitate better function of such domestic institutional arrangements for governing NAMA implementation and conducting policy-level MRV, it is necessary to document the roles of participating ministries, the secretariat, and procedures for decision-making. This especially includes methods of conducting measurement, reporting and verification (MRV) in clear and feasible terms. Also, strengthening capacity is important. In all countries, there are crucial needs to strengthen capacity of the secretariat ministries for technical support, and to coordinate national efforts. They need to lead and facilitate works to be done by line ministries, with their technical expertise. To meet such needs, the MOEJ/OECC capacity-building programme continues to support these four countries. Together with other components, elaborating procedures and guidelines are one focus of the activities.

3.8 MRV needs for a diversity of country objectives and NAMA types

Jared Finnegan, Kelly Levin and Apurba Mitra[25]

Introduction

Under the Copenhagen Accord, non-Annex I Parties to the UN Framework Convention on Climate Change (UNFCCC) committed to implementing mitigation actions in the context of sustainable development.[26] These nationally appropriate mitigation actions (NAMAs) have taken a variety of forms, and have been articulated as projects, policies,[27] and goals (Table 4).[28] In addition, NAMAs can be unilateral or supported. Unilateral NAMAs are financed and implemented by the host country alone, while supported NAMAs are financed by third parties, such as bilateral funding agencies and multilateral development banks.

Given this diversity of NAMAs, there has been considerable confusion about MRV requirements for NAMAs. The international community has experience with MRV of project-level emissions reductions (e.g., via the Clean Development Mechanism (CDM)) and some experience of MRV of mitigation goals (e.g., with Annex I targets under the Kyoto Protocol). However, the proliferation of policy-level NAMAs and new goal types for NAMAs (e.g., intensity and business-as-usual goals) creates new challenges for MRV of emissions reductions from NAMAs.

Table 4: Diversity of NAMAs[29]

Examples of project-level NAMAs	
Ethiopia	Hydro power capacity; wind projects
Ghana	Reductions in methane emission due to improvement of waste management at landfill sites
Tajikistan	Improvement of energy-efficient technologies in buildings
Examples of policy-level NAMAs	
Cook islands	Supporting Implementation of 100% Renewable Electricity by 2020[30]
Republic of Indonesia	Sustainable Urban Transport Initiative[31]
Chile	National Program for Catalyzing Industrial and Commercial Organic Waste Management in Chile[32]
Examples of goal-level NAMAs	
Brazil	Between 36.1% and 38.9% below projected emissions in 2020
Republic of Korea	30% reduction from business-as-usual emissions by 2020
South Africa	34% deviation below business-as-usual emissions by 2020

25 Authors listed alphabetically. All contributed equally.
26 Paragraph 5, http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf.
27 Policies are larger in scale (e.g., renewable energy policies at the sectoral or jurisdiction level) compared to individual projects (e.g., an individual solar photovoltaic installation). With regard to accounting, while project accounting is typically focused primarily on crediting or offsetting, policy accounting also needs to address new methodological issues not common in project accounting, such as quantifying overlaps and interactions between policies in a sector, defining a baseline scenario at a larger scale than a project, and identifying and estimating various indirect effects at a scale larger than a project (e.g., international leakage of GHG emissions).
28 In addition, there are NAMAs defined in terms of a desired outcome (e.g., a percentage of renewable energy to be generated). However, there is little articulation of the policy mechanisms that will achieve each outcome (e.g., through a subsidy to renewable energy producers). The policy mechanisms for attaining the outcome must be specified if emissions reductions are to be assessed accurately, given that different policy mechanisms will result in varied GHG effects.
29 Unless otherwise noted, taken from http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php.
30 http://unfccc.int/files/cooperation_support/nama/application/pdf/nama_implementation_renewable_energy_cook_islands.pdf.
31 http://unfccc.int/files/cooperation_support/nama/application/pdf/nama_implementation_indonesia_sustainable_urban_transport_initiative.pdf.
32 http://unfccc.int/files/cooperation_support/nama/application/pdf/nama-seeking-support-for-implementation_chile_organicwaste.pdf.

This section seeks to unpack MRV needs for estimating the greenhouse gas (GHG) emissions reductions associated with NAMAs, as well as existing resources available to assist countries. We first describe the GHG-related MRV requirements for NAMAs at the international and domestic levels in an effort to identify the tasks countries are facing. Then we describe related methodological resources that can be used to undertake MRV of emissions reductions associated with various types of NAMAs.

It is important to note that this section focuses on MRV of emissions reductions, leaving aside a discussion of MRV of non-GHG metrics and finance, which are also critical aspects of tracking progress. In doing so, we focus more on the measurement and reporting of GHG emissions reductions than verification, to ensure the scope of this section is manageable. Moreover, while this section focuses on methodological resources, other capacities, including institutional, financial and human resources, will be necessary to implement MRV systems effectively for NAMAs.

Information requirements for fulfilling various MRV objectives for NAMAs

Through the implementation of NAMAs, developing countries are seeking to fulfil a variety of objectives, including: achieving sustainable development goals, attracting climate finance, reducing GHG emissions, and contributing to international action to address climate change. To fulfil each of these objectives, specific types of GHG-related information are required (Table 5).

Domestically, many countries recognise that an assessment of the emissions effects of NAMAs (both unilateral and supported[33]) is integral to policy making, planning and implementation processes. In addition, stakeholders within countries implementing NAMAs often demand that information is made available on the effects of government efforts. To carry out such assessments, information is required related to the projected (ex-ante) GHG effects of planned actions, as well as the achieved effects (ex-post) of implemented actions.

In addition, many countries are looking to attract climate finance to support the design and implementation of supported NAMAs. The NAMA Facility is currently the only formal funding mechanism dedicated exclusively to NAMAs and, as such, has attracted the attention of many governments. The UNFCCC's NAMA Registry is also intended as a mechanism for climate finance, however not by providing finance directly, but by matching donors with NAMAs looking for support.

Governments wishing to apply for financing from the NAMA Facility or to submit a NAMA to the NAMA Registry are required, in both instances, to include the estimated emissions reductions associated with the NAMA (ex-ante) as part of the application and submission processes. Moreover, under most agreements between donors and host countries for supported NAMAs, host countries are typically required to provide information on the expected GHG effect (ex-ante) of the NAMA, as well as information related to the NAMA MRV plan, which describes how the GHG effects of the NAMA will be assessed and reported over time.

Countries are also pursuing assessments of emissions reductions in order to convey the effects of their NAMAs to the international community. For example, in addition to helping countries attract climate finance, the NAMA Registry is also intended to operate as an electronic platform for countries to list their NAMAs and gain international recognition. A publically available version of the Registry will be available in October 2013, but many countries have already come forward with early submissions. One important piece of information that countries will include in submissions to the Registry is the estimated emissions reductions (ex-ante) associated with the NAMA.

33 Technically, there is no distinction between MRV for unilateral NAMAs versus MRV for supported NAMAs. For example, higher-tier methods will typically always produce more accurate and robust assessments, regardless of NAMA type. However, in practice, supported NAMAs may, in general, have more stringent MRV requirements than unilateral NAMAs, since MRV requirements for supported NAMAs are designed to accommodate funder's objectives, which typically include accurate and robust assessments of emissions reductions.

In addition to voluntary forums such as the NAMA Facility and NAMA Registry, developing countries are facing new international reporting obligations related to NAMAs. Under the UNFCCC, developing countries agreed to report the effects of NAMAs submitted to the Conference of the Parties (COP) via their Biennial Update Reports (BURs). As part of this process, developing countries are required to report the GHG effects of their NAMAs (ex-ante and ex-post), including chosen methodologies and assumptions.

Table 5: GHG-related information requirements for various domestic and international MRV objectives for NAMAs

Forum	Objective	Required information related to emissions reductions	Original text
Domestic	Achieve sustainable development goals; inform domestic decision-making and planning processes; respond to stakeholder demand	Based on objectives of country; could include estimated emissions reductions from each NAMA (ex-ante and/or ex-post)	N/A
NAMA Facility	Attract climate finance	Estimated emissions reductions of NAMA (ex-ante)	"NAMA Project Outlines should…provide estimates for expected direct GHG emission reductions of the NAMA Support Project…"[34]
UNFCCC NAMA Registry	Attract climate finance and gain international recognition for efforts	Estimated emissions reductions of each NAMA (ex-ante)	"Invites developing country Parties to submit, as appropriate, to the secretariat the following information on individual nationally appropriate mitigation actions seeking international support… (f) The estimated emission reductions."[35]
UNFCCC Biennial Update Report (BUR)	International reporting on efforts to address climate change	Estimated emissions reductions of each NAMA (ex-ante and ex-post)	"The scope of biennial update reports is to provide an update to the most recently submitted national communication in the following areas: … (c) Information on mitigation actions and their effects, including associated methodologies and assumptions."[36]

As can be seen from Table 5, fulfilling each of the objectives mentioned requires generation of new information, especially related to the estimated GHG-emissions reductions of NAMAs (primarily ex-ante). To generate this new GHG information, MRV processes will be required. Below, we look in greater detail at different MRV methods that may be used to assess the GHG effects of NAMAs.

Existing methods for measuring the GHG effects of NAMAs

In order to inform a study of MRV methods for emissions reductions, it is useful first to step back and take stock of methods and experiences used to date to measure, report and verify emissions. Countries have gained significant experience with measuring, reporting and verifying emissions inventories under the UNFCCC and Kyoto Protocol. GHG inventories are a critical first step toward GHG management, as they can inform on which sectors should be targeted for reductions. There are a number of existing standards and guidelines applicable to MRV of emissions at various levels of inventory assessment (at the national, sub-national and organisational levels) (Table 6).

34 http://www.international-climate-initiative.com/fileadmin/Dokumente/nama_facility_information.pdf.
35 Paragraph 46, http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.
36 Annex III, http://unfccc.int/resource/docs/2011/ cop17/eng/09a01.pdf.

Table 6: Existing methods for MRV of emissions for GHG inventories

MRV of emissions		
Type of inventory	**Examples**	**Applicable methods**
National	MRV systems applicable to the reporting of national inventories	IPCC Guidelines for National Greenhouse Gas Inventories
Sub-national	MRV provisions of provinces/states or cities undertaking GHG inventory assessments in developed and developing countries	Global Protocol for Community Scale Emissions (GPC)
Organisation	MRV of GHG emissions at factory, facility, building or company level under existing voluntary or compliance schemes such as the EU-ETS, Australian ETS, NZ-ETS, JV-ETS	GHG Protocol Corporate Standard GHG Protocol Corporate Value Chain (Scope 3) Standard ISO 14064 EU-ETS MRG guidelines ISAE 3410

Inventory development, leading to the creation of credible datasets across sectors, is typically considered a first step toward MRV for NAMAs. Datasets related to GHG sources and sinks intersect with the boundary of both kinds of assessments.

While methods for estimating emissions via inventories can inform the MRV of emissions reductions for certain NAMAs (especially in the case of goal-based NAMAs), they alone are not sufficient for MRV of NAMAs. While the effect of a NAMA typically reflects in the GHG inventory of the relevant jurisdiction, without undertaking a detailed assessment of the NAMA itself, its effect may not be evident in the inventory. This is especially the case when mitigation policies are reducing emissions relative to a baseline scenario but not leading to absolute reductions in emissions, because of changes in other exogenous drivers such as economic activity, population or energy prices, for example. Also, NAMAs designed as mitigation goals may require additional accounting methods that differ from inventory methods. For example, they may require methods to track and account for transfers of emission units (e.g. carbon credits and tradable allowances) and to account for mitigation in the land-use sector.

Countries have explored and practised MRV of emissions reductions primarily at the project level, as is evident from Table 7.[37] At other levels of assessment, such as goals and policies, relatively less familiarity has been attained.[38] Some of the existing standards and methods applicable to the MRV of emissions reductions at various levels of assessment (at the goal, policy and project levels) are captured in Table 7. As mentioned in the table, the World Resources Institute (WRI) is developing two new GHG Protocols on accounting and reporting standards – the Policy and Action Standard and the Mitigation Goals Standard – to fill gaps at the goal and policy levels.[39] While methodological resources by themselves will not be enough to define a complete MRV system for NAMAs, as institutional, technical, human and financial capacities must also be strengthened, these resources can provide a solid foundation to build a system upon.

37 The private sector, as well as developing-country governments to a certain extent via the host-country approval process, have gained considerable experience in MRV at the project level through the CDM process.
38 Experience has been gained at the goal level, but only with regard to goals framed as reductions from a base year.
39 For more information, see http://www.ghgprotocol.org/mitigation-accounting.

Table 7: Existing methods for MRV of emission reductions for NAMAs

MRV of emission reductions		
Type of NAMA	**Examples**	**Applicable methods**
Goal	Base-year goals of Annex I Parties under the Kyoto Protocol; other base-year goals, intensity goals, baseline scenario goals and fixed-level goals at national and sub-national levels	GHG Protocol Mitigation Goals Standard (forthcoming); Kyoto Protocol accounting rules for Annex I targets
Policy	Interventions such as laws, regulations and standards; taxes, charges, subsidies and incentives; information instruments; voluntary agreements; implementation of new technologies, processes or practices; public- or private-sector financing and investment	GHG Protocol Policy and Action Standard (forthcoming)
Project	MRV practices to quantify and account for emission reductions under carbon offset programmes/ schemes such as the CDM and Verified Carbon Standard (VCS)	CDM validation and verification standard Verified Carbon Standard (VCS) GHG Protocol for Project Accounting J-MRV Guidelines JI Guidelines

Conclusion

This section has demonstrated the need to consider the type of NAMA and a country's objectives before implementing MRV systems, as different NAMA types and country objectives will likely require different types of MRV-related information. While the international community has considerable experience with MRV of emissions for GHG inventories – which can create a foundation for but is not sufficient for MRV of NAMAs – experience with MRV of emissions reductions has been limited to the project level (e.g., CDM) and Annex I targets under the Kyoto Protocol. We hope that WRI's new GHG Protocol standards for accounting and reporting emissions reductions from policies and goals will help to address some of the methodological challenges for MRV of NAMAs.

It is important to note that the diversity of NAMA types presents new challenges for MRV not only from a methodological standpoint but also from a capacity standpoint. New MRV methods will need to be complemented by systems and plans for domestic MRV. For example, to assess the GHG effect of a planned NAMA (ex-ante), data are needed from relevant government agencies and businesses, technical expertise is needed to implement relevant methods and models to project GHG effects, and financial resources are needed to support the overall MRV process.[40]

The design of MRV systems for NAMAs can be informed by existing MRV systems for emission reductions, such as MRV frameworks for offset mechanisms (e.g. CDM), some of which are subject to rigorous verification and review. These mature mechanisms house different project types and have been well defined in terms of monitoring parameters and methodologies. Also, some Annex I countries have gained significant experience with MRV in programmes, particularly emission trading schemes, implemented for meeting their emissions-reduction commitments. These programmes encompass a wide variety of sectors and may offer inputs for designing an MRV system for NAMAs across various sectors of the economy. As countries continue to adopt and implement policy- and goal-based NAMAs, more experience will be gained which can inform the design of MRV systems.

40 It should be noted that the scale of the MRV system for a NAMA will depend on a country's objectives and circumstances. The system could be unique and unrelated to a centralised national MRV system, or it could be integrated within a national system. In all cases, domestic MRV systems and plans are needed for formalising the NAMA assessment process and fulfilling countries' objectives.

3.9 The NAMA facility: financing the implementation of NAMAs

Hendrikje Reich, Technical Support Unit on behalf of the NAMA Facility Board[41]

Introduction

During the UN Climate Change Conference in Doha, the NAMA Facility was announced as a new vehicle to finance the implementation of ambitious NAMAs. The NAMA Facility is a joint programme of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the UK Department of Energy and Climate Change (DECC). As a contribution to the goal of the industrialised countries to mobilise jointly USD 100 billion of international climate finance by 2020, BMU has committed €40 million and DECC £25 million. The NAMA Facility is designed to support developing countries that show leadership on tackling climate change and want to implement transformational country-led NAMAs within the existing global mitigation architecture.

Demonstrating NAMA implementation

Until today, international support for NAMAs has focused on the development of NAMAs and the creation of enabling environments for NAMA implementation – so-called NAMA readiness activities. Very few NAMAs have entered the stage of implementation so far. It is the objective of the NAMA Facility to provide support for the implementation of NAMAs across a range of countries and sectors. A centrepiece of the NAMA facility is to combine technical and financial cooperation instruments with a strong emphasis on the mobilisation of capital investments in order to realise transformational change.

The NAMA Facility will fund so-called NAMA Support Projects. A NAMA Support Project forms an element of a broader NAMA and is singled out for financing under this initiative. NAMA Support Projects are put forward to the NAMA Facility by the national government in cooperation with a qualified delivery organisation[42] or by a qualified delivery organisation with strong endorsement by the national government. The full range of development cooperation instruments can be applied. While the focus is on financial support instruments, technical assistance and capacity-building instruments are considered for support, if they are closely linked with financial instruments. Depending on the respective financing challenges, financial instruments can include grant-based support instruments as well as concessional loans or guarantee schemes.

Since the NAMA Facility provides funding for NAMA implementation, eligible NAMA Support Projects must have reached a sufficient degree of maturity ("readiness"). Furthermore, to be eligible, the NAMA needs to be strongly supported by the national government, and qualified delivery organisations need be involved at some stage.

As the NAMA Facility's focus is on financial support instruments and most NAMAs intend to set up some kind of financing scheme, the involvement of a national, regional, bilateral or multilateral (development) bank will be essential for successful NAMA implementation. The mobilisation of private investments for mitigation activities, along with the setting up of a supporting regulatory framework, is perceived as the central element for realising the transformation of a sector. Therefore, close interaction with the commercial banking sector is seen as a key component for successful NAMA implementation

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42 Eligibility of delivery organisations within the context of the NAMA Facility is checked against a set of criteria including legal status, track record on international presence, expertise in the field of climate change mitigation, and experience with larger ODA projects. For further information, please see www.nama-facility.org.

Mitigating global climate change requires a fundamental transformation of all sectors towards low-carbon development pathways. Hence, this will be the yardstick for the NAMA Facility to prepare, foster and contribute to such transformational change. Beyond supporting the realisation of short-term emissions reductions, the NAMA Facility therefore aims to encourage and enable an increasing number of countries and economic and societal actors to commit themselves to implementing NAMAs.

Governance structure of the NAMA Facility

The decision-making body of the NAMA Facility is the NAMA Facility Board. It takes all relevant decisions with regard to strategy, guidelines and selection of NAMA Support Projects for funding. The NAMA Facility Board currently comprises representatives of DECC and BMU, the founders and funders of the NAMA Facility.

A Technical Support Unit (TSU) supports the Board in the management of the NAMA Facility, but is strictly not involved in the actual decision-making. The KfW Development Bank and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) are commissioned by BMU and DECC with the implementation of the NAMA Facility. This includes the staffing of the TSU and channelling the NAMA Facility funds via subcontracting arrangements to the relevant delivery organisations of the NAMA Support Projects selected for funding. KfW and GIZ may also function as qualified delivery organisations to the NAMA Facility and are invited to present NAMA Support Projects for selection, together with national governments of developing countries.

Selection and implementation of NAMA support projects

The NAMA Facility aims to be broadly accessible by countries currently eligible for ODA and by qualified delivery organisations and to fund the most ambitious NAMA Support Projects put forward. By introducing this element of competition, it seeks to create a race to the top for the most ambitious NAMAs. For this purpose, a transparent selection process was defined. Generally, the selection and implementation of the NAMA Support Projects will follow a three-step process.

In step one, the NAMA Facility calls for the submission of project outlines. The outlines will be evaluated against eligibility and ambition criteria (potential for transformational change, co-benefits, financial ambition, mitigation ambition) and the general feasibility of the project design will be checked. After a positive decision from the NAMA Facility Board, the respective delivery organisations will start their in-depth appraisals of the project (step two) to ensure its feasibility and to produce an in-depth implementation plan. Appraisal funding will be made available by the NAMA Facility. Qualified delivery organisations other than KfW and GIZ will be subcontracted by KfW and GIZ. After the conclusion of the appraisal process and preparation of a comprehensive project proposal, the NAMA Facility Board will decide on the final approval. The project is then able to move on to step three: implementation.

The first call for NAMA support projects and its results

The first call for NAMA Support Projects was launched in July 2013. A total of 47 NAMA Support Project outlines were received. The geographical distribution of the projects was balanced across Africa, Asia and Latin America. With regard to thematic sectors, most NAMA Support Project outlines address either renewable-energy or energy-efficiency aspects, followed by waste- and transport-related NAMAs.

The projects received were evaluated against the eligibility criteria and the ambition criteria as communicated beforehand by the NAMA Facility, as well as on their general feasibility. The results of the first call will be communicated during COP 19 in Warsaw. Information will be available on the webpage of the NAMA Facility (www.nama-facility.org).

The Mexican NAMA for Sustainable New Housing – pilot activity

During the 18th UNFCCC Conference in Doha in 2012, BMU and DECC announced their support for the implementation of the Mexican NAMA for Sustainable New Housing as the pilot project of the NAMA Facility.

The NAMA Support Project presented to the NAMA Facility contributes to the implementation of the Mexican NAMA for Sustainable New Housing in two ways.

1. It promotes the penetration of basic efficiency standards in the entire new housing market in Mexico by means of technical assistance to large public housing financiers, as well as private developers. Furthermore, financial incentives will be channelled to small and medium-sized developers and financial intermediaries
2. The upgrading of energy-efficiency standards to more ambitious levels will be promoted. The Mexican NAMA therefore has the potential to contribute significantly to the transformation of the Mexican residential housing sector from the baseline situation where energy-efficiency considerations were largely absent to a sustainable housing sector where ambitious energy-efficiency technologies have penetrated the market.

The in-depth appraisal has been carried out over the course of the year, leading to a final board decision regarding the approval of the project in autumn 2013. The implementation (step 3) of the NAMA Support Project is envisaged to start by the end of 2013. For further information on the NAMA Facility please consult www.nama-facility.org.

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