



[REPORT TASK I.9.2] DRAFT READINESS PLAN FOR THE CEMENT SECTOR IN VIETNAM

EXECUTIVE SUMMARY

The sustainable and low carbon development of the cement sector is a high priority for the Ministry of Construction of Vietnam (MOC) and MOC has gained support from the Nordic Development Fund (NDF) under the framework of the Nordic Partnership Initiative with the project “Pilot Programme for Supporting Up-scaled Climate Change Mitigation Action in Vietnam’s Cement Sector”. The project was initiated in 2014 and it will be finalised in 2016. For the Nordic Council of Ministers (2015), the objective of the Readiness Plan is to strengthen Vietnam’s ability to prepare, propose and implement a full-scale scheme of a clearly specified NAMA in the cement sector.

This draft Readiness Plan is the presentation of the key findings and recommendations found during the first 1½ years of the NAMA cement project. The draft Readiness Plan has been developed in close co-operation with the involved stakeholders and under the overall coordination of MOC. This process will be continued and a final version of the Readiness Plan is expected in the first half of 2016. The key findings and recommendations are

presented in the five building blocks 1) Database and MRV, 2) Baseline and Mitigation Options, 3) Legal and Institutional Framework, 4) Financing Arrangements and 5) Stakeholder Engagement and Capacity Building. Based on this a proposal for a roll-out of the Readiness Plan is made.

The preparatory work for the draft Readiness Plan for the Cement Sector has concluded that there is a significant number of commercial viable CO₂ reduction efforts that can be taken by cement plants, but many of them are not implemented for various reasons. Therefore the Readiness Plan also defines the enabling activities in order to eliminate or overcome the existing barriers to implementation of appropriate mitigation in the cement sector.

A number of actions and innovative ideas with significant mitigation potential can be initiated in the short term. The implementation of these actions is contingent on international support and MOC should accordingly discuss with potential sponsors/donors whether there is a possibility to (further) support the NAMA beyond its feasibility

stage and to engage in implementation of selected actions proposed in this draft Readiness Plan. To avoid delay and gaps between this contract and an eventual follow-up phase it is important to clarify the next actions accordingly and preferably within the next few months. . This can be done through bilateral meetings and workshops (organized by MOC and other partners) in Vietnam, or in international events like the COPs and other UNFCCC meetings.

The roadmap for the roll-out of the Readiness Plan has been structured along with the proposed

prioritization of mitigation actions in short-term, medium-term and long-term perspectives (see table 1) In total, four groups of mitigation actions have been defined by prioritization of their implementation activities over the NAMA time horizon and required support: 1) enabling activities and results-based public incentives (e.g., carbon procurement tender) or 2) additional capex-related financial support/incentives (loans, subsidies, revenues from market mechanisms).

Annexes

Table 1. Summary and prioritization of mitigation actions for the cement nama in vietnam by their time horizon and required enabling activities

	Mitigation actions that can be catalyzed via enabling activities and results-based public incentives	Mitigation actions that can be catalyzed by additional capex-related financial support/incentives (loans, subsidies, market mechanisms)	Required enabling activities
Short-term actions no-regret, no- or low-capex (2016-2020 with initial readiness activities in 2016-2017)	Group 1 <ul style="list-style-type: none"> 1a) Process knowhow, control and management & 1b) Diagnostic energy audits 11) Blending: Pozzolana 12) Blending: Limestone 	n/a	<ul style="list-style-type: none"> Establishing NAMA Operating Unit at MOC; Setting up NAMA MRV system; Revising the MOC Cement Master Plan and developing policy incentives for: balancing cement capacity with demand, EE improvement and reducing clinker content in cement; Feasibility studies on various mitigation actions; Strategic study on AFR use in Vietnam; Designing carbon procurement tender; Capacity building activities.
Mid-term actions (implementation after 2020 with readiness activities in the short term)	Group 2 <ul style="list-style-type: none"> 2) Modern automation and control systems 3) Clinker cooler modification 8) Retrofit to modern multi-channel burner 9) Blending: GBFS as cement constituent 10) Blending: Fly ash as cement constituent 	Group 3 <ul style="list-style-type: none"> 4) Waste heat recovery (WHR) 7) BAT for alternative fuels - replacing fossil fuels 	<ul style="list-style-type: none"> Developing waste management regulations and infrastructure in Vietnam; Pilot phase of the carbon procurement tender; Introducing financial instruments, including performance guarantees for WHR; Facilitating access to existing EE funds (for WHR); Merging small cement plants into a number of larger companies and establishing EE technical centre(s); Capacity building activities, especially for AFR.
Long-term actions (implementation after 2025 with readiness activities in the mid-term)	n/a	Group 4 <ul style="list-style-type: none"> 5) Adding a pre-calciner to existing pre-heater kiln 6) Additional Pre-heater cyclone 	<ul style="list-style-type: none"> Developing policy and financial incentives for mitigation actions under Group 4; Capacity building activities.

Table 2. Financing mitigation actions and enabling activities under the cement sector NAMA

	Mitigation actions that can be catalyzed via enabling activities and results-based public incentives	Mitigation actions that can be catalyzed by additional capex-related financial support/incentives	Required enabling activities
Short-term financing (2016-2020)	<p>Group 1</p> <ol style="list-style-type: none"> 1. Capital markets, balance sheets of cement companies. 2. Results-based payments from the pilot phase of the carbon credit procurement tender; 3. Existing domestic and international EE support funds. 	n/a	<ol style="list-style-type: none"> 1. International (e.g., NDF, NAMA Facility, GCF, etc.) and domestic public funding of the initial enabling activities. Special attention should be given to: <ul style="list-style-type: none"> • Updating cement Master Plan, • Developing policies and regulations, • Developing waste management infrastructure in Vietnam; • Core budget for NAMA Operating Unit, • Setting up Facility for Credit Purchasing (FCP) and preparing pilot phase of carbon credit procurement, • Capacity building, engagement of cement plants, • MRV at plant-level. 2. Budget for the pilot phase of carbon credit procurement tender (international and domestic finance). 3. Cost recovery mechanism to fund the operational costs of NAMA Operating Unit and CPF via: <ul style="list-style-type: none"> • a small share of energy savings (ESCO model), • a fee per carbon credit added to the carbon price, • a fee (or tax) on the use of coal.
Mid-term and long-term financing (2021-2025)	<p>Groups 1, 2</p> <ol style="list-style-type: none"> 1. Capital markets, balance sheets of cement companies; 2. Results-based payments from CPF; 3. Pre-payments against the future delivery of carbon credits from the Facility for Credit Purchasing (FCP) 4. Existing domestic and international EE support funds; 5. International carbon market. 	<p>Group 3 (and 4 in long-term)</p> <ol style="list-style-type: none"> 1. Capital markets, balance sheets of cement companies; 2. Results-based payments from CPF; 3. Instruments to de-risk performance and facilitate access to capex funds (e.g. performance guarantees); 4. Waste disposal fee; 5. EE investment support facility; 6. Existing domestic and international EE support funds; 7. Loans from international climate finance facilities (e.g. GCF) 8. International carbon market. 	<ol style="list-style-type: none"> 1. Cost recovery mechanism to fund the operational costs of NAMA Operating Unit, CPF, EE support fund via: <ul style="list-style-type: none"> • a small share of energy savings (ESCO model), • a fee per carbon credit added to the carbon price, • a fee (or tax) on the use of coal.

The above table presents the needed readiness activities in the cement sector prepared by the Consultants after initial consultation with the Vietnamese stakeholders. The focus will now be to consult further especially with the Vietnamese stakeholders to ensure a final Readiness Plan for the cement sector in early 2016. The comments received in the next months will be integrated in the final version of the Readiness Plan.

After a preliminary consultation with MOC special attention should be given to: clarifying the following 1) Updating the Cement Master Plan, 2) Developing policies and regulations, 3) Core budget for NAMA Operating Unit, 4) further clarification of setting up Facility for Credit Purchasing (FCP) and preparing pilot phase of carbon credit procurement, 5) Capacity building and engagement of cement plants, 6) MRV at plant-level, and 7) mobilizing international climate finance and carbon market funds.

MOC shall consult with potential donors to support the above mentioned activities in the short term. The different characteristics of the donors should be explored with the aim that they can cover different type of enabling activities.

The COPs and UNFCCC meetings as well as international carbon fairs are also a market place for potential support and MOC should use this opportunity to attract further funds to the cement sector in Vietnam.

The approach, methodology and selected documents underpinning the Draft Readiness Plan for the Cement Sector in Vietnam should be shared with the international community to contribute the further development of the cement NAMAs in other countries.

The report was developed under the framework of the Nordic Partnership Initiative Pilot Programme for Supporting Up-scaled Climate Change Mitigation Action in Vietnam's Cement Sector.

The Nordic Partnership Initiative (NPI) established in December 2011 to support climate change mitigation efforts in developing countries and funded by Denmark, Finland, Iceland, Norway and Sweden. The budget of the NPI Programme in Vietnam is €1.6 million, and it is financed by Nordic Development Fund (NDF) and the Ministry of Construction of Vietnam. The implementation of the Vietnam cement sector Pilot Programme started in March 2014, by a consortium led by NIRAS A/S (Denmark) in collaboration with Perspectives GmbH, South Pole Group, VNEEC JSC and NIRAS Vietnam.

For more information on the project and the full report, please contact:

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