



Executive Brief for NAMA Consultation Workshop

Nationally Appropriate Mitigation Action (NAMA) programme in the Waste Sector: "Waste to Resources for Cities in Vietnam"

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1. Introduction and Context

Nationally Appropriate Mitigation Actions (NAMAs) refer to a set of policies and actions that developing countries can undertake on a voluntary basis in order to reduce the emissions of greenhouse gases (GHG). The concept of NAMAs was first proposed in 2007 at the 13th Conference of the Parties Meeting held in Bali, Indonesia, and central to the NAMA concept is that mitigation actions should be framed in the context of sustainable development, and that they are supported and enabled by international financing, technology, and capacity building.

At present, NAMAs are considered an important tool that developing countries can use to structure, promote and support their GHG emission reductions. In the Asia-Pacific region Vietnam has been one of the most active countries developing NAMA programmes, and in the past 2-3 years a significant number of initiatives have been conducted by national institutions, mostly related to "NAMA-readiness" and "NAMA-preparedness". A few NAMA concepts have been proposed for key sectors, such as energy, cement or waste.

Set against this background, the Institute of Meteorology, Hydrology and the Environment of Vietnam (IMHEN) and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), are currently developing a NAMA programme for cities in Vietnam which proposes to look into waste as a resource. IMHEN and ESCAP first developed a concept note for this NAMA programme, which was presented at the Global NAMA Financing Summit that was held in Copenhagen, Denmark, on 15-17 May 2013. In light of the potential of the proposed programme to bring transformational change to the waste sector in Vietnam, IMHEN is developing a comprehensive NAMA programme based on this concept, with support from ESCAP.

2. Overview of the Proposed NAMA Programme

The proposed NAMA programme is framed in the context of Vietnam's municipal solid waste and climate change sectors.

In Vietnam's urban areas, waste collection rates are estimated at 60-70% per cent in inner city areas, while peri-urban communes often have lower collection rates of about 20%. In an attempt to temporarily dispose of waste, many households resort to waste burning, dumping or burying. Such practices pose enormous threats to the environment and public health. On the other hand, most waste that is collected is disposed into landfills and dump sites, most of

which are unsanitary and cause environmental degradation and health hazards. Additionally, many existing dumpsites have reached their capacity, forcing municipal governments to dispose their waste in locations farther away from collection areas, putting a strain on municipal budgets. This trend is expected to be exacerbated with the increasing urbanization that Vietnam will be undergoing in the next two decades.

According to the Second National Communication of Vietnam to the UNFCCC, the total GHG emissions from waste in 2000 were of 7.9 million ton of CO_2e , which constitutes 5.3% of the total GHG emissions of Vietnam. Of these, 5.6 million ton of CO_2e (or around 70%) are due to solid waste management. Although the percentage of GHG emissions from the waste sector is small compared to other sectors, including energy, industrial processes or agriculture, it will increase significantly in the future if no appropriate waste management methods are applied.

The NAMA programme "Waste to Resources for Cities in Vietnam", proposed by IMHEN and ESCAP, is expected to improve solid waste management practices in cities across the nation while reducing the emissions of GHGs by looking into waste as resources. The programme builds on the experiences and expertise of both IMHEN and ESCAP on climate change and the waste sectors.

Over the 2012-2013 period, IMHEN has implemented the NAMA-readiness project titled "Vietnam-Japan Capacity-building Cooperation and Joint Study Project for NAMA in the waste sector in a MRV manner". On this project, IMHEN identified the GHG emissions baseline from waste disposal for 21 cities in Vietnam, which led to the estimation of a business-as-usual scenario for GHG emissions.

ESCAP has been promoting sustainable solid waste management practices in municipalities across the Asia-Pacific region for almost one decade. Together with its partner Waste Concern, ESCAP has been implementing a regional programme in secondary cities and small towns in Asia and the Pacific to effectively manage solid waste and transform waste products into valuable resources, improve waste collection services, and provide better working conditions for the informal sector. In Vietnam the project has been implemented in the cities of Quy Nhon and Kon Tum, through ENDA Vietnam and in partnership with the Ministry of Construction and the Association of Municipalities of Vietnam (ACVN).

The **overall goal of this NAMA** is to reduce emissions of GHGs from the waste sector in cities in Vietnam through the application of integrated solid waste management practices that look into waste as resources, while contributing to sustainable development goals and seizing opportunities to tap from international climate support. This goal will be supported by the achievement of the following **specific objectives**:

- Promotion of 3R principles and the improvement of waste collection services in cities in Vietnam;
- ii) The diversion of waste streams from end-of-pipe solutions, such as landfilling, opendumping and incineration;
- iii) Segregation of the organic and inorganic components of waste streams at the source of generation;
- iv) Promotion of the biological treatment of organic waste, as well as the recycling and reuse of inorganic waste;
- v) Improve the capacities of local governments in managing solid waste;
- vi) Improve and streamline the roles and responsibilities of national and sub-national governments in the management of solid waste in Vietnam;
- vii) Delivery of sustainable development benefits to local communities.

The scope and key design elements of the proposed NAMA programme are as follows:

- i) <u>Physical boundaries</u>: urban and peri-urban areas of municipalities in Vietnam;
- ii) <u>Waste streams and feedstock to targeted by the programme</u>: municipal solid waste (MSW);
- iii) <u>Methods and technologies eligible under the NAMA will be in line with 3R principles</u>, <u>and include the following</u>:
 - Methods for the biological treatment of the organic fraction of MSW (i.e. composting and anaerobic digestion) and other related technologies (e.g. production of RDF, co-composting, co-digestion, etc.);
 - Methods for reducing the amount of waste as well the sorting of waste at municipal level in households, small businesses, large markets and other sources of waste generation in urban settlements;
 - Methods for minimizing emissions from transporting sorted waste to transfer points at community level as well as end points where waste is treated and/or disposed;

• Methods for minimizing the amount of waste sent to landfills, open dumps or incineration facilities.

The proposed NAMA programme will have as starting point the approach focused on waste to resources promoted by ESCAP, centered on the development of Integrated Resource Recovery Centres (IRRCs), which are decentralized, small-scale facilities aimed at recovering resources out of waste, as illustrated below. Although this model is particularly relevant for secondary cities and small towns, its core elements can be easily adapted to any city in Vietnam. The IRRC model was initially developed by Waste Concern, an organization based in Bangladesh which has been a partner of ESCAP.



Figure above: Illustration of the IRRC model

The proposed NAMA programme will support the achievement of the target of reducing GHG emissions from the waste sector in Vietnam by 5% by 2020, as defined by Decision 1775/QD-TTg of the Prime Minister. It will also be in line with the National Climate Change

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