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Status Report on Nationally Appropriate Mitigation Actions (NAMAs)

Mid-year update 2017



Status Report on Nationally Appropriate Mitigation Actions (NAMAs)

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Disclaimer

The opinions expressed in the articles are the author's own and do not necessarily reflect the view of their respective organisations.

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GRAS Communicatie

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List of abbreviations

CEO	Chief Executive Officer
COP	Conference of Parties to the UNFCCC
DO	Delivery Organisation
ECN	Energy research Centre of the Netherlands
EEPBP	Energy Efficiency in Public Buildings Programme
GEF	Global Environment Facility
GHG	Greenhouse Gases
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IDB	Inter-American Development Bank
LGUGC	Local Government Unit Guarantee Corporation
M&E	Monitoring and Evaluation
MRV	Measuring, Reporting and Verification
MSME	Micro, Small and Medium Enterprises
NAMA	Nationally Appropriate Mitigation Action
NDC	Nationally Determined Contribution
NSP	NAMA Support Project
OECD	Organisation for Economic Co-operation and Development
PA	Paris Agreement
RAC	Refrigeration and Air Conditioning
SCF	Standing Committee on Finance
SSRE	Self-supply Renewable Energy
TOD	Transit-Oriented Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP DTU	UNEP Technical University of Denmark Partnership
UNFCCC	United Nations Framework Convention on Climate Change



List of tables and figures

Tables

Table 1	Instruments available to make the private sector invest in NAMAs	33
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Figures

Figure 1	Submission of NAMAs to the UNFCCC Registry	11
Figure 2	Overall number of NAMAs 2011-2017 (under development and under implementation)	13
Figure 3	Regional distribution of NAMAs (under development and implementation)	13
Figure 4	Sectoral distribution of NAMAs (under development and implementation)	14
Figure 5	Stages of NAMAs under implementation	16
Figure 6	Stages of NAMA development	24
Figure 7	Different types of private sector entities involved in NAMAs	25
Figure 8	Percentage of total number of private entities involved at each stage of NAMA development	26

Boxes

Box 1	The UNFCCC NAMA Registry	11
Box 2	The NAMA Database	12
Box 3	Categories of NAMAs under implementation	15
Box 4	Descriptions of stages of NAMA development	20
Box 5	Descriptions of the roles of different types of private sector entities	22
Box 6	NAMA Café de Costa Rica	27
Box 7	Scaling up distributed solar power in the Philippines	28
Box 8	Case study: Refrigeration NAMA in Colombia	34



Table of Contents

Acknowledgements	2
Foreword	6
Executive summary	8
1. What is happening in the world of NAMAs?	10
2. Making NAMAs work for the private sector	18
3. Financing mechanisms to involve the private sector in NAMAs	30
References	35

Foreword

Xander van Tilburg

Now that the initial excitement about the Paris Agreement is behind us, the focus is shifting to the actual implementation of what has been agreed upon. The majority of countries have submitted a Nationally Determined Contribution (NDC), and will now have to start implementing it. As described in the previous Status Report, the concept of NAMAs continues to have an important role in the new international climate context. They align mitigation actions with development impacts, they can increase country ownership of mitigation projects and they are designed to enable broad stakeholder engagement. However, securing funding for implementation has been identified as a key obstacle. Now, six months after the last report, the number of NAMAs continues to grow, showing its potential relevance in country's climate strategies. What we can still observe, though, is that the number of NAMAs under implementation is far behind the number under development. It seems that the challenges in securing funding have not been resolved yet.

To further analyse these disparities in the number of NAMAs under development and under implementation, it is important to look at the roles of different actors in the NAMA development and delivery process. After the trends in the world of NAMAs have been described in more detail, Chapter two will look at the involvement of the private sector in NAMAs so far. That the private sector is a crucial player in NAMAs, as well as in climate change mitigation in general, is nothing new. However, the term private sector is often used without clearly defining it and without looking at its different functions. Chapter two therefore distinguishes different types of private sector entities and how, when and why they are involved in the development and delivery of NAMAs. Finally, Chapter three focuses on financing mechanisms to involve the private sector in NAMAs, and when they are most efficient.

I hope that this report will contribute to a better understanding of the possible roles of the private sector in NAMAs, and that it can help identify the obstacles and possibilities for securing funding. In the end, involving the private sector is critical for the future success of NAMAs, but also for the broader actions to mitigate the effects of climate change.



Executive Summary

1. UPDATE ON NAMA DEVELOPMENT AND IMPLEMENTATION

Despite an increase in the number of NAMAs worldwide, **the pace has slowed down** since the adoption of the Paris Agreement (PA) in November 2015



Only 20 NAMAs are currently under implementation, equivalent to **9% of the total number of recorded NAMAs in the NAMA Database.**

9% Currently under implementation

2. MAKING NAMAs WORK FOR THE PRIVATE SECTOR



This chapter presents a number of observations from

15 interviews

with **Delivery Organisations** of NAMA Support Projects, and **3 private entities** who have been involved in NAMA development.



The chapter also provides observations from these interviews on what went well, what didn't go well and lessons learned for NAMA developers on how to approach the involvement of the private sector in NAMA development.

3. FINANCING MECHANISMS TO INVOLVE THE PRIVATE SECTOR IN NAMAs

This chapter discusses what it means to involve the private sector in NAMAs and provides a typology of available financial instruments which can be used to attract private investment into NAMAs. The chapter also presents an example of a Refrigeration NAMA in Colombia in which some of these instruments have been applied.



Executive summary

This mid-year update report starts with an overview of NAMAs by numbers in **Chapter 1**, as in previous NAMA Status Reports. The chapter shows that the total number of NAMAs submitted to the UNFCCC Registry continues to increase over time, and the share of NAMAs that have received financial support remains constant but relatively low since the last update. The NAMA Database presents similar trends in terms of the overall increase in NAMAs. Since the last update there are 26 new NAMAs under development and one additional NAMA under implementation. This is not surprising considering the overall low number of NAMAs under implementation: only 20 out of 229.

The NAMAs listed in the database cover 65 countries. Over the past year, no significant change has been observed in the geographical distribution of the total number of NAMAs, both those under development and implementation. NAMAs under implementation are mostly located in middle-income countries. Similarly, the sectoral distribution of NAMAs has not changed much, with NAMAs remaining unevenly spread across the major economic sectors. Energy remains the leading sector when it comes to NAMAs under implementation.

Chapter 2 of the report focuses on approaches to involving the private sector in the development of NAMAs and is based around an analysis of NAMA Support Projects (NSP), which are projects funded by the NAMA Facility that provide support to governments for the implementation of their NAMAs through the provision of finance and technical cooperation instruments. Understanding that the private sector is heterogeneous, consisting of different types of actors playing varying roles, and having diverse economic, social, political, and environmental interests, is important if we want to successfully involve the right actors at the right time in development and delivery of NAMAs.

The chapter presents observations from 15 interviews with Delivery Organisations of NSPs, and 3 with entities from the private sector who have been involved in NAMA development.

Observations from the interviews show that technology or service providers and commercial banks have been involved most frequently in the development of NSPs. For commercial banks as well as for technology or service providers, taking advantage of new market opportunities and diversifying their lending portfolios and business opportunities are mentioned as the main motivations for becoming involved. The chapter also provides some observations from interviewees on what went well and what didn't go so well, together with lessons learned for NAMA developers in the future on how to approach involvement of the private sector in NAMA development.

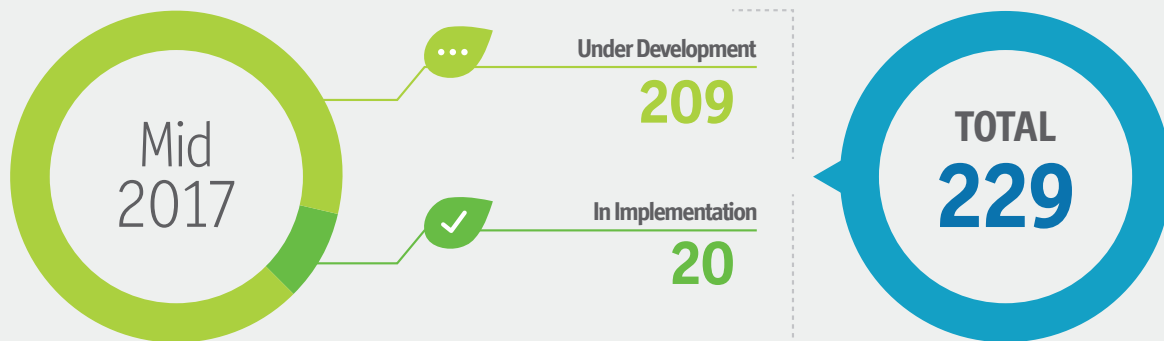
Chapter 3 explores the topic of financing mechanisms to involve the private sector in NAMAs. The chapter begins with an explanation of what is meant by involving the private sector in NAMAs. It suggests that this is not a question of shifting responsibilities for a particular development to the private sector, but rather of deciding the best possible mode of collaboration between the public sector as governing body and regulator and the private sector as investor and operator, exploiting the private sector's financing capacity and capability. While there are many instruments available for the public sector to promote or ensure participation of the private sector, some are more efficient than others. The chapter also provides a typology of available finance instruments and their characteristics, and presents an example of a NAMA in which some of these mechanisms have been applied.



Update of NAMAs Development and support

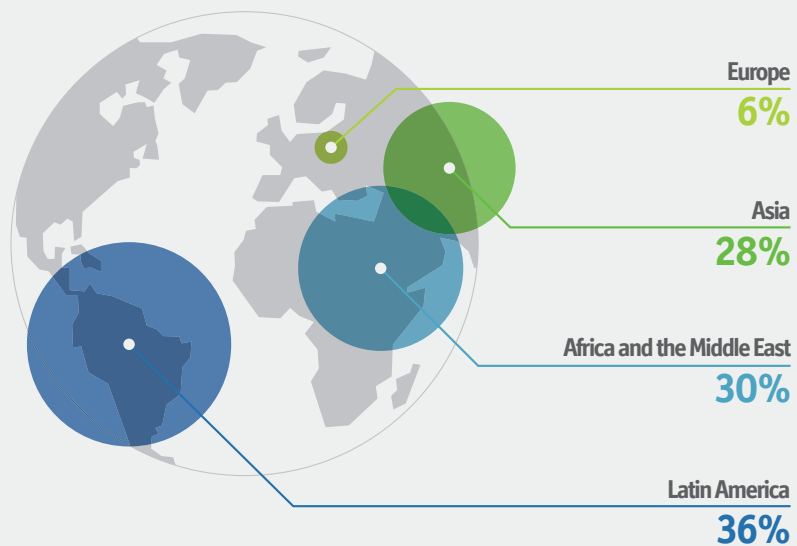
2017

TOTAL NUMBER OF NAMAs



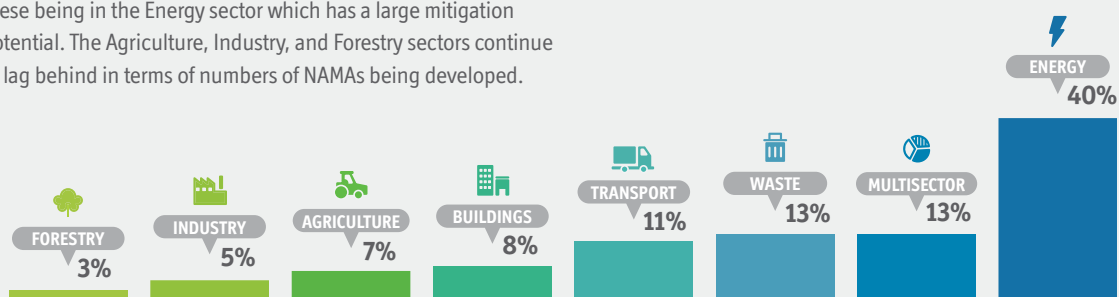
REGIONAL OVERVIEW

Latin America (and the Caribbean) continues to be the region hosting the highest number of NAMAs, around 36% of the total. Although the share of Africa (and Middle East) NAMAs has slightly decreased, from 32% in October 2016 to 30% in April 2017, Africa remains the second most represented region. There is a growing share of NAMAs in Asia, from 25% in October 2016 to 28% in April 2017.



SECTORAL OVERVIEW

NAMAs continue to be developed across all sectors, with 40% of these being in the Energy sector which has a large mitigation potential. The Agriculture, Industry, and Forestry sectors continue to lag behind in terms of numbers of NAMAs being developed.



1. What is happening in the world of NAMAs?

Coraline Bucquet (Ecofys)

Over the last six months, 26 new NAMAs have been recorded in the NAMA Database, most of which are under development, and one moved to the implementation stage. However, despite a constant increase in the number of NAMAs worldwide, the pace has somewhat slowed down since the adoption of the Paris Agreement (PA) in November 2015: from a 40% increase in the year preceding the Agreement to a 29% increase in the last twelve months.

One striking fact is that only 20 NAMAs are currently under implementation, equivalent to 9% of the total number of recorded NAMAs in the NAMA Database. This indicates that securing finance, whether it be from international or national, private or public sources, or indeed a combination of these, remains a key challenge for moving NAMAs to implementation.

Given that the PA entered into force on 4 November 2016, it is too early to analyse its influence on the development of NAMAs. However, we would expect that for countries that ratified the PA, subsequently, any new proposed NAMAs would be consistent with and contribute to achieving the ambition in their NDCs. Currently, 43 NDCs indicate the intention of using NAMAs as instruments to implement NDCs. In a recent webinar, The NAMA Facility stated¹ that NSPs submitted to the Facility's 4th call scored higher when they specifically referred to the country's NDC and showed they are well integrated in the country's strategy. To bolster the NDC-NAMA nexus, "the NAMA Facility requires NAMA Support Projects (NSPs) outlines to refer specifically to the country's NDC context"². This chapter provides an update on the status of the global NAMA pipeline, since the last Annual Status Report, considering new developments between October 2016 and March 2017³.

Status of officially submitted NAMAs (UNFCCC NAMA Registry)

Following the 16th Conference of Parties (COP) in November 2010, the UNFCCC Secretariat set up the NAMA Public Registry⁴ to recognise and record NAMAs seeking international support. Over the years, it has become an established publicly available online platform. Its overarching aim is to facilitate the provision and matching of international technical, financial, and capacity building support to NAMAs.

As in the previous editions, within the UNFCCC NAMA Registry, the NAMA Status Report focuses solely on NAMAs seeking international support for preparation and implementation (categories i and ii). It does not consider NAMAs for recognition⁵ (category iii).

The total number of NAMAs submitted to the UNFCCC Registry continues to increase (Figure 1).

The Registry now holds 137 NAMAs seeking support for preparation and implementation, compared to 130 since the last update in October 2016. However, since the adoption of the Paris Agreement in late 2015, NAMA submissions have slowed down. In the run-up period to Paris, between April and October 2015 there was a 39% increase in NAMA entries, but during the following six months the increase was 14%. The number of NAMA submissions has declined even further in the past year, from 7% between April and October 2016, to 5% since then. Whether this change of pace denotes a potential decline in the interest in NAMAs as mitigation instruments remains to be seen. Nonetheless it provides a good indication of current trends and thus, NAMA submissions to the Registry should be carefully monitored in the future.

¹ NAMA Facility (2017). Lessons Learnt from 4th Call of the NAMA Facility. Webinar held on 5 April, 2017. <http://www.nama-facility.org/news/recording-webinar-iv-available-now/>

² NAMA Facility: <http://www.nama-facility.org/concept-and-approach/>

³ Mitigation Momentum: <http://mitigationmomentum.org/downloads/Mitigation-Momentum-Status-Report-NOV2016.pdf>

⁴ UNFCCC NAMA Registry: <http://www4.unfccc.int/sites/nama/SitePages/Home.aspx>

⁵ Information on 18 organisations, initiatives or governments that provide financial support to NAMAs.

Box 1: The UNFCCC NAMA Registry⁶

There are three types of NAMAs in the Registry:

- (i) NAMAs seeking support for preparation: NAMAs that have not yet been developed and require financial or technical support to be prepared;
- (ii) NAMAs seeking support for implementation: NAMAs that have already been developed and are ready to receive financial, technical and/or capacity building support for implementation;
- (iii) NAMAs for recognition: NAMAs that developing countries have implemented or will implement without international support, seeking recognition for domestic mitigation efforts.

The Registry also offers additional information on the different financing sources in entries such as ‘Information on Support’⁷ and ‘Supported NAMAs’⁸.

Since the last update⁹, the number of NAMAs seeking support for implementation has increased by 10% (from 63 in October 2016 to 69 in end of March 2017) and is now almost equal to the number of NAMAs seeking support for preparation. This is a change from the year following the Paris Agreement which saw more NAMAs seeking support for preparation than for implementation. The previous report¹⁰ suggested that this could be a sign that countries had started to change their strategies and were increasingly looking for international support first to help develop NAMAs that already take donor requirements into account, instead of developing NAMA concepts on their own before turning to funders for implementation

support. This year’s change could be explained by the fact that developing countries are becoming more aware of the potential to implement existing NAMAs in order to achieve targets set out in NDCs. Thus far, six NAMAs have managed to secure financing for implementation.

The share of NAMAs that received financial support remains constant, yet relatively low, since the last update. One additional entry has been identified, bringing the number of supported NAMAs to 17. The NAMA for Rural Electrification in Vanuatu received financial support for its implementation from the Austrian NAMA Initiative.

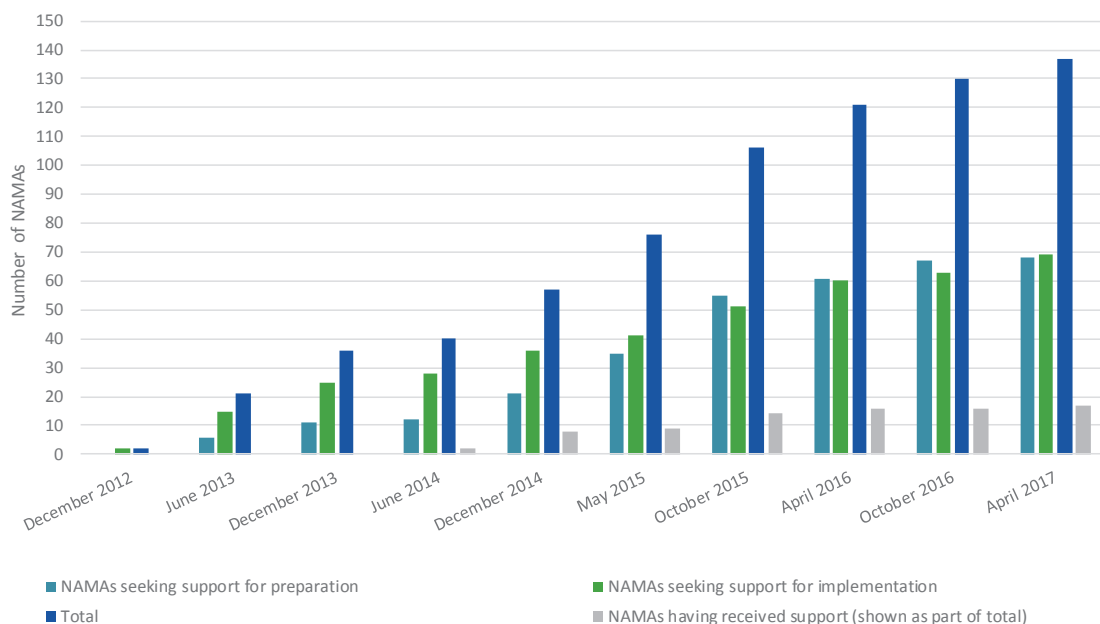


Figure 1: Submission of NAMAs to the UNFCCC NAMA Registry

⁶ More information can be found in the 2016 NAMA Annual Status Report <http://mitigationmomentum.org/downloads/Mitigation-Momentum-Status-Report-NOV2016.pdf>

⁷ Only 17 entries have been entered in the ‘Supported NAMAs’ in the Registry, including support given for the implementation of NAMAs (such as Azerbaijan or Tunisia), for the preparation of the NAMA design document (such as Namibia or Lao), or for capacity development projects for NAMAs (for example Serbia).

⁸ At the time of writing there were 9 NAMAs seeking recognition in the NAMA Registry (unchanged since 2016).

⁹ Bucquet, C and Cuntz C. (2016). What is happening in the world of NAMAs? In Annual Status Report on NAMAs.

¹⁰ Ibid

Box 2: The NAMA Database¹¹

NAMAs, in the database, are categorised as either ‘under development’ or ‘under implementation’.

The criteria for these two categories are:

- (i) NAMAs under development: these NAMAs have the intention to seek financial, technical transfer or capacity building support under the UNFCCC; have a specific mitigation objective given within specific sector(s); and have received government backing;
- (ii) NAMAs under implementation: these NAMAs meet all the criteria mentioned above; have a clear proponent and a clear set of activities across a defined timeline; specify cost estimates and support needs; specify GHG mitigation and co-benefit impacts; have received some international support to implement proposed actions; and make the size and source of funding publicly available.

The NAMA Database also contains feasibility studies¹², which have not received official government support, and unilateral NAMAs, which are purely domestic initiatives. As in all past reports, these initiatives are excluded from the statistics presented in this report.

Note: The NAMA Database does not represent official NAMA submissions and may not reflect the priorities of the country governments.

The Registry provides a list of sources that support NAMAs, namely the Global Environment Facility (GEF), the Governments of Austria and Japan, the NAMA Facility, the Spanish NAMA Platform, the Austrian NAMA Initiative, the Inter-American Development Bank (IDB), and the Australian funded United Nations Development Programme (UNDP) Millennium Development Goal (MDG) Carbon programme. Despite the diversity of sources, services, and coverage, only 12% of NAMAs in the Registry are tagged as having received support.

Another eye on NAMAs: status of the NAMA database

The NAMA database contains publicly available data for specific NAMAs worldwide¹³. Updated on a regular basis, the NAMA Database collects information from the UNFCCC NAMA Registry, the NAMA Facility¹⁴, the NAMA Pipeline Analysis and Database¹⁵, as well as additional publicly available information on NAMAs.

According to the NAMA Database¹⁶, the total number of NAMAs globally continues to increase. Currently, 229 NAMAs are listed, up from 203 in October 2016 and 178 a year ago, representing an increase of 13% since October 2016 or 29% in the last year (Figure 2). Even though the growth rate has slowed over time, NAMAs continue to be developed to support climate change mitigation.

Since the last update, there are 26 new NAMAs under development¹⁷ and only one additional NAMA under implementation. The new NAMAs under development are spread across regions and sectors. In March 2017, the NAMA Facility announced in its 4th call support for the Detailed Preparation Phase of seven NAMAs (in Brazil, Mexico, Philippines, Thailand, Tunisia and Uganda)¹⁸. This support, combined with other country initiatives, has contributed to the increase in NAMAs worldwide. However, although the number of NAMAs under implementation increased from 16 to 19 between April and October 2016, only the Rural Electrification NAMA in Vanuatu managed to receive financial support for implementation in the past six months.

The number of NAMAs under implementation remains low: 20 NAMAs compared to the 209 NAMAs that are still in the development phase. This share of only 9% has remained almost constant over the past two years. Furthermore, research and past interviews carried out for the NAMA Status Reports have shown that the category ‘under implementation’ does not necessarily mean that the NAMA is sufficiently supported. Only combining public and private funds can help secure the level of finance needed for NAMAs to carry out their planned activities.

¹¹ More information can be found in the 2016 NAMA Annual Status Report <http://mitigationmomentum.org/downloads/Mitigation-Momentum-Status-Report-NOV2016.pdf>

¹² At the time of writing there are 35 feasibility studies listed in the NAMA Database, 5 more than in October 2016.

¹³ NAMA Database: http://nama-database.org/index.php/Main_Page

¹⁴ NAMA Facility: <http://www.nama-facility.org/news.html>

¹⁵ UNEP DTU NAMA Pipeline Analysis and Database: <http://www.namapipeline.org/>

¹⁶ All data and figures given in this section refer to the NAMA Database, dated 11th April 2017.

¹⁷ This figure includes the fact that the Rural Electrification NAMA in Vanuatu, which previously existed in the NAMA Database, has shifted from under development to under implementation.

¹⁸ <http://www.nama-facility.org/projects/portfolio.html>

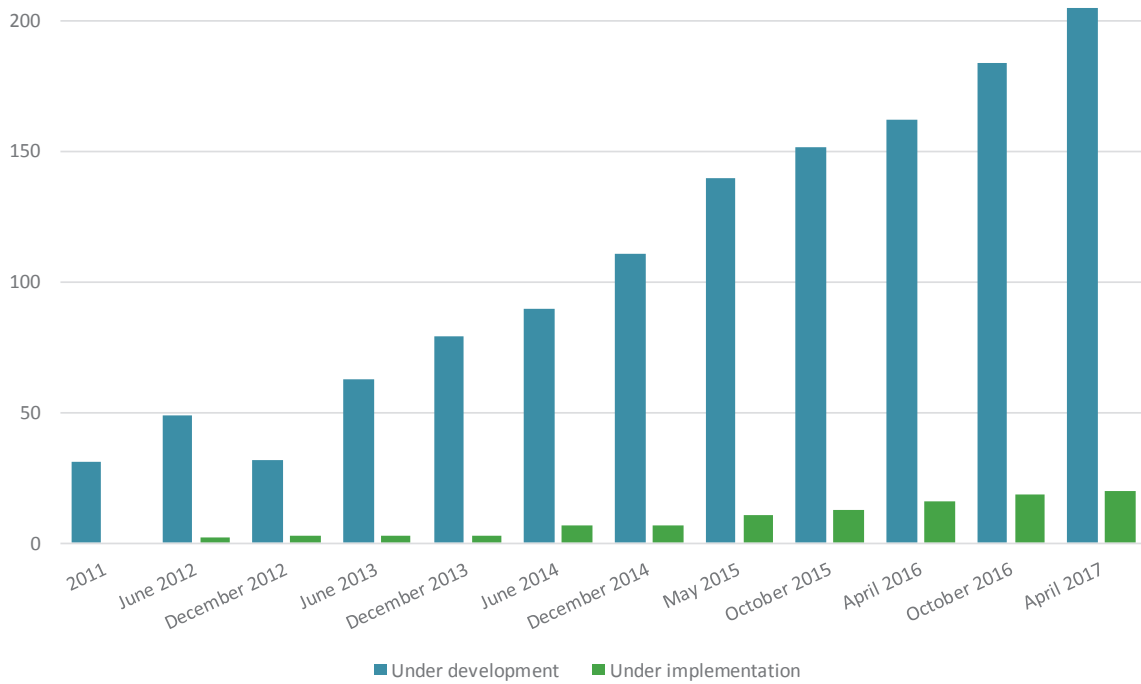


Figure 2: Overall number of NAMAs 2011-2017 (under development and under implementation)

The NAMAS listed in the database cover 65 countries, including an additional two countries since the last update in October 2016, Brazil and Zambia. All continents (Europe, America, Asia and Middle East, Africa) are represented but some countries host a higher number of NAMAs than others (still many countries have none). The difference in numbers may depend on the alignment between NAMAs and climate mitigation strategies of developing countries, the pro-activeness of governments and other stakeholders to move NAMAs to implementation, the efforts made by developing countries to seek technical and financial support, or the level of climate awareness. Moreover, over 80% of these NAMAs are developed at the national level, instead of at the sub-national level as it is sometimes the case.

Regional distribution of NAMAs

Over the past year, no significant change has been observed in the geographical distribution of the total number of NAMAs, both those under development and implementation. Latin America (and the Caribbean), with 82 NAMAs up from 74 since October 2016, continues to be the leading NAMA region hosting around 36% of total NAMAs. Even though the share of African (and Middle Eastern) NAMAs has slightly decreased, from 32% in October 2016 to 30% in April 2017, Africa remains the second most represented region, with 69 NAMAs up from 64 last October. Third is Asia with a growing share of NAMAs, 28% in April 2017 in comparison to 25% in October 2016, hosting 13 new NAMAs of which one is currently under implementation. Finally, only 14 NAMAs are under development in Europe, accounting for 6% of the total number of NAMAs across the world (Figure 3).

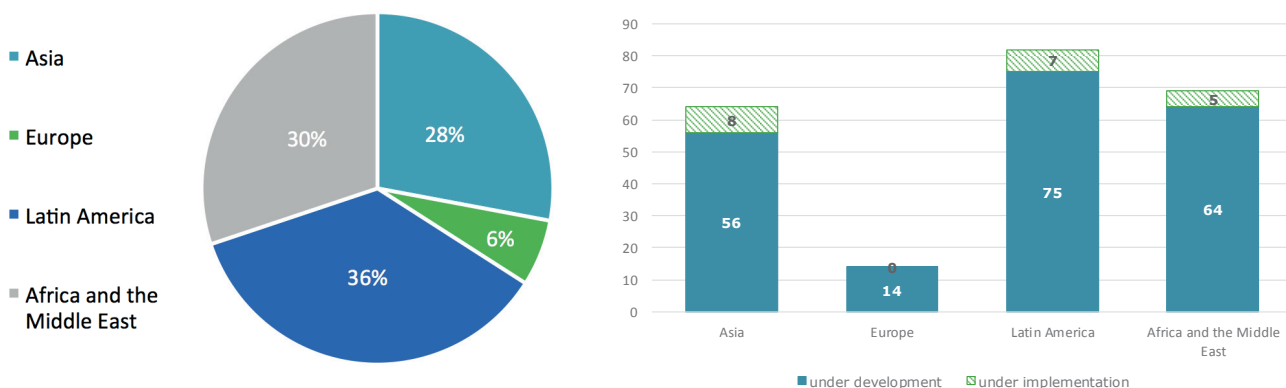


Figure 3: Regional distribution of NAMAs (under development and implementation)

Sectoral distribution of NAMAs

Over the past year, there has not been much change in the sectoral distribution of NAMAs, with NAMAs remaining unevenly spread across the seven major economic sectors (Figure 4). The **Energy** sector holds 40% of the total NAMA population (both under development and under implementation), representing 91 NAMAs. **Forestry** remains an underrepresented sector, accounting for only 3% of NAMAs. With 11% and 13% shares of NAMAs respectively, the **Transport** and **Waste** sectors are more popular than Forestry in African and Latin America countries. Focus on the **Buildings** sector is largely found in Europe and to a lesser extent in Latin America. **Agriculture** has experienced the sharpest growth in terms of NAMA development, despite little variation between regions, from 11 in October 2016 to 16 in April 2017, bringing its share of NAMAs to 7%. Asia has by far the highest interest in developing NAMAs in the **Industry** sector.

In the meantime, multi-sectoral NAMAs have almost doubled in the past twelve months, now totalling 30 NAMAs. The share of these NAMAs has increased from 9% in April 2016 to 13% in April 2017. This could reflect synergies between sectors being made and countries seeing the broader cross-sectoral benefits of NAMAs. Even though energy remains the leading sector, its share of NAMAs has not varied significantly in the past years. It seems that NAMAs in complex sectors or in a combination of sectors have gradually gained interest.

A closer look at NAMAs under implementation

Even though the UNFCCC NAMA Registry and the NAMA Database index their NAMAs in different ways, namely 'seeking support for preparation' or 'seeking support for implementation' on the one hand and 'under development' or 'under implementation' on the other hand, the rationale behind this categorisation is similar. The discrepancies in results, outcomes and scope between NAMAs tend to depend on the status of development and implementation of the NAMAs. In addition, the review of NAMAs listed as 'under implementation' in the Database combined with several interviews held with NAMA proponents¹⁹ indicated that it is judicious to further refine this first

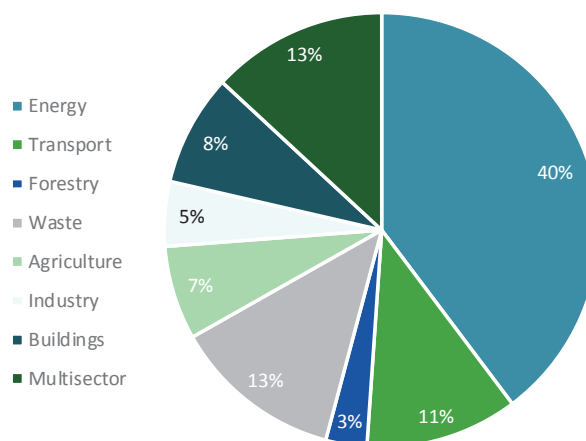


Figure 4: Sectoral Distribution of NAMAs (under development and implementation)

classification of NAMAs by identifying the various stages of implementation (see Box 3).

Note: Using the information provided in the NAMA Database, the analysis presented in this report focuses mostly on contributions from international donors, which will be used to leverage additional national public and private finance.

Based on the level of financing they have received, 20 NAMAs are currently under implementation, representing only 9% of the total number of NAMAs worldwide. Three new NAMAs secured funding including South Africa (energy efficiency in public buildings) and Guatemala (energy efficiency in households of rural and particularly indigenous communities) as a result of the 3rd call of the NAMA Facility, and Nigeria (de-risking renewable energy) thanks to the GEF. Since October 2016, only one additional NAMA, rural electrification in Vanuatu, moved to implementation.

To date, there is no NAMA that has been fully funded, and approximately 70% of NAMAs under implementation (14 NAMAs in total) are still in the earliest stages of implementation: that is 40% are currently under appraisal for financing and 30% for which financing, though approved, has not yet been disbursed (5). The addition of the new NAMA in Vanuatu²⁰ explains the slight increase since October 2016 in the share of NAMAs under the category 'financing approved'. At the COP 22 in Marrakesh, the Austrian and Vanuatu governments signed a funding agreement of US\$1 million for the NAMA.

¹⁹ This analysis was carried out in September-October 2016 for the publication of the 2016 Annual Status
²⁰ <http://namanews.org/news/2016/12/01/austria-and-vanuatu-sign-funding-agreement-for-renewable-energy-nama/>

Box 3: Categories of NAMAs under implementation²¹

NAMAs under implementation can be classified according to the level of financing they have received.

The four categories that measure the extent to which NAMAs are being implemented on the ground are: Financing is not the only criterion to consider when classifying NAMAs under implementation, and the categorisation of these NAMAs remains challenging. Also, one should bear in mind that international support received is only one piece of the puzzle for full implementation of a NAMA. Indeed, while international support can be key, the combination of other sources of finance, including from domestic private and public sources, is often needed. It is necessary that public funding leverages additional private investments.

Category	Requirements
Fully funded	<ul style="list-style-type: none"> • International funding has been received • Funding (international, national, private) covers the total cost of the NAMA • Adequate financial mechanisms are established • All activities linked to the implementation of mitigation activities envisaged in the NAMA proposal have been or are being executed
Partially funded	<ul style="list-style-type: none"> • International funding has been received • Funding (international, national, private) covers a part of the total cost of the NAMA • Additional financing sources (international, national, private) are sought • Financial mechanisms have been researched, but not necessarily established • Some activities linked to the implementation of mitigation activities envisaged in the NAMA proposal are being executed
Financing approved	<ul style="list-style-type: none"> • Funding proposals have been submitted to and approved by an international donor • Bilateral project agreements are under discussion²² • Additional financing sources (international, national, private) are sought • Financial mechanisms have been researched, but not yet established • No activities linked to the implementation of mitigation activities envisaged in the NAMA proposal are executed yet²³
Under appraisal	<ul style="list-style-type: none"> • Funding proposals have been submitted to an international donor • Funding proposals are being assessed by the donor²⁴ • Additional financing sources (international, national, private) are sought • No activities linked to the implementation of mitigation activities envisaged in the NAMA proposal are executed yet

Financing is not the only criterion to consider when classifying NAMAs under implementation, and the categorisation of these NAMAs remains challenging. Also, one should bear in mind that international support received is only one piece of the puzzle for full implementation of a NAMA. Indeed, while international support can be key, the combination of other sources of finance, including from domestic private and public sources, is often needed. It is necessary that public funding leverages additional private investments.

²¹ More information can be found in the 2016 NAMA Annual Status Report <http://mitigationmomentum.org/downloads/Mitigation-Momentum-Status-Report-NOV2016.pdf>

²² Once funding is approved, an agreement between the parties involved, generally the national government and the international donor, is reviewed and signed. It constitutes the bilateral basis for implementation of the NAMA and provides the green light to de-block technical activities on the ground. It is important to note that this process includes the exchange of notes and feedback rounds between parties and is generally time-intensive.

²³ According to interviews with NAMA proponents in countries and the NAMA Facility, some preliminary activities are carried out once funding is approved but has not yet been sourced. Indeed, since the financing process occurs over several years, activities such as the design of the NAMA concept, the development of the MRV component and capacity building, already take place before funding is approved. However, generally the majority of the technical activities towards concrete mitigation actions only start once financing is disbursed.

²⁴ An example is the NAMA Facility which classifies its NAMA Support Project proposals under the 'appraisal' category. According to an interviewee from the NAMA Facility, this phase entails the thorough assessment of these proposals, including on-site missions and additional feasibility studies, as well as discussions between the national government and the donor to clarify the ambitions of the NAMA, which will be considered for the final decision of the donor. This process can take up to 18 months.

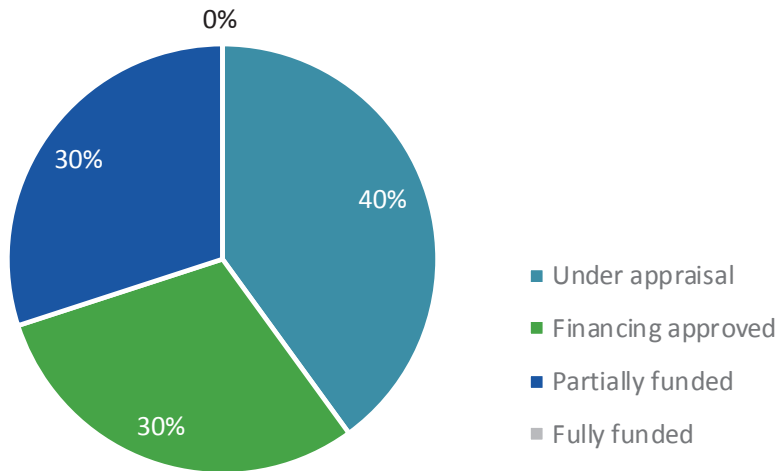


Figure 5: Stages of NAMAs under implementation

The implementation of the remaining 30% of NAMAs under implementation is more advanced. These NAMAs are partially funded and implementing activities have already started. This shows that more financial resources need to be mobilised to accelerate the implementation of NAMAs and to reach a stage where NAMA activities are underway.

It is important to highlight that 70% of the NAMAs under implementation are being financed by the NAMA Facility.

The NAMA Facility²⁵, a multi-donor fund, has provided approximately €262 million across its four calls since its creation in 2012, to support developing countries in implementing ambitious actions to mitigation GHG emissions, particularly through the NAMA mechanism. It is currently the single most important targeted funding source for NAMAs. In chapter 2 of this report, through interviews with Delivery Organisations developing the NSPs approved by the NAMA Facility, we will explore private sector involvement in NAMA development, using examples of how private sector entities have been involved in the development of these NSPs.

Regional distribution of NAMAs under implementation

Even though Asia only hosts a quarter of the total number of NAMAs worldwide, the region remains the frontrunner in terms of NAMAs under implementation.

Of the total NAMAs under implementation, 40% are in Asia and 35% in Latin America. **Asia** is currently implementing eight of its NAMAs, of which almost two thirds have already been partially funded or are close to starting implementation ('financing approved'). **Latin America** has seven NAMAs in all stages of implementation and **Africa** five, most of them only 'under appraisal'. In **Europe**, there are no NAMAs under implementation. In addition, NAMAs under implementation are mostly located in **middle income countries**²⁶: more than half continue to be in upper-middle income countries, followed by seven in lower-middle income countries with three additions (Guatemala, Nigeria and Vanuatu) over the past twelve months, one in a low-income country (Burkina Faso) and one in a high-income country (Chile). Colombia is the first and only country to have received financing for implementation of two NAMAs, both by the NAMA Facility²⁷.

²⁵ www.nama-facility.org

²⁶ These countries have been categorized by country income groups, according to World Bank Classification.

²⁷ The two NAMAs in Colombia are for Transit-oriented Development (TOD) and for the domestic refrigeration sector. Funding under the NAMA Facility is under appraisal following, respectively, a first and third call for NAMA Support Project Outlines.



Sectoral distribution of NAMAs under implementation

Following the general sectoral trend of NAMAs worldwide, energy remains the leading sector in NAMAs under implementation. The energy sector accounts for 35% of these NAMAs, followed by transport with 15%. Energy is also the frontrunner sector in all three continents, representing, up to 60% of NAMAs under implementation in Africa and around a quarter in Asia and Latin America. This is in part due to the recent addition of the rural electrification NAMA in Asia and to the fact that most of the NAMA Support Projects pre-selected by the NAMA Facility in its 4th call are energy-related. **Forestry** is the most underrepresented sector but nevertheless the third biggest sector in terms of number

NAMAs under implementation. This results from the addition, a year ago, of two NAMAs targeting the Forestry sector (in Georgia and Tajikistan) that secured funding for implementation. Building on synergies between sectors, **multi-sectoral** NAMAs continue to play an important role, representing one fifth of the number of NAMAs under implementation. Even after the increasing number of submissions of waste NAMAs to the NAMA Facility in the 3rd call and the addition, a year ago, of an agricultural NAMA (in Costa Rica), both **Waste** and **Agriculture** are not as strongly represented in the area of implementation. Also, **Industry** is the only sector that does not have any NAMA under implementation.

2. Making NAMAs work for the private sector

Matthew Halstead, James Rawlins and Linda Velzeboer (ECN)

Why is the private sector important for mitigation?

It is widely accepted that the public sector cannot address the challenge of climate change mitigation on its own (or adaptation, for that matter, but mitigation is the focus of this report). With limited resources, the public sector can provide overarching frameworks, use incentives such as public financing mechanisms, impose regulations, etc. to direct economies and societies in the desired way. It is the private sector though, with financial resources and capabilities at its disposal far greater than that of the public sector, which must be the main driving force behind the transformation of our economies. Thus, private sector action and investment is crucial in addressing the complex challenges of low carbon development.

The need to divert private capital towards climate-friendly investments is clear. The 2016 biennial assessment report of the Standing Committee on Finance (SCF) to UNFCCC Parties states that total global climate finance was estimated to be an average of USD 714 billion per year in 2013-2014²⁸. According to the Climate Policy Initiative's Global Climate Finance Landscape, over the next 15 years a further US\$16.5 trillion investment is required to meet the 2 degrees Celsius target²⁹. Given limited public financial resources³⁰, it is clear that in order to meet the world's climate financing needs, large amounts of private sector investment into low-carbon and climate-resilient development is required.

Capital investment, however, is not the only piece of the puzzle. Mitigation projects and NAMAs will typically involve a variety of different types of entities from the private sector including, service and technology providers, construction firms, sector and business associations, etc.

We know that in order to get them involved, it is important to manage and meet the expectations of these different types of private entities. We also know that from prior experience it is difficult to get the timing right as to when to involve these entities in NAMA development and delivery, and what the nature of their involvement should be³¹.

There is little doubt that private sector involvement is needed in mitigation and NAMAs, and it makes sense for this involvement to take place in the development of NAMAs in order to design interventions that create sustainable business models for the private sector. Therefore, the purpose of this chapter is to explore how involving the private sector in the development of NAMAs is working in practice and what lessons have been learned. The analysis in this chapter is based on a subset of mitigation projects called NAMA Support Projects (NSPs), which are 'projects funded by the NAMA Facility that will provide support to governments for the implementation of the most ambitious parts of their NAMAs through the provision of financial support and technical cooperation instruments'³².

The reasons for the focus of our analysis is that 70% of all NAMAs being implemented globally have been awarded funding from the NAMA Facility, and therefore happen to be 'NSP's, and that these NSPs have successfully passed the quality assessment of the NAMA Facility, so should provide good examples of well-designed and effectively developed mitigation projects³³. Chapter 3 explores private sector involvement in NAMAs from a different angle, addressing the question of how to attract the private sector to invest in NAMA delivery through financial mechanisms that incentivise and/or regulate them to do so.

²⁸ 'The volume of the climate-related finance and investment flows globally may be higher, given that there are still significant data gaps in critical sectors such as sustainable transportation, agriculture, energy efficiency and resilient infrastructure': <http://unfccc.int/resource/docs/2016/cop22/eng/10a01.pdf>

²⁹ Climate Policy Initiative: <http://www.climatefinancelandscape.org/>

³⁰ World Resources Institute (WRI, 2012): http://pdf.wri.org/public_financing_instruments_leverage_private_capital_climate_relevant_investment_focus_multilateral_agencies.pdf

³¹ Van Tilburg, Rawlins, and Bhasin (2016)

³² Definition from NAMA Facility website: <http://www.nama-facility.org/conceptand-approach/glossary/>

³³ In the NAMA Facility's factsheet on 'Potential for Transformational Change', the Facility states that NSPs are evaluated based on several points including 'Does the outlined NAMA Support Project envisage the participation and/or development of the private sector? What is the specific contribution of the private sector to transformational change potential?', thus highlighting that private sector involvement is an important consideration for the NAMA Facility when evaluating NSP proposals http://www.nama-facility.org/fileadmin/user_upload/NAMA_Facility_factsheet_transformational_change_potential.pdf

The following sections contain observations from interviews conducted with the Delivery Organisations³⁴ of NSPs, and private sector entities that have been involved in NAMA development. The interviews show the typical roles different private entities perform at different stages, how they have been involved (through meetings, workshops, surveys, etc.), and why these entities have been interested or incentivised to be involved. Lessons learned and best practices on the process of involving the private sector are also presented, with the objective of informing developers of mitigation projects about effective approaches to involve private actors in the development of NAMAs.

First it is important to understand what we mean when we talk about the private sector in the context of NAMAs. The next section will discuss this and propose a classification of different types of private entities who might be involved at different stages of project development and delivery, and the roles they might play.

What do we mean by 'the private sector' in the context of NAMAs?

The term private sector is commonly used in discussions and publications on the theme of low-carbon development, including on the topic of NAMAs, and private entities are often grouped under the all-encompassing term 'the private sector'. Understanding that the private sector is heterogeneous, consisting of different types of actors playing varying roles, and having diverse economic, social, political, and environmental interests, is important if we want to successfully involve the right actors at the right time in development and delivery of NAMAs.

Several development organisations, including the United Nations Development Programme (UNDP), use the following definition of the private sector from the OECD:

"A basic organising principle of economic activity where private ownership is an important factor, where markets and competition drive production and where private initiative and risk taking set activities in motion."³⁵

This is an accurate definition of the private sector, but it is important to elaborate this further in order to better explain the different types of private sector entities and the roles they play specifically in NAMA development and delivery. Private entities have a crucial role to play in helping NAMAs to contribute to the transition towards lower GHG emissions in three distinct ways:³⁶

- They provide the technologies, products and services that are needed to make the transition possible;
- They provide the funding necessary to finance the transition, filling the large gap between what the public sector can provide and what is needed;
- They themselves are important actors in the transition, as organisations responsible for emissions, and as organisations that are vulnerable to climate change.

³⁴ A Delivery Organisation is an entity, which meets the NAMA Facility qualifying criteria to be a Delivery organisation, and can submit an NSP Outline on behalf of a national government. Among other functions, 'the Delivery Organisation will be responsible for conducting an in-depth appraisal and due diligence of the NAMA Support Project to ensure its feasibility and to produce a robust implementation plan.' International NAMA Facility General Information Document accessed via IKI website <https://www.international-climate-initiative.com/>

³⁵ This definition is used in, for example, the OECD's 2004 publication 'Accelerating Pro-Poor Growth through Support for Private Sector Development' <https://www.oecd.org/dac/povertyreduction/34055384.pdf>

³⁶ Discussion paper 'Taking care of business: the role of the NDC in involving the private sector in Green Climate Fund projects' (Rawlins, Halstead, 2016) <https://www.ecn.nl/publications/PdfFetch.aspx?nr=ECN-E-16-070>

There are different types of private entities that play one or more of these roles, either being involved in or affected by NAMAs. These include:

- (Potential³⁷) Implementers
 - Commercial banks
 - Technology and service providers
 - Project developers
- Consultants and advisors (including evaluators)
- Sector and business associations
- (Potential) Wider beneficiaries (i.e. the companies who may benefit from the services delivered or enabled by the NAMA, e.g. loans for energy efficiency investment)
- Investors

The roles that these various types of entities play at different stages of NAMA development and delivery will be explored in the next two sections.

Roles of private sector entities

One key determinant of the role of a private sector entity in achieving GHG mitigation is likely to be its 'function', i.e. the nature of their core business. Whether they are a technology or service provider, an energy project developer, or a commercial bank, will influence the role they play in a NAMA³⁸.

Thus, identifying the main categories of organisational 'function' is likely to be helpful in devising private sector involvement approaches for NAMA developers.

Box 4: descriptions of the roles of different types of private sector entities³⁹

Commercial banks

International, national and local commercial banks can play an important role in NAMAs, especially in channelling capital to public and private entities which implement or are beneficiaries of a NAMA. For example, they can disburse loans or provide other basic financial products to commercial and industrial businesses to fund their activities.

Technology and service providers

Technology and service providers can be local, national or international businesses that provide part of the technology or services needed for the implementation of the NAMA and achievement of its desired outcomes. Examples of such businesses are producers of clean cook stoves or solar panels, but also large multinational companies who implement sustainable production methods for rice or other staple crops.

Project developers

In the context of the classification presented in this report, project developers are private entities that develop and manage projects which result from NAMAs, for example projects that scale-up renewable energy generation capacity such as constructing a Solar PV plant or develop sustainable housing that achieve GHG savings through energy conservation.

³⁷ The term 'potential' is used here for two reasons. First, those private entities that are involved in NAMA development can become actual implementers only once implementation of the NAMA begins, which is only possible when sufficient financial resources have been secured and disbursed. Further, there could be private entities that are involved in the NAMA development process, but do not continue to be involved as implementers once the NAMA is being delivered

³⁸ 'Taking care of business: the role of the NDC in involving the private sector in Green Climate Fund projects' (Rawlins, Halstead, 2016) <https://www.ecn.nl/publications/PdfFetch.aspx?nr=ECN-E-16-070>

³⁹ These descriptions have been adapted from the discussion paper 'Taking care of business: the role of the NDC in involving the private sector in Green Climate Fund projects' (Rawlins, Halstead, 2016) <https://www.ecn.nl/publications/PdfFetch.aspx?nr=ECN-E-16-070>. They have been tailored to applied to the context of the development and delivery of NAMAs.

Consultants and advisors

Developing a NAMA, from idea generation to funding mobilisation and implementation, can be a lengthy and resource-intensive process that requires a range of capabilities. Many NAMA developers will not have the resources to carry out this process entirely on their own, and will therefore hire consultants or advisors to assist them. These consultants and advisors take over time-consuming tasks such as research and the completion of required documents for funding proposals, but they also bring specialist skills critical for developing a high-quality NAMA, such as economic and financial expertise, technical knowledge and stakeholder engagement skills.

Sector and business associations

Input from representative private sector entities is especially important when NAMAs aim to deploy interventions that target the private sector, to check if the proposed interventions are likely to work. However, in many sectors there could easily be tens of thousands of active private sector organisations, and engaging with a representative sample is not realistic for most NAMA developers. To get a representative picture of the needs and issues of a sector, one can choose to engage with sector or business associations instead. The purpose of these organisations is to understand and represent their sector, and thus they are well placed to explain the barriers and issues that the sector faces.

Wider private sector beneficiaries

Wider private sector beneficiaries are companies or smallholders that benefit from services provided through a certain NAMA. Many NAMAs are dependent on the actions of a large number of private sector organisations that are not formally or directly involved to achieve their results. Most private sector organisations in any country or sector will only keep a distant and indirect relationship with NAMA development and delivery. For example, a business can benefit from a green loan from a bank without knowing that the funding for this service came from an intervention developed as a part of a NAMA. It is important that the NAMA has been well designed and executed, so that it aligns with the interests of private sector organisations and creates value and opportunity for them.

Investors

Some NAMA interventions will seek to attract private investors to contribute capital directly. This capital can then be used to achieve the outcomes of the NAMA. The private investors that contribute capital in this way are different from those investors that invest in activities that have been enabled or stimulated by a NAMA. As such, the NAMA developer needs to engage with those investors that contribute capital directly.

Stages of NAMA development and delivery

Successful development and delivery of NAMAs requires a number of different activities to take place in sequence⁴⁰, with different entities playing distinct roles at different times. It is in the NAMA developers' interest to have a clear vision for how this process should work, and to know the different roles that need to be played, and by whom, along the way. The NAMA developer can then be in a position to involve these different private sector groups at the right times, using the most effective methods.

To identify the different roles that need to be played, a simple NAMA lifecycle is presented below, breaking the process down into the major stages, to show which actors need to be involved at which points.

The stages are briefly described below and summarised in the infographic on the following page.

There are many ways to illustrate such a NAMA lifecycle depending upon what best suits the objective of the exercise, with perhaps a different number of stages or showing a non-linear policy formulation process. The purpose of this breakdown is to highlight the different types of private entities that are primarily involved at different stages and what their 'functions' might be. There are five separate stages; three relating to the NAMA development process, and two relating to actual delivery of the NAMA following the award of funding for implementation.

Box 5: Descriptions of stages of NAMA development

Stage 1: Idea Gathering and Prioritisation

The first stage is to gather ideas for potential projects, and to start to prioritise them. A range of private sector actors should be involved, which could include sector representatives (businesses, sector associations, or trade bodies), consultants and other experts, and of course NAMA developers themselves.

Stage 2: Concept Development

The key objective in this stage is to turn a high-level project idea into a clearly articulated project concept, supported by evidence and analysis and with stakeholder buy-in. The tasks would be led typically by the NAMA developer, which could be the Delivery Organisation, or it could be led by a consultancy contracted specifically for the concept development phase. Other organisations may also be hired to undertake supporting analyses such as market or feasibility studies.

Stage 3: Funding & Resource Mobilisation

For a NAMA, the critical set of tasks in this step relates to the production and submission of proposal documents that are required by a potential funder such as the NAMA Facility. Private sector involvement in this stage is likely to be limited compared to the first two stages, as most of the work here will be undertaken by the NAMA developer, and potentially specialist advisors or consultants (who might be from the private sector).

⁴⁰ It is important to emphasise that policy formulation is not a linear, sequential process and this means that seemingly well-designed NAMA concepts, neatly packaged as "take-or-leave" business propositions, often do not proceed to implementation. The purpose of illustrating NAMA development and delivery in such a linear way here is to show at which stage of the process different types of private entities are most active, and what their key roles are.

Stage 4: Set-Up

Once a donor has approved a NAMA proposal, and once the legal and contractual arrangements between the donor and the relevant entities are in place, the key stage before actual implementation is to set up the NAMA components. This involves final design and putting in place organisational structures to implement NAMA interventions, including contractual and operational arrangements, and governance structures. Much of the work at this stage will be undertaken by the Delivery Organisation and a select number of implementing partners, some of which might be from the private sector.

Stage 5: Delivery and Monitoring & Evaluation

The final, longest, and most complex stage of a NAMA is that of delivery or implementation. The activities undertaken and the range of actors involved in this stage will vary more between different NAMAs than in the other stages, because of the large potential differences in the core activities being implemented by the project. These could range from providing new technology to promote sustainable agricultural practices to offering new financial instruments to encourage energy efficiency in the industrial sector, to give only two very different examples. The key private sector entities involved will mainly be those directly involved in implementing the project, who could be organisations such as commercial banks, construction and engineering firms, energy project developers, technical consultancies, and additional private investors.

The crucial difference, in terms of private sector involvement, between this stage and the stages that precede it, is that in many NAMAs, the delivery phase may feature hundreds or even thousands of private sector organisations who are participating in and benefitting from the project. These could include renewable energy companies taking advantage of concessional loans to cover up-front capital investment costs and grow their business, companies receiving loans for energy efficiency projects, and a wide range of other interactions in which private sector organisations might engage directly or indirectly with services or funds provided by NAMA interventions.

The different types of entities described in Box 5 could be more or less involved in NAMAs at different stages of development and delivery, which is the focus of the next section. The remainder of this chapter explores, through interviews and two examples, which types of entities are involved at which stages of NAMA development, how they were engaged, and why they were motivated to be involved.



Stages of NAMA Development and Delivery

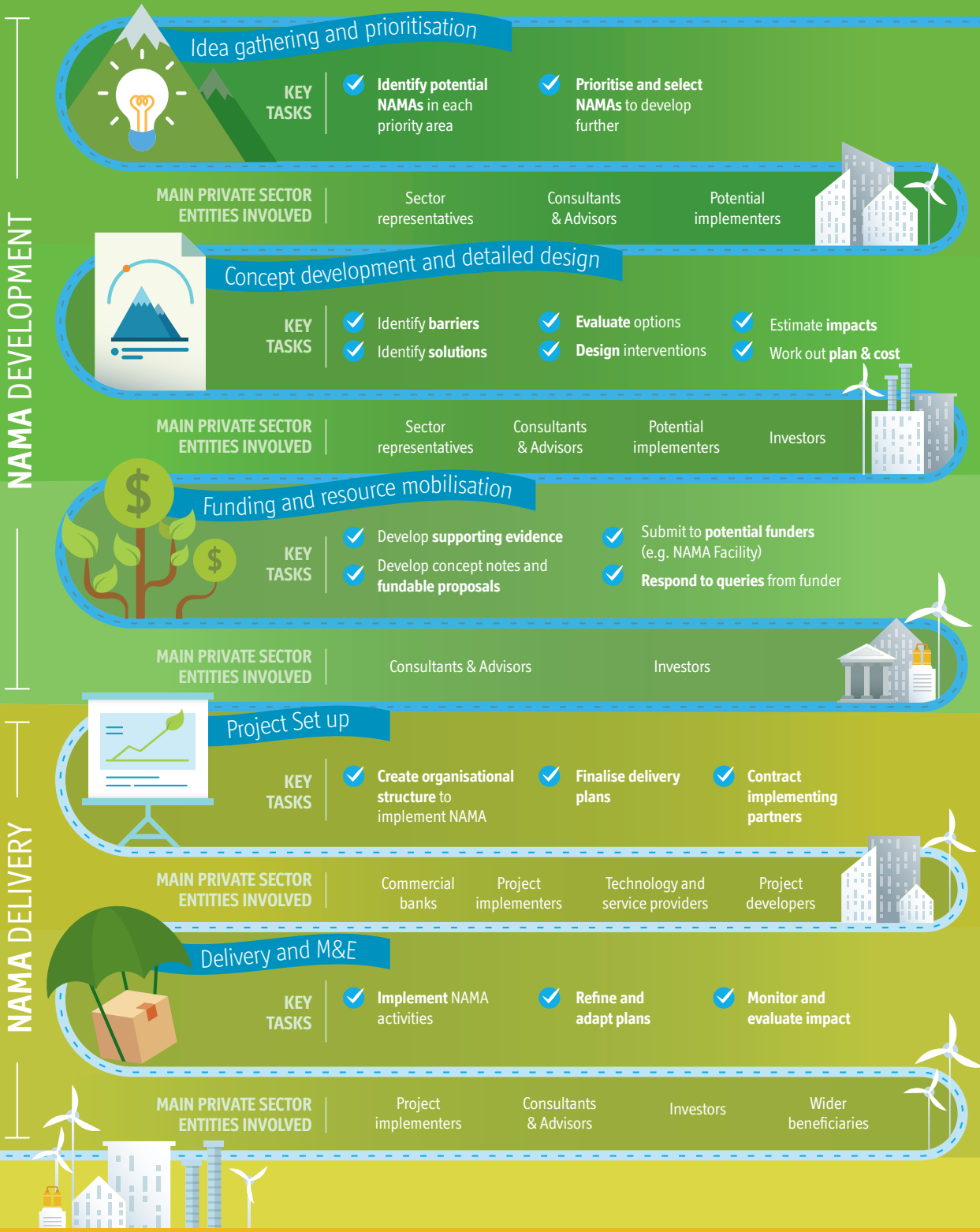


Figure 6: Stages of NAMA Development⁴¹

⁴¹ These stages and their descriptions in Box 4 have been adapted and applied to NAMA development and delivery from the discussion paper 'Taking care of business: the role of the NDC in involving the private sector in Green Climate Fund projects' (Rawlins, Halstead, 2016) <https://www.ecn.nl/publications/PdfFetch.asp?nr=FCN-E-16-070>.

NAMA Support Projects: interviews and examples

As already mentioned NSPs are projects funded by the NAMA Facility in order to support developing country governments to implement their NAMAs. The observations presented in this section are from interviews with the Delivery Organisations of 15 NSPs. This section also presents two examples of NSPs in which there has been particularly active private sector involvement, and these examples include some insights from interviews with the private entities themselves. The two examples are the NSP on Coffee in Costa Rica and the NSP on Distributed Solar PV in the Philippines.

Observations from interviews⁴²

The two types of private sector entities that have been most frequently involved in the development of NAMAs are technology or service providers and commercial banks. In 11 out of the 15 NSPs (around 70% of respondents) there was involvement from technology and/or service providers,

and in 10 out of 15 commercial banks were involved. This is because these two types of entities are usually integral in the delivery of a NAMA, thus it is important for the NAMA developer to make sure they engage with them. Moreover, commercial banks, and technology and service providers are in a position to (clearly and directly) benefit economically so it is worthwhile from their perspective to be involved. Sector and business associations were also prominently involved in the NAMA development stages (9 out of 15 NSPs), as well as consultants and advisors (8 out of 15). Unsurprisingly, in only one third of the NSPs (potential) wider beneficiaries were involved in the NAMA development process (5 out of 15), which supports the statement that the vast majority of private entities are likely only to engage once a NAMA is under implementation, and in many cases, only in so much as they directly or indirectly benefit from the activities of the NAMA, and are not themselves part of implementing the interventions.

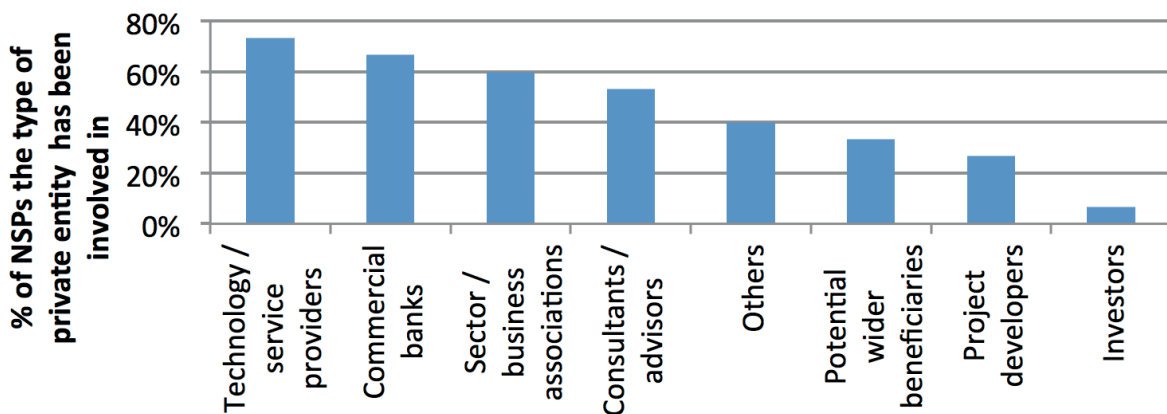


Figure 7: Different types of private sector entities involved in NAMAs

Involvement of private sector entities has nearly always been facilitated by either a Government entity or the NSP Delivery Organisation themselves. Almost all of the respondents stated that this was the case, but there was also a facilitation role for sector or business associations who have close, longstanding relationships with private sector entities in the sector(s) that the NAMA is trying

to transform. These associations have established relationships with key decision-makers of private entities, and thus the necessary convening power.

⁴² The observations in this section are made based on interviews conducted with Delivery Organisation's of 15 different NSPs, and thus not on all NAMAs that are either under development or implementation. 15 NSPs is more than 70% of the total number of NSPs that have been approved for funding by the NAMA Facility.

Approximately 80% of total private entities involved did so during the first two stages of NAMA development; idea gathering and prioritisation, and concept development and detailed design. Only a very small number of entities were involved in stage three (funding and resource mobilisation), stage 4 (project set-up), and stage 5 (delivery and monitoring and evaluation). This is not surprising as many of the NSPs have not yet received

sufficient funding needed to start implementation, therefore these NAMAs have not yet reached the final two stages of NAMA development and delivery. Moreover, the functions that these entities generally performed were aligned to the early stages of NAMA development, for example to provide ideas, provide supporting evidence / data, evaluate / design / review / respond / comment on / validate NAMA interventions.

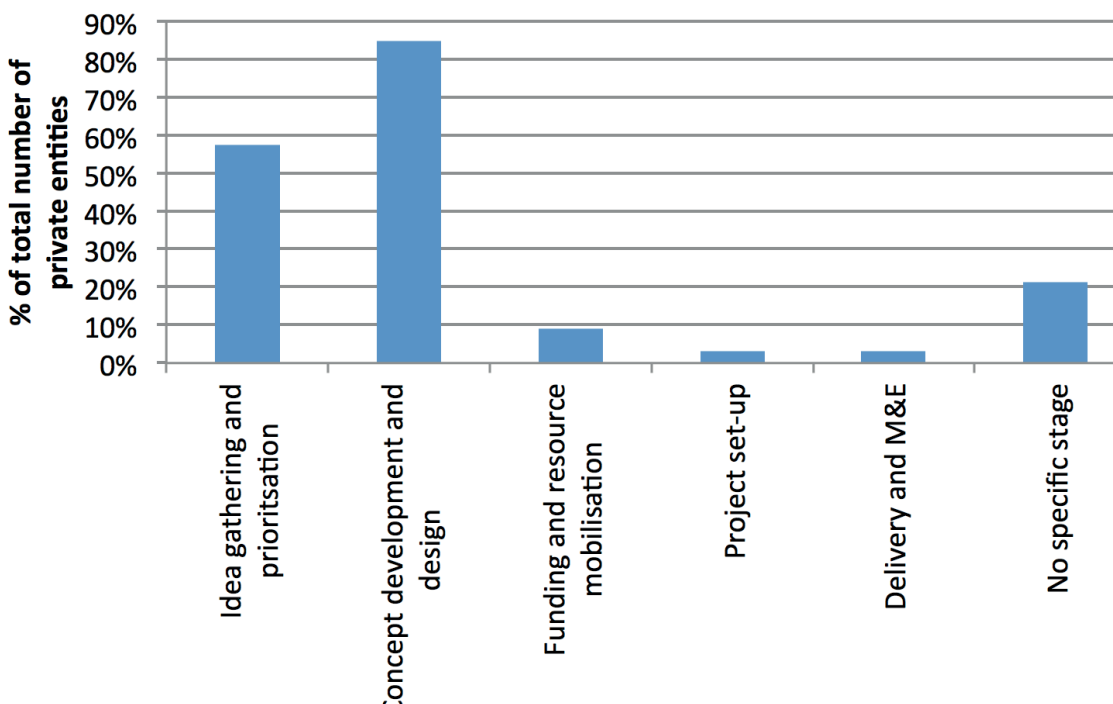


Figure 8: Percentage of total number of private entities involved at each stage of NAMA development

Private entities have been typically involved through meetings (formal and informal) and workshops. Most of the respondents suggested that meetings and workshops were the best forums for NAMA developers to help private entities to better understand NAMAs and for the private sector to provide valuable input on the proposed NAMA interventions. More research oriented means of involvement such as interviews and surveys were not often used as methods to involve the private sector because NAMA developers found them to be less flexible than meetings and workshops, which provided forums where the concept of NAMAs could be better explained and ideas for potential NAMAs exchanged more freely.

6 out of the 10 respondents who stated that commercial banks were involved also stated that their motivation to be involved was to take advantage of new market opportunities and diversify their lending portfolios⁴³. Ultimately, opportunities to increase returns from its commercial activities and for market expansion (with an acceptable level of risk) is one of, if not the most important concern of a rational, profit seeking private enterprise. However, the interviews yielded some interesting observations and highlighted a more nuanced perspective than private entities being driven to be involved in NAMAs only because of their motivation to grow and increase returns. One respondent stated that a commercial bank had expressed that their involvement was mainly due to their wider societal responsibility to invest into the renewable energy sector.

⁴³ Some respondents referred to 'first-mover advantage', which means a competitive advantage gained by becoming the first significant occupant of a market segment.

The respondents told a similar story for technology and service providers, with 8 out of 11 respondents suggesting that they were involved for similar reasons as commercial banks i.e. to take advantage of new market opportunities and diversify the products and/or services they offer. It could be argued that many, if not all, of these reasons are linked in one way or another to the private entity balancing seeking increased returns and market growth. However, the key point here is that in their approach to getting private sector entities involved in NAMA development, NAMA developers should have a comprehensive understanding of the nuanced reasons why private sector entities would be interested or incentivised. They can develop this understanding through listening to these private entities and learning about their needs and wishes, which will help them to build narratives that can encourage involvement of these entities. Furthermore,

this understanding will enable the NAMA developers to design sustainable, robust business models that address the challenges faced by private entities in getting involved in NAMAs and stimulate private investment in the NAMA to help to achieve the overarching objective of GHG abatement. The examples in Boxes 6 and 7 show how private sector involvement has gone in two NSPs: a Coffee NAMA in Costa Rica and a Distributed Solar PV NAMA in the Philippines. These examples also indicate how financing mechanisms can be used to attract private sector investment into NAMAs, which is the key theme of Chapter 3 of this report. In the Philippines example this is demonstrated using a guarantee program aimed at stimulating commercial bank lending to projects that help to accelerate the uptake of solar PV.

Box 6: NAMA Café de Costa Rica

9% of Costa Rica's national GHG emissions are from by coffee production. To reduce the sector's carbon footprint and safeguard future sustainable production, the NAMA Café de Costa Rica will be implemented until 2021. As the first agricultural NAMA in implementation, the NAMA Café de Costa Rica is an innovative collaboration between private, public, financial and academic actors. The aim is to reduce GHG emissions and to improve efficiency in resource use along the value chain, from farmers to exporters⁴⁴.

The NSP 'Low Carbon Coffee' offers policy and technical advice to change the production and processing practices in the coffee sector. It follows a sector-specific approach to transform the entire value chain in a climate-friendly way. The project provides grants, loans and guarantees for coffee farmers and millers to invest in better fertilizer and milling technologies.

From the interviews, it was clear that different types of private sector entities have been involved at different stages of NAMA development and delivery (as was common in the NAMAs for which interviews were conducted for this report). The sector association ICAFE⁴⁵ has been involved throughout all five stages, from idea gathering to project set-up and delivery. As the organisation represents 30,000 Costa Rican farmers, its role has been to provide ideas and supporting evidence to serve the interests of their members. Also, ICAFE has been actively involved because the image of the Costa Rican coffee sector as being 'low carbon', benefits the farmers economically both in national and international markets. Through ICAFE, over fifty coffee processing plants have also been directly involved in the concept development, project set-up and delivery phases. This further demonstrates the convening value that sector associations can bring to the NAMA development process. In the funding and resource mobilisation phase, the Central American Bank for Economic Integration (CABEI) and several local commercial banks have been involved. They provide financial investment in the NAMA. For CABEI, participating in the project is beneficial as the technical assistance provided through the NAMA has led to improvements in the financial performance of their loans. Local banks benefit by being able to create new local financial products for the coffee sector with financial and technical support from CABEI. Finally, several importing and fertiliser companies have been indirectly involved in the delivery phase, as they are benefitting from the green image of the coffee produced in the project.

⁴⁴ <http://www.namacafe.org/>

⁴⁵ <http://www.icafe.cr/>

Box 7: Scaling up distributed solar power in the Philippines

In its NDC, the Philippines targets a 70% reduction in GHG emissions below a business as usual scenario by 2030. The energy sector, currently the largest contributor in the Philippines to national GHG emissions and heavily reliant on fossil fuels, has been identified as one of the key sectors to focus on in order to achieve the GHG emissions target. The NAMA is embedded in the country's NDC, and aims to accelerate the uptake of new distributed solar power. It does this by reducing the technology risks, lowering the transaction costs and creating financing options for customers and third parties.

The financial component of the NSP is implemented by LGU Guarantee Corporation (LGUGC), a private corporation active in the guarantee business in the Philippines. LGUGC will offer a new product for commercial banks, which aims to stimulate the banks to lend to clients who wish to finance solar PV rooftop installations. The guarantee serves to mitigate lending risk for the commercial bank by securing loan repayments from these clients. Apart from operating the guarantee, LGUGC has played an important role in involving the other private sector entities in the project. These other entities are commercial banks, technology and service providers, solar PV project developers, and electric utilities.

The interviews demonstrated that it was important to have a partner in the NSP that can reach key decision-makers at relevant private entities. In this case, the long-standing relationship between the NAMA developer and LGUGC proved critical for gaining access decision-makers at commercial banks, with whom the CEO of LGUGC facilitated the connection. For LGUGC, engaging in the project enables them to expand the services they offer to their clients. From the perspective of LGUGC, commercial banks will be more inclined to be involved in a NAMA if risk reduction measures are put in place, if the NAMA provides possibilities for credit enhancement and if it provides new market opportunities.

What went well and what didn't go well? What were the lessons learned?

Private sector involvement in NAMA development has gone smoothly with many respondents making positive statements about private entities being active participants in workshops and meetings, and enthusiastic and committed to the moving the NAMA forward. One key reason for this was that because of the existing longstanding relationships in the country between government entities or Delivery Organisations and the private entities, NAMA developers could take advantage of these established networks and easily connect with the right people. For example, in the case of the Philippines distributed solar PV NAMA, the CEO of LGU Guarantee Corporation had established relationships with several commercial banks, and as such provided a bridge for the NAMA developer to discuss the NAMA with key decision-makers of these banks. A further reason was that the key benefits of

the NAMA to the private entities were communicated effectively to them in meetings and workshops which incentivised them to become deeper involved in NAMA development.

It is important to build a narrative around NAMAs that is understandable for private sector entities, which focuses on the business case for the private sector and highlights specific ways in which the entities can be involved in the NAMA. Often it was confusing for the private sector entities and time-consuming to describe what a NAMA is, what an NSP is, and what the NAMA Facility does. Thus, often it was better to describe the NAMA as a mitigation project rather than a NAMA to avoid lengthy delays in getting private stakeholder buy-in. Private sector entities are mainly concerned with the opportunities and impacts that the NAMA can bring them rather than complexities such as how a NSP Outline is structured in

terms of its different technical and financial components, and with respect to how the NAMA Facility operates. One respondent stated that when engaging with private entities, discussions were often more fruitful when they were centred around the commercial benefits of NAMAs to the private entities, and not on mitigation of GHG emissions.

NAMA developers need to have a clear understanding of the interests and roles of different private sector entities throughout the value chain of the sector or market the NAMA is attempting to impact. It is important for NAMA developers to understand the business case that can attract different types of private sector entities to be involved in the NAMA at different stages, either directly or indirectly (as wider beneficiaries). Moreover, it is necessary to understand the bottlenecks that prevent these entities from getting involved, which could be for example financial challenges such as high up-front costs of investing into renewable energy or a lack of technical knowledge on energy efficiency activities meaning that commercial banks perceive the risk of lending to project developers as too high. This can help the NAMA developer to build a robust and sustainable business case for the private sector.

Market assessments⁴⁶ can provide very useful information and data which can be used to build a strong business case for attracting private sector investment into a NAMA. These assessments can provide valuable insights into aspects such as current and potential market demand for products and services, for example demand for electricity as was the case in the market study conducted for the distributed solar PV NAMA in the Philippines. Moreover, market assessments can be useful to help identify and understand the reasons why private sector investment into a specific sector, market or technology is not happening, and thus help the NAMA developer to propose effective, sustainable interventions that can help overcome these challenges and stimulate investment.

Early engagement of private entities, particularly commercial banks, is important because they are usually the 'tipping point' as to whether the NAMA idea will work or be sustainable. A number of respondents highlighted the importance of engaging specific key private sector entities as early as in the idea generation stage. In particular, respondents emphasised this with commercial banks, as a NAMA that involved banks will only achieve its objectives if the banks are on board and offering attractive financial products, such as low interest rates for loans to renewable energy projects. Involving banks early on provides an opportunity to 'test' the idea of the NAMA to make sure it will work and secure buy-in from banks for when the NAMA is being implemented.

It is important to consider the organisational hierarchy in private sector entities, and to work with the appropriate level(s) depending upon the role they can play in the NAMA. The success of a NAMA could be dependent upon, for example, high level buy-in from directors of commercial banks who can decide to offer the financial products that have been proposed in the NAMA in the banks' product portfolio. Success could also be dependent upon getting access to market data to assess current and future demand for public transport systems or agricultural products, which could require engagement with an organisation at a more technical, operational level.

A key challenge for NAMA developers is to manage the expectations of private sector entities. Developing a NAMA from the idea generation stage through to set-up and delivery is a long process, thus economic and other benefits that are the motivation for private entities to get involved might not materialise for some time. It is important for NAMA developers to make sure that it is clear to relevant private entities that developing a NAMA is done so through a multi-stakeholder partnership, and that public entities have certain bureaucratic requirements that might take longer periods of time to complete than these private entities are accustomed to.

⁴⁶ These assessments are usually done either by the NAMA developer or a specialist consultant who has experience and knowledge of the local context, and contacts that help with data and information gathering. Such assessments can provide information on setting the baseline and estimating potential for emission reductions for the market the NAMA is trying to impact; identifying the key stakeholders (stakeholder mapping); defining the co-benefits of NAMAs; identifying the key obstacles to private sector investment, etc.



3. Financing mechanisms to involve the private sector in NAMAs

Søren Lütken (UNEP DTU Partnership)

What does it mean to involve the private sector in NAMAs?

The involvement of the private sector has increasingly become a standard phrase in international climate policy development, and thus also in NAMA development and design, often with reference to the shortage of public funds. There is probably only little reflection about what it actually means.

It is obvious that practically no policy in any area of economic activity is implemented without the involvement of the private sector, and that this involvement takes place in a multitude of ways. The private sector develops products that the public sector purchases, or of which the public sector regulates its usage. The private sector builds the physical infrastructure that the public sector decides to establish. The private sector finances many of the investments that the public sector undertakes. And in some cases, the private sector builds, owns and operates public service assets for the delivery of energy, water, transport services through roads, rails and bridges, waste handling, etc. Therefore, there is nothing particular in involving the private sector in developing more sustainable infrastructure with emissions reduction benefits.

Ultimately, however, it rests with the public sector to ensure that the private sector shifts its engagement into those investment alternatives that entail such emissions reduction benefits. It is thus not a question of persuading the private sector to invest against its immediate inclination - it is a question of creating conditions that make it the private sector's immediate inclination to invest in the low-emission alternative.

What private sector involvement is *not* about is to establish a policy standard that conflicts with national priorities.

Most countries regard their energy sector as strategically especially important. Although many countries invite the private sector into energy generation, transmission and distribution they do so under strict regulation, and commonly to a limited extent and in parallel to or in close collaboration with government owned operators. Hence, private sector involvement is not a panacea that pushes all other objectives and priorities aside. It is an avenue that can and should be used as long as it does not conflict with other national strategic interests. It is an instrument to support the achievement of national emissions reduction goals; it is not an objective in itself.

Particularly in the energy sector there has been, and is increasingly, a trend of offering power purchase agreements to private operators, not least for the establishment and operation of renewable energy projects in wind and solar. Here, large scale private investments have dramatically increased the renewable energy capacity in a rapidly growing number of countries worldwide. But it is the result of a political decision on a particular implementation model and based on a specific financing model that is deeply rooted in national budgets.

Private sector involvement, therefore, is not a question of shifting responsibilities for a particular development to the private sector; it is a question of deciding the best possible mode of collaboration between the public sector as governing body and regulator and the private sector as investor and operator, exploiting the private sector's financing capacity and capability. This implies that a fundamental

interest in the public sector is to shift the financial burden of asset investment to the private sector, often due to financial constraints national budgets. But there are even more subtle considerations in this regard. In simple terms, shortage of government funds is, among other things, a result of insufficient tax collection. Tax is commonly collected from private enterprises and individuals. Involving the private sector can therefore either be assured by increasing tax collection or by regulating the private sector to use part its savings resulting from the 'non-collected tax' on items that are beneficial for the climate. Such regulation could, for instance, be the setting of minimum standards for technology performance. Hence, the choice is mostly concerning modalities of *how* to include the private sector financing capacity. The bottom line is, however, that the involvement of the private sector in the response to climate change is intricately linked to decisions concerning the national public budget.

Often, the phrasing of private sector involvement goes: 'the private sector will have to contribute' without considering the policy steps that are necessary to ensure such 'contribution'. The private sector is unlikely to 'contribute' voluntarily at scale, although political convenience would prefer such an approach. Promotional campaigns and voluntary participation carries no cost, neither political nor economical, to others than those private enterprises and people who choose to follow the recommendations. In many cases, such recommendations would concern activities related to savings and in the end, therefore, will come at no cost even to those who comply.

Because it is much more difficult to instruct through regulation than to promote through campaigns, particularly for reasons that are not commonly regarded as essential (such as climate change), regulators often lose out on the most obvious emissions reduction options, where the private sector is the prime agent. Fuel standards, electro mobility, efficient air-conditioning standards, LED lightbulbs, etc. are typical examples of areas where the public sector *can* regulate the private sector into making overall savings both in terms of

energy, emissions and most often money as well, but where individuals and companies commonly tend to choose the low-investment-high-operating-cost alternatives, either because of shortage of funds, but most commonly because of lack of knowledge or interest. The latter is exactly the reason why the common political choice is voluntary action, assuming that the private sector will make the informed and rational choice when given the facts. Unfortunately, however, all experience points to the opposite.

Sometimes, therefore, the public sector chooses to offer an incentive in addition to the economic savings, making the case for the private investor even better. While such programmes are often more effective they also come at a significant cost to the public sector and fundamentally work counter to the principle of making the private sector 'contribute'. Rather, in such cases the private sector is rewarded with additional profit for voluntary action.

Involving the private sector is therefore often a question of political courage to regulate the private sector into making climate friendly investment choices. Even if such regulation works counter to the immediate preferences of the private sector, it is likely to participate if the regulation is applied evenly - meaning that circumvention is made difficult. In that way, it becomes the public sectors', and the NAMA designers', responsibility, through the design of policies, frameworks, mechanisms and instruments, to ensure that the private sector is being involved and its investment and financing capacity is activated in support of emissions reduction. The point here is, that in order to optimize the economic case equally for the public and private sectors, and thus for the economy as a whole, the tools must be chosen carefully. While incentives schemes are politically convenient, they are expensive and the outcome in terms of emissions reduction uncertain. On the other hand regulation tends to be cost efficient, because the private sector will try to comply at the lowest cost possible, but it may carry a political cost if the regulation is perceived as costly, unnecessary or biased. Tools that combine the best from both approaches are often preferable.

It is also important to stress that if an initiative with emissions reduction benefits comes at a net cost, that cost will not disappear due to the mere involvement of the private sector. While the private sector may have experience, efficiency, financing capacities, and scale that reduces the extra cost in comparison to a public sector operator, it also enters with profit requirements that may well surpass what would have satisfied a public sector investor. Capital constrained governments may therefore not be off the hook, but must rearrange cash flows to satisfy the private sector's requirements regarding return on investment.

This exactly is at the core of the public sector's role in engaging the private sector. As it is the size and reliability of the cash flows flowing from capital investments that determines the private sectors' interest in getting engaged, and because it commonly is a government contract that determines both, the public sector must position itself to live up to the demand of the private sector. Commonly, prices on most public services are determined through regulation, even if the service is provided by private sector entities, and if short of funds the public regulator's willingness to collect - and raise if necessary - the fees for the services delivered is essential. These fees are typically raised from the private sector, mainly consumers and enterprises.

Financial instruments to engage the private sector in NAMAs

When NAMA designers together with public sector regulators build frameworks within which the private sector is intended to play a prominent role they seem to have only the choice of two different approaches. Either one that comes at a political cost, which ensures the participation of the private sector by making sure investment in high-emission alternatives becomes difficult or impossible, or one that comes at an economic cost through expensive incentives schemes for the low-emission alternative.

Fortunately, this is not typically the case. In most countries a significant proportion of the emissions reduction potential can be realised with a net profit.

If the approach is rather how to distribute the profit among stakeholders, or how to direct the profits towards those investments that have a financial shortfall, the exercise is a positive one.

While there are many instruments available for the public sector to promote or ensure the private sectors participation, some are more efficient than others. One of the reasons why the private sector would sometimes require significant returns on investment in public service assets like power and water is the balancing of risk. What few public sector regulators consider is that they are often themselves one of the significant sources of risk. Steps to reduce regulatory risk are not only on the regulators own doorstep, they will also help to reduce the cost of the service that a private sector enterprise is contracted to undertake. Guarantees against default on power purchase agreements, for instance, may be very helpful.

Below are some financial points to consider when trying to involve the private sector in a NAMA:

- A situation of low return (or no return) on an investment can be improved by various measures, including direct subsidies, investment tax breaks, improved depreciation options, concessional lending, and enhanced cash flows during operation, e.g. through feed-in tariffs or carbon markets.
- Not all instruments are equally attractive for all purposes. From the public regulator's perspective preference, should of course be given to those instruments that are relatively cheap for the public sector to make available, while at the same time highly valued by the private sector. Among these are often different types of guarantees.
- High risk can be lowered by risk guarantees or insurance schemes (and usually not by increasing returns).
- High transaction costs can be lowered through the standardization and aggregation of activities.

Instrument	Characteristics	Typical providers
Equity	Investments made directly in projects or operating assets by investors that take ownership in accordance with their provision of capital	Private companies, individuals, venture funds, publicly funded venture funds (hybrids), pension funds
Mezzanine (first loss)	A tranche of finance that, in the event of a default, takes the first loss before other tranches of finance. Also called mezzanine finance or sometimes 'junior debt'. May be regarded as a hybrid of debt and equity	Private companies, venture funds, publicly funded venture funds (hybrids)
Loans	Traditional debt finance on standard terms (market rate and tenor), commonly provided by banks, including development banks	Banks, development banks, publicly funded venture funds (hybrids), pension funds
Soft loans	Loans on favourable terms (below market price) with low interest rates, long maturities and possible grace periods. A subset of soft loans are mixed credits that under OECD rules must contain at least a 35% grant element	Bilateral donors (through commercial banks), multilateral development banks
Dedicated credit lines	Lines of credit (debt finance) for investing in projects that meet specified criteria, e.g. related to climate change. Credit lines are typically established by development banks or less commonly by public entities (government agencies) channelled through a private-sector bank or financial institution for the financing of (most often) private-sector initiatives	Multilateral and bilateral development banks
Risk cover instruments, Guarantees	Several instruments provided by either the public or the private sector, most often in the form of insurances against certain events. Governments will typically be providing political (policy) guarantees, government agencies may be insuring such guarantees; private-sector entities may be providing technical (technology) risk cover. Guarantees (except government guarantees) are paid for like an insurance policy	Export credit agencies, insurance companies, banks, governments, technology suppliers
Project finance	Financing structured around a project's own operating cash flows and assets, without requiring additional financial guarantees by the project sponsors. Loans in a project finance structure are also called 'non-recourse' lending. Project finance essentially depends on the structuring of the risk through risk cover instruments	All of the above
Bonds	A debt investment in which an investor lends money to an entity (corporate or governmental) that borrows the funds for a defined period at a fixed interest rate. The bond (i.e. the debt) may be traded on an exchange and bought by anyone	Financial arrangers like banks and credit institutions, large corporations, governments
Grant	Provision of funds without expectation of repayment, using government budgetary allocations, and/or international financial institution or donor funds. For example, funds provided to pay up-front cost of measures or projects	Bilateral donors, philanthropic funds
Carbon credits	Certificates proving the reduction of 1 ton of CO ₂ e, whether traded based on Emissions Reduction Purchase Agreements, over the counter or in formal emission trading systems like the EU ETS	Project developers/owners, the carbon market(s)

Table 1: Instruments available to make the private sector invest in NAMAs (Source: Lütken et al., 2016)



Private-sector finance is diverse. Table 1 presents a typology of finance and its suppliers without emphasising that private-sector banks are likely to become the main lenders for NAMAs, whether the borrower is a private- or public-sector entity. The private financing that is mainly thought of, however, is the equity listed at the top of Table 1, and the equity investment, which will engage other types of finance along the way, is driven by the profit motive. To the extent that private-sector involvement is sought, the financing of NAMAs is about establishing the most cost-efficient blend of Table 1 instruments to make the private sector invest in the assets or operations that the NAMA developer desires.

Involving the private sector in NAMAs is not an objective in itself, but it may be a useful strategy for the public sector in order to stretch the financial capacity for achieving emissions reduction objectives. The cost of emissions reduction is fundamentally determined by the way a public sector regulator chooses to apply different financial and non-financial instruments; it is equally a question of 'costs to whom?' Choosing the right instruments can significantly reduce the cost, but the prime focus should be on those interventions that, overall, come at no cost at all. For such actions getting the private sector on board will not be difficult.

Box 8: Case study: Refrigeration NAMA in Colombia

The NAMA Facility has supported a number of NAMAs, many of which are building on private sector participation. A Colombian NAMA focused on the reduction of emissions from refrigeration includes several initiatives targeted at the private sector:

- A ban of hydrofluorocarbons (HFCs) in the domestic manufacture of refrigerators with a support programme for production line conversions to using hydrocarbon refrigerants instead;
- Minimum Efficiency Standards (MEPS) and changed product design to improve energy efficiency in the domestic refrigeration sector;
- An innovative replacement program including a sustainable on-bill financing mechanism with incentives for low-income households when old-inefficient appliances are returned;
- A sustainable extended producer responsibility scheme by which producers and importers are given responsibility for domestic refrigerators at the end of their lives.

The co-benefits will be increased education and employment, increased economic competitiveness, improved access to credit and efficient equipment for low income households, and in avoiding negative environmental impacts - all benefits and co-benefits achieved by targeting different parts of the private sector. Over a period of less than five years, the entire stock of refrigerators in the country will be well underway to being replaced with efficient hydrocarbon cooled refrigerators, with positive spill over effects in the countries that import Colombian manufactured refrigerators and annual emissions reduction of up to 3.8 million tCO₂e per year.

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Online resources and websites:

- Instituto del Café de Costa Rica (ICAFF) <http://www.icafe.cr/>
- International Climate Initiative (IKI) <https://www.international-climate-initiative.com/en>
- Mitigation Momentum <http://www.mitigationmomentum.org/index.html>
- NAMA Café de Costa Rica: <http://www.namacafe.org/>
- NAMA Database: http://nama-database.org/index.php/Main_Page
- NAMA Registry: <http://www4.unfccc.int/sites/nama/SitePages/Home.aspx>
- UNEP DTU NAMA Pipeline Analysis and Database: <http://www.namapipeline.org/>
- NAMA Facility: <http://www.nama-facility.org>



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