



# Vertically Integrated Nationally Appropriate Mitigation Actions (V-NAMAs)

## Policy and Implementation Recommendations

Sub-national governments have an increasingly important role to play in actions which contribute to the implementation of national government climate change strategies and commitments. Integrating efforts across multiple levels of government effectively ("vertical integration") can be challenging depending on the context but the rewards in terms of improved efficiency and impact can be great. Drawing on recent research and practitioner insights, a range of recommendations are presented here to enhance the design and implementation of Nationally Appropriate Mitigation Actions (NAMAs) through improving vertical integration. Recommendations include:

### ENGAGE

1. Engage sub-national government in the design of NAMAs
2. Strengthen dialogue between national and sub-national government
3. Align NAMAs with existing national and sub-national processes and priorities

### Introduction

Sub-national governments are important leverage points for climate change mitigation as they often have a high degree of influence over key sectors where greenhouse gas emissions are released such as buildings and land-use, transport and waste. Cities in particular account for the majority of global emissions and local governments can exert considerable political and economic influence over policies and practices affecting those emissions.

Sub-national governments can strengthen and reinforce national policies to help reach higher ambitions. Many set

### MOTIVATE

4. Link mitigation actions with benefits valued by sub-national government
5. Provide mandates and powers to motivate sub-national government to act
6. Use targets and regulation to motivate sub-national government implementation
7. Create financial incentives to motivate sub-national government engagement

### ENABLE

8. Create the conditions to ensure sub-national government has sufficient funding
9. Support sub-national government in accessing data and information
10. Support sub-national government in developing or accessing skills and knowledge
11. Enable knowledge sharing and learning among sub-national governments

higher mitigation targets than national government and can have greater flexibility to deliver mitigation actions. Due to their proximity to local communities they are also uniquely placed to identify local needs, bring together key stakeholders and to exploit synergies across investment priorities.

For these reasons, sub-national governments have an increasingly important role to play in implementing actions which support national government climate change strategies and commitments under the United Nations Framework Convention on Climate Change (UNFCCC).

On behalf of:

In collaboration with:

However, coordinating the design and implementation of such actions effectively across multiple levels of government can be challenging. Often the absence of coordinated, vertically aligned processes can result in slow or inconsistent implementation of mitigation actions. While decentralisation or devolution are often viewed as essential to sustainable development and widely lauded as components of good governance, they are also broadly recognised as processes fraught with complexity and potential failure. Proactive leadership from national government can stimulate mitigation action at lower levels, but translating a comprehensive climate strategy into complex layers of multi-level governance is no easy task. It can require the involvement and coordinated effort of multiple levels of government, with each level engaged in a particular role corresponding to its mandate.

Vertical integration therefore comes at a cost; it increases complexity and may not be appropriate in all contexts or at all stages in the design and implementation of mitigation action. Nevertheless, a growing body of knowledge now suggests that improving integration of efforts between layers of government, although challenging, is a prize worth pursuing for the potential enhanced impact it can bring also to mitigation efforts such as Nationally Appropriate Mitigation Actions (NAMAs).

As growing emphasis is placed on the actions of sub-national governments in raising national ambition for a strong global deal on climate change, the role of vertical integration for achieving this goal is increasingly recognised. With the emergence of new international initiatives to support enhanced sub-national action (e.g. the new Global Environment Facility (GEF) integrated sustainable cities programme or the numerous new city initiatives announced during the UN Climate Summit in September 2014), the importance of vertical integration for increasing the efficiency and effectiveness of sub-national and national government mitigation efforts is perhaps greater than it has ever been.

The following recommendations distil key lessons from emerging practice to help guide governments and international donors to improve NAMA design and implementation through strengthening vertical integration. They are clustered into three key activities: *engaging*; *motivating* and *enabling* better vertical integration.

The recommendations are built on current research and practitioner insights in the fields of climate change mitigation, low emissions development and green growth, including the earlier baseline study undertaken for the V-NAMA project. They also draw on early lessons and experiences from the V-NAMA pilots in South Africa and Indonesia, case studies from which are included in the accompanying folder.

### Understanding “Vertically Integrated NAMAs”

Also called “sub-national integration” or a “multi-level governance approach”, vertical integration refers to different levels of government – from national or federal to state, provincial and local government – jointly addressing improvement and mutually reinforcing coordinated approaches for planning, implementation and reporting. Considering that each level of government has its specific mandate and responsibilities, effective vertical integration between different levels of government is increasingly important, especially in the context of addressing climate change mitigation.

Nationally Appropriate Mitigation Actions (NAMAs) are a set of policies and actions that developing countries undertake to deliver their commitment to reduce greenhouse gas emissions under the United Nations Framework Convention on Climate Change (UNFCCC). They acknowledge that different countries may take different action based on their respective responsibilities and capabilities.

The concept of a Vertically Integrated NAMA (V-NAMA) is a relatively new one and is applied to NAMAs which incorporate this element of vertical integration, as described above.

### The V-NAMA Project

The V-NAMA Project supports national governments in their efforts to mobilize sub-national actors to help achieve national mitigation targets. It is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and funded by the International Climate Initiative (IKI) on behalf of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

As partner countries of the project, Indonesia and South Africa have piloted a multi-level government approach in the waste management and public building sectors. This approach addresses the challenge of vertical integration in the development and implementation of Nationally Appropriate Mitigation Actions (NAMAs).

The present recommendations are part of the V-NAMA Folder, which also includes case studies and tools aimed at strengthening the involvement of sub-national governments in mitigation actions.

## Creating the conditions for vertical integration

There are a range of challenges and barriers identified which prevent vertical integration in climate action. Recent analyses highlight a number of common issues relevant for NAMA design and implementation including:

### Weak engagement

- Knowledge and information gaps between national and sub-national governments, preventing effective communication and coordination of mitigation action.
- Institutional differences in culture, priorities or political ideology between national and sub-national government; national policy sometimes impairing or blocking sub-national governments' action.
- Institutional weaknesses such as lack of effective communication and coordinating mechanisms, institutional congestion causing duplication and fragmentation of resources, weak governance structures or institutional capacity constraints.

### Poor motivation

- Lack of clear, formal mandate or political incentives for sub-national governments, due to misalignment between national and sub-national priorities, negative impacts

for certain sub-national stakeholders, barriers caused by vested interests or institutional bias preventing support.

### Lack of resources and capacity

- Insufficient public budgets due to unstable or weak revenues.
- Lack of access to affordable finance (international finance in particular) and high investment costs often due to creditworthiness concerns at sub-national level.
- Difficulty mobilising international and private finance without the backing of national government particularly for small to medium sub-national governments.
- Lack of skilled staff and technical expertise to incorporate mitigation into sub-national governments' planning and implementation particularly in developing countries.
- Lack of data and information due to it not being collected, organised or shared appropriately. In particular, the lack of emissions data at a local level is a common barrier, as is the lack of consistency and comparability in sub-national governments' emissions accounting methods.

Understanding these barriers and finding solutions creates the conditions for more effective vertical integration between national and sub-national government. At the same time, improving vertical integration can help to overcome

### The South African V-NAMA „Energy Efficiency in Public Buildings Programme“ (EEPBP)

Since 2012, GIZ has been supporting partners in the South African government to develop a “Vertically integrated National Appropriate Mitigation Action” (V-NAMA) focussing on energy efficiency in public buildings. Energy efficiency in buildings is an area where local governments can have a key influence and is one of eight priority areas identified in South Africa's national Climate Change Response Strategy.

The V-NAMA proposal development process has helped national government, provinces and municipalities to overcome barriers in their vertical coordination. It has also lead to increased horizontal coordination between different sectoral departments within the same sphere of government.

Once implemented, the Energy Efficiency in Public Buildings Programme (EEPBP) V-NAMA will strengthen private sector engagement with provinces and municipalities, enhance the effectiveness of national subsidy programmes and contribute to transformational change in the management of public buildings.

### The Indonesian „Vertically integrated Municipal Solid Waste Management NAMA“ (VIMSWa-NAMA)

Since 2012, GIZ has been supporting partners in Indonesia to develop “Vertically integrated Nationally Appropriate Mitigation Action” (V-NAMA) focussing on municipal solid waste management (MSWM). MSWM is a sector where local governments have key competencies and is one of five priority areas identified in Indonesia's National Action Plan for reducing Greenhouse Gas Emissions. The V-NAMA involves municipal stakeholders and helped to establish links between all vertical levels of government, in particular between the national and the municipal level. The program developed a bankable NAMA-proposal that meets MRV requirements, but the process of developing VIMSWa-NAMA has gone far beyond simple proposal preparation. It has helped to enable national and sub-national governments to work together more effectively, jointly developing appropriate strategies for investments, operation and management. At the same time, the process has helped to coordinate the various activities undertaken in the sector and to capture their combined impact, strengthening the monitoring of progress towards Indonesia's national climate mitigation target. It has also enabled stronger private sector engagement and leveraged additional public budget for the sector, and provides a blueprint for more ambitious mitigation approaches in other sectors.

some of these barriers. As more countries begin to put their climate strategies into practice it becomes even more important to successfully engage, motivate and enable sub-nationals to inform and implement national climate action.

## Recommendations

Over the following pages a range of recommendations is presented for improving vertical integration between national and sub-national governments in the development and implementation of NAMAs. The extent and type of integration which is optimal will vary from country to country and depend on the existing governance arrangements and the nature and extent of the mitigation actions planned. For this reason, the following recommendations should be considered pragmatically to avoid creating additional bureaucratic burden on the NAMA process. The recommendations draw on current research and practitioner insights together with lessons from the V-NAMA pilots in South Africa and Indonesia.

The recommendations do not aim to articulate model policies but rather highlight key activities for consideration during the NAMA design process and many cut across the various stages of NAMA development presented in the GIZ NAMA Tool (see conclusion). The recommendations are clustered into the three key activities for promoting vertical integration: *engaging*, *motivating* and *enabling*. Each recommendation includes a brief supporting rationale (first paragraph) which explains the basis for the recommendation. Further issues and practitioner lessons are also included for consideration when implementing these recommendations (second paragraph).

## ENGAGE

*Engagement requires a conscious effort to open new, or deepen existing dialogue between national and sub-national governments. It requires national government to first listen and understand the sub-national government view and can require major effort as top-down thinking is often deeply engrained into the relationship between national and sub-national government. Understanding the sub-national government view then enables NAMA design to be more closely aligned with both national and sub-national processes and priorities.*

### 1. Engage sub-national government in the design of NAMAs

Engaging sub-national government in the design of NAMAs helps strengthen national level coordination of sub-national government action and can enable bottom-up leadership. This can be achieved through ensuring strong sub-national government involvement in national steering committees responsible for NAMA design and enabling effective vertical dialogue between national and sub-national government. Developing NAMAs based on activities already demonstrated by sub-national government can increase buy-in and confidence by reducing the risk of implementing un-tested approaches at a national level. Good examples of this can be found in Brazil where effective approaches using municipal building codes to promote the deployment of passive solar power in the city of Sao Paulo and innovative approaches to waste management in the city of Belo Horizonte went on to influence development of national policy and implementation across many other sub-national governments.

While ownership of the V-NAMA starts at the national level, the sequencing and management of engaging sub-national governments is important. Engaging sub-national governments too early can lead to failed expectations and disengagement while previous bad experiences may make sub-national government wary or cynical of involvement. It is therefore important to manage expectations and provide clear roles and responsibilities to ensure effective and timely communication of risks and benefits to maintain sub-national government engagement. Providing funds for piloting (e.g. for testing approaches, which are planned to become part of the NAMA design) from an early stage of preparing NAMAs can mitigate disengagement and effectively motivate sub-national government engagement in the early stages. The V-NAMA experience in Indonesia and South Africa has shown that national governments prefer to control the selection of sub-nationals to participate

in a vertically integrated NAMA process in a top-down fashion. This does not have to be so: a competitive and transparent process could be considered, whereby sub-national actors are selected based on their motivation and demonstrated willingness to commit their own efforts.

## **2. Strengthen dialogue between national and sub-national government**

Establishing or strengthening formal and informal dialogue channels between national and sub-national government helps to enable effective coordination of NAMA design and implementation. Where possible existing channels should be utilised or adapted rather than creating new ones. Enabling such dialogue can be particularly beneficial at the design stage to ensure effective understanding of sub-national government priorities and to also ensure that innovative solutions they may offer are considered in the design of the NAMA. It is also important during the implementation stage to enable sub-national government to feedback successes and challenges faced (beyond normal MRV – Measurable, Reportable, Verifiable – arrangements). Formal channels might include for example ensuring sub-national governments are effectively engaged in national government planning meetings for NAMA design and implementation or related sectoral working groups and inter-ministerial bodies. Other approaches can involve establishing semi-formal channels like the German Bund-Länder exchange on climate change, which enables on-going dialogue and exchange between federal and state governments to discuss challenges in regard to climate and energy policy.

Experience from the V-NAMA pilots suggests that establishing vertical dialogue between sub-national and national government requires continuous attention (e.g. through the work of national V-NAMA teams and providing resources for workshops and capacity building) but is highly appreciated by sub-national participants. Adequate resources should therefore be identified to support these activities if such dialogue is to be effective. Designing NAMAs which align donor, national and sub-national government priorities can be challenging and informal communication channels which help to foster understanding and reach consensus can play an important role in such negotiations. Furthermore, national and sub-national government employees may rarely meet or share common social or institutional perspectives and this can be an obstacle to the creation of such informal dialogue. Providing opportunities for building social relationships between such individuals can help to overcome this. For example,

during the development of the Colombian Transit Oriented Development (TOD) NAMA, national and sub-national government colleagues joined an overseas study tour together which as well as providing inspiration, enabled more informal communication and greater collaboration in designing the NAMA.

## **3. Align NAMAs with existing national and sub-national processes and priorities**

Aligning NAMAs with existing national and sub-national government processes and development priorities can strengthen commitment to implementation and avoid NAMA activities being side-lined by changing political or service delivery priorities. Integrating NAMA implementation into, or coordinating in parallel with future plans, processes or institutional reforms at the sub-national level can also offer unique opportunities to implement mitigation measures. For example national government plans in Kyrgyzstan for reforming and modernising domestic heating included the transfer of ownership of facilities from national to sub-national government, offering a unique opportunity for a NAMA to implement renewable energy and energy efficiency measures during the transition. Similarly the South African V-NAMA pilot fosters the implementation of a near-term priority flagship programme of the national climate change response strategy. The Indonesian V-NAMA pilot contributes to one out of five priority areas of the national action plan of greenhouse gas emission reduction. In both countries, increased vertical integration has also led to enhanced horizontal coordination among the line ministries involved. Once established coordinating mechanisms such as the technical committee on V-NAMA in Indonesia or the interdepartmental task-team on energy efficiency in South Africa can also be used for other purposes, the ministries can benefit from. In Georgia, preliminary research at the national level identified the buildings sector as a priority for mitigation action. Studies on sustainable energy action plans provided by cities seconded this prioritisation and helped to define the scope of the NAMA development process. It is also important that sub-national and national MRV approaches are well aligned and that indicators used are jointly agreed.

Aligning the priorities of national government, sub-national government and donors during NAMA design is not always easy and there is a risk that existing or new priorities may take over. Engaging sub-national government in transparent collaborative processes such as the multi-criteria NAMA prioritisation approach developed in Lebanon may help to reach agreement and aligning with

benefits valued by sub-national government may help to keep it a higher priority. In attempting to ensure effective alignment of national and sub-national MRV approaches, national government can easily over-burden sub-national government with excessive and complex data collection. Jointly agreeing MRV indicators to be used at sub-national level can help to avoid this risk and ensure a more efficient MRV process.

## MOTIVATE

*Effective engagement and dialogue with sub-national government reveals the many political and economic pressures they are under, delivering on many fronts with often limited resources. From there it follows naturally that sub-national governments need to see tangible benefit from a V-NAMA before they will be persuaded to commit limited staff, resources and political capital to such a new initiative. This motivation might be financial or reputational; it might require alignment with local priorities or promise to improve the re-election chances of the mayor. Supporting national priorities and commitments is often insufficient motivation to secure the full involvement and support of sub-national government. Therefore more creative ways to persuade or incentivise involvement are often required.*

### 4. Link mitigation actions with benefits valued by sub-national government

To ensure political support for delivering mitigation action, sub-national government and other sub-national stakeholders may need to be incentivised politically or via other co-benefits that they value. Linking mitigation actions to benefits which are priorities for sub-national government and are popular with voters can generate political capital – which in turn creates incentives for sub-national government leaders to support mitigation action. For example, in the transport sector, this could be reduced congestion, travel time and cost, along with improved air quality. Others might include job creation and economic growth, energy access and security or health improvements and resilience to climate change. Recognition or reputational incentives for individual sub-national government political leaders and staff can also be powerful incentives, particularly when linked to individuals' electoral or career prospects. Similarly instigating national or regional competitions which bestow reputational benefits on sub-national government such as publicity or improved investment prospects can also serve as powerful incentives for action. For example, in Indonesia, the “Adipura” or “Clean City award issued by the Ministry of Environment”, despite not offering financial support, is a powerful tool being used by national government to drive environmental improvements in municipalities.

Stakeholder mapping is required to identify which benefits are valued by whom, to consider the impact of NAMAs on different stakeholders and the potential influence that these stakeholders may have over NAMA implementation (the private sector in particular). Mapping national and

sub-national stakeholders should be undertaken sensitively, e.g. in regard to “key stakeholders” or “supporters” and “detractors”, to avoid any perceptions of it being politically divisive as this could jeopardize support for mitigation action. Care must also be taken to ensure that co-benefits are compatible with proposed mitigation actions, that they do not lead to unintended rebound effects and that NAMA activities are not overly co-opted to achieve other political aims. There may also be trade-offs between co-benefits, mitigation measures and related costs. In the waste sector for example, on one hand a landfill-gas recovery project may present ‘low-hanging fruit’ in terms of mitigation, but benefits spilling over to local communities could be quite limited. On the other hand, initiatives aligned with “3R” (reduce, reuse, recycle) such as composting, while potentially more costly and longer to implement, could offer broader co-benefits to society.

#### **5. Provide mandates and powers to motivate sub-national government to act**

Providing legal or political mandates for sub-national government to design or implement NAMAs is important to ensure that sub-national governments give it sufficient priority and are legally or politically enabled to deliver. For example in Vietnam, all 63 sub-national governments are mandated to develop their own provincial green growth action plans and coordinate implementation to deliver the national strategy. In France, regional climate action plans assign ownership of scenario building and emission inventory development to sub-national government and in Indonesia, provinces break down the national action plan for reducing GHG emissions to their territory in order to develop a regional action plan with regional mitigation priorities. Transferring revenue and expenditure powers to sub-national government can result in more efficient resource use adapted to local conditions through more active stakeholder participation. For example, in the UK, City Deals made between sub-national and national government together with regional devolution of spending are being used to strengthen implementation of mitigation action.

The ability to devolve and recognize powers for the implementation of NAMAs will depend heavily on the cultural and political context in the country and sector. If achieved, then devolving powers to sub-national governments can be an efficient way to delegate responsibilities for implementing NAMAs and allows sub-national government to play a more proactive role, encouraging innovation in local implementation of mitigation actions. However, devolving

responsibility without also providing resources to deliver can lead to un-funded mandates and an increasing strain on sub-national government which could hinder effective implementation of NAMAs. Therefore sufficient funding and skills and knowledge capacity may also be required (see ENABLE recommendations).

#### **6. Use targets and regulation to motivate sub-national government implementation**

Assigning responsibilities for sub-national governments to deliver shared mitigation action through the introduction of top-down targets, regulations and guidance is a common approach to policy implementation and can be an effective way for national government to promote mitigation action across multiple sub-national governments in an integrated way. Regulatory approaches that allow sub-national governments to go further than national regulations can also be a powerful tool, as there may be stronger incentives for ambitious action and fewer barriers at the sub-national level. However, sub-national governments should be involved in the development of relevant regulations (in particular around buildings, transport and waste) at the national level to ensure they take account of the diversity of implementation contexts and capacity at sub-national government level.

In Vietnam, provinces and cities are able to self-determine targets to deliver the national green growth strategy, with national government requiring the inclusion of just two common indicators to ensure some level of national consistency.

#### **7. Create financial incentives to motivate sub-national government engagement**

Financial incentives can help encourage stronger engagement and more effective sub-national government implementation. Grant-based funds to prepare mitigation plans, develop MRV systems, build sub-national capacity and pilot mitigation approaches are usually required as a first step. Mechanisms such as performance-based incentives which reward or penalise implementation performance, such as step-wise payment of grants, can represent a second phase of mitigation actions. Designing NAMAs to implement actions which lead to sub-national government budget savings, such as reduced energy costs from building energy efficiency, or increased income, for example from higher or newly introduced waste management service fees or selling of recyclables, can also provide a powerful motivation. These are often one of the main entry points

for local climate action, as practical experience from the local level, including developed countries, shows. While doing so, special focus must be given to the ring-fencing of savings, so that a municipality benefitting directly from the reduced energy bill, can retain or carry the savings over to the following year and can use them for other investments.

Capacity to implement mitigation actions may vary among sub-national governments and financial incentives will need to be designed to accommodate this. For example, in Rwanda, the national climate fund (FONERWA) did not initially receive many applications from sub-national government, largely due to capacity limitations. To remedy this, additional capacity support was provided to assist sub-national government in making applications to the fund. National and sub-national laws, regulations and fiscal arrangements may also vary and will consequently need to be taken into account when designing appropriate and effective financial incentives. For example, in the Indonesia V-NAMA, an incentive mechanism known as DAK (special allocation fund) is proposed, which provides national budget to fund specific activities at sub-national level in accordance with national priorities. Whilst appropriate to the Indonesia context, this may not be simply replicated in a country like South Africa.

## ENABLE

*Engaging and motivating sub-national government is necessary to ensure their willingness to be involved in NAMA design and implementation, but it also requires them to have capability in terms of resources and capacity. Sub-national involvement requires funding which can include a blend of local, national and international sources which distribute risks and rewards in ways each party can draw tangible benefit from the NAMA. Even when sufficient funding is available, lack of capacity is often identified as a key constraint. Information, skills, knowledge and implementation capability are core requirements in effective V-NAMA and will often require strengthening through training, external support and peer-to-peer learning.*

### **8. Create the conditions to ensure sub-national government has sufficient funding**

Identifying appropriate ways to channel finance and ensure sub-national government has sufficient funding is essential to enable implementation of NAMAs. This can be achieved in a variety of ways, from providing direct funding, subsidies and grants, to enabling fiscal transfers, discounted finance to “pump-prime” credit lines or other approaches enabling access to affordable private and public loans. For example, India’s national urban development program provides co-financing for cities to improve efficiency in urban infrastructure, and Germany, Sweden and Japan all provide grants or budget support for delivering mitigation action. In South Africa, as part of the V-NAMA development, an improved energy efficiency funding mechanism has been designed for municipalities including adjustments to existing programmes to further speed up the flow of funds to sub-national governments. In Indonesia a discussion has been initiated with the national Climate Change Trust Fund on how to give cities access to climate finance for improving their waste management (and thereby reduce GHG emissions). Establishing effective funding channels (e.g. particularly for international finance sources) might involve working through existing national finance entities or by setting up new dedicated institutions. For example, in Peru the state-owned development bank COFIDE has mobilised international and private sector finance to support innovative low carbon transportation initiatives at the municipal level and in Thailand, a highly successful Energy Efficiency Revolving Fund extended credit lines to thirteen local public and commercial banks to supply low-interest loans for energy efficiency improvements. Examples of new dedicated institutions include Rwanda’s national climate change fund (FONERWA), South Africa’s Green Fund or

the UK's Green Investment Bank which all provide dedicated facilities for sub-national governments to implement climate mitigation action.

Transferring fiscal powers to the sub-national government can be an effective tool for incentivising involvement and raising revenue to cover additional operational costs incurred through NAMA implementation. However this will depend on national laws and fiscal arrangements and whether the national government has an appetite for such devolution of tax powers. National government continues to struggle to implement national programmes including NAMAs because in many cases climate finance mechanisms to accompany the programs still need to be developed. At sub-national government level, the line between what is climate finance or 'regular' budget, and what comes from national or international sources, is of limited relevance, as long as there is a tangible incentive and access is not too burdensome. Experience from the V-NAMA pilots highlights the importance of involving the Ministry of Finance or National Treasury to address questions of national climate finance, how to blend national with international and local funding, and how to effectively channel finance to sub-national governments. Leveraging private sector investment is also a key consideration and full scaling-up may only be feasible if the V-NAMA opens the door to increased private sector involvement (e.g. energy service companies ESCos in South Africa). One such approach is the co-creation of businesses whose revenues and operation can support NAMA implementation, for example, through the sale of secondary raw materials and recovery of recyclables (e.g. paper and plastic) or through the generation of added value products such as horticultural compost from diverted municipal organic waste.

### **9. Support sub-national government in accessing data and information**

Providing information and data resources together with technical and political assistance for sub-national governments is often necessary to enable them to access, collect and analyse data and information necessary for designing, implementing and Measuring Reporting and Verification (MRV) of NAMAs. This includes jointly agreeing appropriate indicators to use for MRV and might also involve building sub-national or national capacity (e.g. in ministries or the office for national statistics) to collect new data or re-analyse existing data needed by sub-national government. For example, in the UK, the Homes Energy Efficiency Database gathers multiple data sets on housing conditions from different sources and combines them into

an accessible database for sub-national governments to access strategic data to guide their energy efficiency planning, while also providing an overview for national government strategy.

Abilities to collect new data or re-analyse existing data may vary in feasibility and cost depending on the context. In some cases it may be more cost effective for the NAMAs to build existing skills and knowledge capacity in sub-national government to undertake this (see following recommendation). Another approach might be to enable multiple sub-national governments to pool resources (e.g. budget and analytic capacity) to share data and generate common data-sets useful to all. Legal or institutional barriers (e.g. civil liberty or data protection concerns) may be held up as barriers to prevent the sharing of data useful to NAMA implementation. However it is often possible to negotiate new ways of sharing data which provide useful detail without compromising anonymity.

### **10. Support sub-national government in developing or accessing skills and knowledge**

Developing existing sub-national government skills and knowledge capacity or providing additional technical assistance is important to enable effective engagement in NAMA design and implementation. Where multiple sub-national governments are involved, consideration could be given to developing sub-national government training opportunities or facilities at national level. For example in Bangladesh, a national training centre was developed to support sub-national government staff to build capacity and implement sub-national waste management programmes. Providing subsidies for recruiting dedicated sub-national government staff to support implementation of NAMAs should also be considered. For example, the German National Climate Initiative (NKI) provides sub-national governments with up to a 40% subsidy for employing municipal climate managers. Similarly, one element of the South African V-NAMA proposal is the provision of energy efficiency managers for provinces or municipalities to help them establish shared savings contracts with private energy service companies. Leveraging existing skills and knowledge at other regional or national institutions should also be considered. For example, in Brazil, a collection of private banks led by the national development bank provides capacity support to sub-national governments in undertaking the complex technical and financial processes necessary for effective urban renewal, infrastructure projects and public private partnerships.

While developing existing capacity is a preferable approach as it helps strengthen sub-national government capacity for longer-term impact, it may be dependent on there being capacity to develop in the first place. In some sub-national governments capacity may be so weak that suitable staff may not be available to train, in which case providing additional technical assistance (e.g. through trained national government staff, national “service centres” or external consultants which carry out procurement tasks for sub-national governments) may be the next best option in addition to building longer-term institutional capacity. To address variation in capacity among sub-national governments, the South Africa V-NAMA developed a two window approach. This approach offers intensive ‘hand-holding’ for less experienced sub-national governments which consists mainly of technical and procurement support, while sub-national governments with more experience in energy efficiency projects are being offered a package of financial incentives, such as subsidies and loans, which in future may be linked more strongly to their actual performance. A basic understanding of the general NAMA approach and specific mitigation actions is also necessary to ensure that sub-national government stakeholders can really speak and influence the NAMA design and implementation processes.

### **11. Enable knowledge sharing and learning among sub-national governments**

Establishing and maintaining mechanisms for sub-national governments to share knowledge and lessons with other sub-national governments engaged in similar mitigation action can help improve efficiency, effectiveness and motivation to deliver. For example, in Sweden, networks of municipalities such as the Swedish Eco-municipalities work together to reduce their emissions by motivating each other, exchanging experience and sharing information. In the Indonesian V-NAMA pilot, the good practice example of the Malang Waste Bank, a bank to which citizens can sell their recyclables and use the payment, for example, for their utility bills, attracted interest for replication by other pilot municipalities and the private sector. In the South African V-NAMA pilot, good practice examples from eThekweni (Durban) and Cape Town demonstrated to practitioners from other provinces and municipalities the mitigation potential and co-benefits of increased energy efficiency in public buildings.

Where multiple sub-national governments are involved in implementation then national government can play an important orchestrating role establishing communication

channels between them. Established international, regional and city networks can also provide useful channels for sub-national governments to share knowledge with and learn from sub-national governments in other countries. For example, ICLEI as an international association, the South African Cities Network (SACN) and the Association of Indonesian Municipalities (APEKSI) were used for knowledge sharing purposes in the two V-NAMA pilots. Greater success is likely to be achieved by using local champions and pioneers which operate under the same or similar framework conditions to give the right context in transferring lessons.

## Conclusions

The extent and type of vertical integration that is optimal in any given country context should be considered pragmatically. Integrating and involving sub-national government more fully in NAMA design and implementation can add cost and complexity. However a growing body of knowledge suggests that the benefits in terms of reduced risk, improved impact and efficiency can in many cases outweigh such costs.

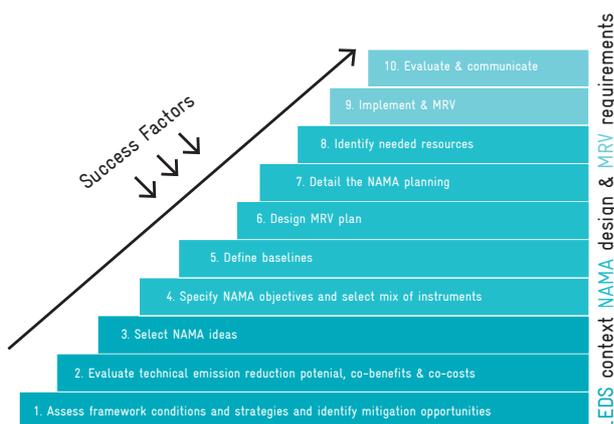
As described in the recommendations presented here, the engagement of sub-national governments throughout the different steps of the NAMA design process has the potential to increase the transformational capacity of the NAMA and the impact of its implementation in terms of mitigation results and other sustainable development benefits. In relation to the steps outlined in the GIZ NAMA tool (Details, see Tools and Resources document included in the accompanying folder), engagement of sub-national government can make a valuable contribution throughout, for example:

- Assessing framework conditions, strategies and potential mitigation opportunities (e.g. via closer knowledge of delivery conditions and practicalities on the ground);
- Selecting NAMA ideas (e.g. successful approaches already working at sub-national level such as the Mexican Low Emissions Schools NAMA case included in the accompanying folder);
- Defining baselines (e.g. greenhouse gas emissions, public sector service delivery gaps and finance needs);
- As well as Planning; Identifying resources; Implementation and MRV.

Effective vertical integration throughout NAMA design and implementation can help ensure NAMAs are sensitive to local needs, priorities and capacity, and that they utilise a wider range of change processes across policy, technology, finance, service provision and consumption.

The folder accompanying these recommendations includes a selection of case studies and further tools and resources which elaborate on many of the examples presented in these recommendations. The case studies provide early insights into the practical implementation of vertical integration drawn from the V-NAMA pilots in South Africa and Indonesia, along with other insights from both developing and developed country contexts.

10 Steps to a NAMA



## International Climate Initiative (IKI)

Since 2008, the International Climate Initiative (IKI) of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) has been financing climate and biodiversity projects in developing and newly industrializing countries, as well as in countries in transition. These efforts provide various co-benefits, particularly the improvement of living conditions in partner countries. Priority is given to activities which support creating international climate protection architecture, transparency, and innovative and transferable solutions that have an impact beyond the individual project. The IKI cooperates closely with partner countries and supports consensus building for a comprehensive international climate agreement and the implementation of the Convention on Biological Diversity.

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