

WORKSHOP ON NATIONALLY APPROPRIATE MITIGATION ACTION (NAMA) IN VIETNAM'S CEMENT SECTOR

Date, time: Wednesday, 14th October, 2015, 8:30 - 12:00 (Hanoi time) **Location**: Hanoi Opera Hilton, No 1A, Le Thanh Tong, Hanoi, Vietnam.

WORKSHOP PROCEEDINGS



October, 2014











Ta	ble of Contents1 BACKGROU	JND
	3	
2.	OPENING CEREMONY	3
	PRESENTATION #1 READINESS PLAN FOR THE CEMENT SECTOR IN VIET NAM - KEY FINDINGS,	4
4.	PRESENTATION #2 GREEN GROWTH AND GREEN CLIMATE FUND IN VIETNAM	5
5.	PRESENTATION #3 GHG EMISSION REDUCTIONS IN VIETNAM: FROM POLICIES TO ACTIONS	5
6.	PRESENTATION #4 VIETNAM NATIONAL ENERGY EFFICIENCY AND CONSERVATION	6
7.	PRESENTATION #5 VIETNAM ENERGY EFFICIENCY FOR INDUSTRIAL ENTERPRISES PROJECT	7
8.	PRESENTATION #6 VICEM - OPPORTUNITIES AND DEMAND OF CARBON EMISSION REDUCTION	7
9.	DISCUSSION	8
10.	CONCLUSION	. 10
ΑN	NEX 2 LIST OF PARTICIPANTS	12











1. BACKGROUND

Within the framework of the Nordic Partnership Initiative Pilot programme for supporting upscaled climate change mitigation action in Vietnam's cement sector, the Ministry of Construction organize a workshop on "Nationally appropriate mitigation action (NAMA) in Vietnam's cement sector". The objectives of this workshop are to present the key findings and recommendations for the NAMA Readiness Plan and consult with stakeholders for improvement and finalization of the project's outputs.

The workshop was organized on 14 November 2015 in Hanoi with 80 participants from Ministry of Construction, International Advisory Group, relevant ministries, Institutions and Associations, donors and international programmes, cement enterprises, energy efficiency services providers, Consultant team and media.

2. OPENING CEREMONY

Mr. Do Duc Duy - Vice Minister of Ministry of Construction

Cement industry are growing fast and has it important role in construction field as well as in the national economy. The industry contributes to the national budget at estimated 4-4.5 million USD/1 million ton of cement product. In 2014, there have been 03 new cement projects which come into operation and the total cement facilities in Vietnam has increased by 74 units with the total designed capacity of 77.35 million tons per year. The total cement consumption has reached 70.6 million tons, equivalent to 110% as planned and 15% of that in 2013. The total domestic consumption was 50.9 million tons and approximately 19.7 million tons for export. The total consumption in 2014 has been estimated at 70-72 million tons and this amount is expected to reach 100 million tons per year by 2020.

However, cement production industry is considered as the intensive energy user and a great GHG emitter. The total GHG emission in 2014 from cement production has been estimated as 55.6 million ton of CO2 equivalent and is expected to reach more than 60 million tons in 2015. Therefore, it is critical to investigate and implement emission reduction options in order to ensure both the development target and environment protection towards to sustainable development.

In the framework of Nordic partnership initiative pilot programme for supporting up-scaled climate change mitigation action (NAMA) in Vietnam's cement sector funded by Nordic Development Fund (NDF), the project has conducted a sector survey, data collection, assessment of GHG emission reduction potentials at cement plants, development of emission baseline and MRV system in compatible with international standard, analysis of cost, barriers and institutional solutions for NAMA in cement sector.

Ministry of Construction (MOC) organize this workshop to present the draft NAMA for cement sector to relevant ministries, organizations, international donors and to collect comments from











participants for finalization of the NAMA proposal. The project's product will be the technical inputs for MOC to consider for next steps of integrating into the sectorial policies. MOC also expect the consensus with relevant ministries and organizations, attracting the technical, technology and financial supports from international donors and developed countries for the implementation of NAMA for cement industry.

Ms. Ms. Martina Jargerhorn - Country Programme Manager, NDF

The workshop is latest output of the Nordic partnership initiative pilot programme for supporting up-scaled climate change mitigation action (NAMA) in Vietnam's cement sector. The project is funded by NDF and implemented in the leadership of Ministry of Construction. The project is implemented in the time of two years, which is now 75% has been completed. The project will have 06 more months to be implemented.

We have now the first draft of the Readiness Plan prepared and the project is entering into a new phase of extensive consultation with key stakeholders. We are moving from Design phase to Consultation Phase. I hope all of you will take active role and contribute to this important consultation process. At the end of this Phase, we will have the final Readiness Plan and will be ready to receive financing from national and international sources for NAMA in cement sector. This is the significant step for Vietnam and Vietnam also serves as the model for other countries. We hope this work will attract financing for investment in the cement sector which will make the cement production more clean in the way of benefiting not only the climate but also the development goals of Vietnam.

3. PRESENTATION #1 READINESS PLAN FOR THE CEMENT SECTOR IN VIET NAM - KEY FINDINGS, RECOMMENDATIONS AND NEXT STEPS

The sustainable and low carbon development of the cement sector is a high priority for the Ministry of Construction of Viet Nam (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 Viet Nam's Cement Sector". The project was initiated primo 2014 and it will be finalized 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.













Refer to the PPT Presentation: Readiness plan for the Cement sector in Vietnam - Key findings, recommendations and next steps Morten Perdersen and Ha Dang Son

4. PRESENTATION #2 GREEN GROWTH AND GREEN CLIMATE FUND IN VIETNAM

Vietnam Green Growth Strategy includes 12 groups of activities with 66 specific activities, aiming at 03 strategic tasks: (1) Reducing the intensity of GHG emissions and promote the use of clean and renewable energy, (2) Greening production, and (3) Greening lifestyle and promoting sustainable consumption. Viet Nam has moved green growth from being a Strategy to an important driver forces for Sustainable Growth. Even though it still needs to complete the policy framework, but Vietnam is ready to move from policy to implementation with the integration of climate change and green growth contents in the Law on Environment Protection 2014 and some other regulations. Many partners have joined Viet Nam's 'green coalition', such as UNDP, KOICA, GIZ, Belgium, the EU, ADB, USAID, and the World Bank.

Green Climate Fund (GCF) has its management unit of finance mechanism under UNFCC with the objective to contribute importantly and ambitiously to global climate change response effort. In Vietnam, there have been meetings between GCF and MPI, MOIT, MOF, MARD, MONRE, SBV, VDB, some commercial banks, enterprises cooperation and some development partners in Jan. 2015. A workshop on Pathway and Readiness of Vietnam to join GCF has been organized in Jun. 2015. In Aug. 2015, the working group had a meeting with GCF's Director in Songdo to discuss about: 1) GCF's conditions of funding for Vietnam in the coming period, especially when Vietnam becomes a mid-income countries; 2) The funding of 30 million USD for project "Building coastal climate change resilience for vulnerable community" proposed by MARD and MOC; and 3) Support of GCF for capacity building to successfully access the Fund.



Refer to the PPT Presentation: Green Growth and Green Climate Fund in Vietnam
Nguyen Tuan Anh

5. PRESENTATION #3 GHG EMISSION REDUCTIONS IN VIETNAM: FROM POLICIES TO ACTIONS

Vietnam is one of the fastest growth of GHG emission in the region and CO2 intensity of GDP increased more than that of regional average. For contribution to GHG emission reductions, Viet Nam will reduce GHG emissions by 8% compared to BAU, in which emission intensity per unit of GDP will be reduced by 20% compared to the 2010 levels and forest cover will increase to the level of 45%. There have been climate change policies which have been issued, and policy on NAMA will be developed and completed.











Several opportunities for mitigation activities have been identified (the development of Nationally Appropriate Mitigation Actions (NAMAs) is among them). Also, there are some challenges for the implementation of GHG reductions: (1) Incomplete National GHG Inventory system, (2) Inadequate policies and guidance for NAMA development and management, (3) Few application of advanced technologies to reduce GHG emission, (4) Financial support and investment remain limited, (5) Fragmented and few technology transfers and technical support, (6) Few capacity building programmes, only top-down approach at this stage.



Refer to the PPT Presentation: GHG Emission Reductions in Vietnam: From Polices to Actions
Luong Quang Huy

6. PRESENTATION #4 VIETNAM NATIONAL ENERGY EFFICIENCY AND CONSERVATION

Ministry of Industry and Trade (MOIT) is the ministry in charge of state management in energy efficiency and conservation in Vietnam. MOIT is implementing National Target Program on Energy Efficiency and Conservation (VNEEP) for the period 2006-2015. The objectives of VNEEP are: (1) to achieve 5-8% savings on total national energy consumption for the period 2012-2015, (2) to set up a network for the implementation of the Law on Energy Efficiency and Conservation at central and local levels, (3) to widely use high efficient equipment, removing backward technologies and equipment, reducing 10% of energy intensity in energy intensive industries, (4) to have mandatory management in accordance to Vietnam Building code for 100% new buildings or renovated buildings and (5) to meet 10-15% demand of public transportation in big cities.

The establishment of benchmarks and minimum energy performance standards for industries in Vietnam is in progress with some achievements, i.e. the issuance of Circular 02/2014/TT-BCT dated 16 January 2014 promulgating EE&C measures in industries in general, and the energy management/EE measures in the chemical industry in particular, Circulars guiding EE&C measures in steel and beverage industries, benchmark in preparation for pulp and paper, plastic, and food processing industries. Proposals and actions plans for next activities include: (1) To continue the development of energy benchmark for key industrial sectors, (2) To promote the communication, energy audit and consulting services for entities in key industrial sectors, giving priorities for the application of high efficient equipment, gradually removing low efficient equipment, (3) To develop ESCO market to support energy efficiency investments for enterprises in the industry sector, (4) To develop and perfect the energy consumption database system as the tool for energy efficiency assessment, (5) To develop M&E framework and NAMA in EE.













Refer to the PPT Presentation: Vietnam National Energy Efficiency and Conservation
Trinh Quoc Vu

7. PRESENTATION #5 VIETNAM ENERGY EFFICIENCY FOR INDUSTRIAL ENTERPRISES PROJECT

There are some barriers for energy efficiency activities in Vietnam. There is a lack of accountability to enforce the national-level EE targets, as Energy Efficiency (EE) is usually not a priority for industrial enterprises. Also, financial incentives offered by the government are insufficient. And there is a lack of access to financing for EE is the major bottleneck to EE scale-up. Credit risks, Performance risks, lack of expertise, interest, and confidence in EE financing on the part of financial institutions, Small deals with high transaction costs have been identified as the financing barriers for EE in industrial enterprises

Vietnam Energy Efficiency for Industrial Enterprises Project (VEEIEs) is designed with 02 components: Component 1 includes a fund of \$330 million over five years to provide loans for energy efficiency projects in industrial sector and Component 2 includes Technical Assistance and Capacity Building for Improving Energy Efficiency. The Project will be effective late 2015-early 2016. Project Concept was agreed by the WB's management and financing mechanism was agreed by the government. Development of Project Pipeline has already started.



Refer to the PPT Presentation: Vietnam Energy Efficiency For Industrial Enterprises Project
Chu Ba Thi

8. PRESENTATION #6 VICEM - OPPORTUNITIES AND DEMAND OF CARBON EMISSION REDUCTION

In terms of production technologies used among cement plants owned by Vietnam Cement Industry Corporation (VICEM), the technology includes clinker production line with dry technology (preheater and rotary kiln). 5% design capacity of cement grinding process is Vertical Roller Mill and 25% design capacity of cement grinding process is a ball mill with pre-grinding.

VICEM has investment demand for emission reductions, which are grouped into three main project activities: technology improvement and small-scale energy efficiency, utilizing waste heat for generator, and using alternative fuels and recycled raw materials. Some challenges for emission reduction projects have been identified, including Capital and Investment efficiency, Technical and technological level, Awareness on energy efficiency, Policies. Some











recommendations have been proposed regards with financial support, penalties, awareness raising and capacity building.



Refer to the PPT Presentation: Opportunities and demand of carbon emission reduction

Do Hoang Linh

9. DISCUSSION

<u>Ouestion:</u> What level of MRV information should be included and classified into each level (at-plant, sectoral, and national level)? By Mr. Nguyen Lanh (Institute of Strategy and Policy on Natural Resources and Environment)

Answer from the Consultant: To clarify MRV information, it should be clear that NAMA is different from National GHG Inventory activities. According to NAMA's requirement, NAMA should not only contribute to GHG emission reduction but also to national sustainable development goals. It should be inter-linked with the national green growth objectives and others. Therefore, in order for NAMA implementation, it is compulsory that MRV shall be for GHG and other co-benefits despite the fact that no specific criteria for a MRV has been set forth by UNFCCC so far but recommended by domestic and international donors.

In the workshop framework, we are unable to go into detail each criterion for each MRV level. However, a comprehensive MRV system has been provided in the MRV report of the project. For example, for GHG MRV, 29 criteria are provided, each of which provides with information such as frequency of measurement, location of measurement; what plant-level MRV is; what sectoral MRV is; and what national MRV is; what figures shall be mentioned, etc. Also, for non-GHG MRV, we have provided in detail, what should be reported/measured and to whom the report shall be submitted.

We/MOC are willing to share and discuss with further information after this workshop.

Question: As you mentioned in your presentation about GHG and non-GHG emission.

Could you please further define what non-GHG is? By Mr. Nguyen Xuan Quang representative of Institute of Head and Refrigeration Science and Technology/Hanoi University of Science and Technology

Answer from the Consultant: As mentioned in the presentation, as defined by IPCCC, GHG emission is categorized into 03 types. Those are direct emissions (from heating limestone in the kiln, burning fossil fuels), indirect emissions (from electricity consumption activities), and emissions from other activities such as transportation of clinker and cement to distribution











networks. In the project framework, we only study two first emission types (direct and indirect emissions).

Question: by Thai Duy Sam (General Secratary of Vietnam Association of Building Materials)

On behalf of VABM, I would like to express my appreciation on huge effort and outcomes of the project have been done so far, especially the resulting database of the cement sector.

We hope that after the project completion, clear mechanisms, measures, and policies shall be developed by competent authorities to implement proposals and recommendations given in the project.

In addition, as mentioned in the representation that it is recommended to use limestone and puzzolane for blending to reduce clinker content in cement. In my opinion, volume of limestone and puzzolane in Vietnam is limited. Ash and slag from coal-fired plants are plentiful. Therefore, it is recommended to focus on ash and slag.

Answer from the consultant: Thank you very much for your contributions.

Question: by Nguyen Hoan Cau, General Secretary of VNCA. I have no question but would like to share with you some information

We met up with some Japanese project teams. We were informed that a Company (NEDO) is willing to fund a project (using household wastes as fuels for cement kilns) in terms of technology and equipment. Small part of counterpart capital contribution is required from Vietnam side. We and the team conducted site visit to some cement plants such in Ha Nam, Hai Phong provinces, and Hue province as Luks cement (in Hue province) and Dong Lam cement plant. But the project team could not find a counterpart for implementing this project.

In addition, another project team introduced a project on recycling domestic and industrial wastes for partly substitution of materials for cement production. The surprising substitution ratio is over 50%. In my opinion, the ideas of the said projects are good and workable, I would like MOC and related governmental authorities to support such projects.

Answer: by Mr. Le Trung Thanh, Director of DSTE/MOC

Thank you so much for sharing this information. We will consider your suggestion with all support from governmental policies on new low-emission technology.











10. CONCLUSION

Mr. Do Duc Duy - Vice Minister of Ministry of Construction

The draft NAMA in the cement sector has been developed comprehensively, including sector database, emission scenarios and recommendations for technical options and financial demands for each emission scenario. Also, we appreciate the presentations from other speakers, discussing for key issues and comments and opinions provided in the workshops.

The draft NAMA in cement sector has proposed 04 main groups of options, including: (1) Blending, (2) WHR, (3) Multichannel burner and (4) Enhancing process and energy management. It is noted that the option of improvement of grinding technology which has been recommended by VICEM should be considered. Such options are suitable in the local context of Vietnam at present and in the future, however, the feasibility of these options also depends on the timing and on the actual situation of each cement plant.

For the finalization of the NAMA proposal, the proposal should also include the calculation of added cost per cement product unit to cover the investment in GHG emission reduction options. There should be analysis on added cost for the options included in each selected scenario as well as the investment return. These factors will affect the implementation roadmap and the feasibility of the selected scenario. Regards with the financial sources for investment, there should be information on % from enterprises, % from donors, % from carbon trading, % from environment fund. Such information will help to determine how the enterprises can afford and the duration of the implementation phase.

Regards with the recommendations provided by the Cosultants on action by the Ministry of Construction and relevant authorities, MOC appreciate and will consider these recommendations immediately but not until the final NAMA is approved. In fact, some recommendations proposed have been being implemented by MOC, i.e. including WHR projects into the list of renewable energy projects in priority attached in the revised Resolution, using fly ash from chemical plants, fertilizer manufacturers, thermal power plants for building materials.

MOC very much looks forward to the continuation of supports from NDF and other donors for the 2^{nd} phase of this initiative, in which 02 activities are of high priority:

- Establishment of MRV system at plant level and sector level.
- Development of pilot projects (i.e. WHR, municipal waste for burning in the clinker kilns. Such pilot projects are the inputs for the replication in the sector.











ANNEX 1. FINAL WORKSHOP AGENDA

Time	Contents	In charge
08:00 - 08:30	Registration	
08:30 - 08:40	Welcome speech	Mr. Do Duc Duy, Vice Minister of Ministry of Construction
08:40 - 08:50	Opening speech	Ms. Martina Jargerhorn, Country Programme Manager, NDF
08:50 – 9:30	Key findings and recommendations: - Sectoral Database and MRV system for Vietnam's cement sector - Reviewing institutional and regulatory framework for NAMA - Emission scenario and mitigation actions - Financial needs and plans for NAMA NAMA Readiness Plan – First ideas on pilot project and comprehensive implementation	Mr. Morten Pedersen, Team Leader And Mr. Ha Dang Son, Deputy Team Leader
09:30 - 09:45	Coffee Break	
09:45 – 10:00	Green Growth Fund and Financial management for NAMAs in Vietnam	Mr. Nguyen Tuan Anh, Deputy Director of the Department of Science, Education, Natural Resources and Environment, Ministry of Planning and Investment
10:00 – 10:15	Development of NAMAs in Vietnam	Mr. Luong Quang Huy, Director of Division of GHG Emission Monitoring and Low carbon Economy; Department of Meteorology, Hydrology, and Climate Change Natural Resources and Environment
10:15 – 10:30	VNEEP and energy efficiency activities in the industries	Mr. Trinh Quoc Vu, Director of the Department of Science, Technology and Energy Efficiency, General Directorate of Energy, Ministry of Industry and Trade
10:30 – 10:45	Introduction on energy efficiency investment fund for industrial entrepreneurs of the World Bank in Vietnam	Mr. Chu Ba Thi, Project Team Leader, World Bank.
10:45 – 11:00	Opportunities and emission reduction needs of VICEM's companies	Mr. Do Hoang Linh - VICEM
11:00 – 11:45	Open discussion	All participants
11:45 – 12:00	Conclusions and Closing	Mr. Do Duc Duy, Vice Minister of Ministry of Construction
12:00 –	Lunch at the hotel	











ANNEX 2. LIST OF PARTICIPANTS

LIST OF SPEAKERS

No	Name	Organization	Position
1	Mr. Do Duc Duy	Ministry of Construction	Vice Minister
2	Mr. Morten Pedersen	NIRAS A/S	Project Team Leader
3	Mr. Ha Dang Son	RCEE-NIRAS	Project Deputy Team Leader
4	Mr. Nguyen Tuan Anh	Department of Science , Education, Natural Resources and Environment/MPI	Deputy Director
5	Mr. Luu Quang Huy	Division of GHG emission monitoring and low-carbon economy/Department of Meteorology, Hydrology and Climate Change/MONRE	Director
6	Mr. Trinh Quoc Vu	Department of Science, Technology and Energy Efficiency/MOIT	Director
7	Mr. Do Hoang Linh	VICEM	Technical Expert
8	Mr. Chu Ba Thi	World Bank	Energy Board

LIST OF PARTICIPANTS

No	Name	Organization	Position
9	Mr. Le Trung Thanh	Department of Science, Technology and Environment (DSTE) /MOC	Director
10	Mr. Nguyen Trung Hoa	Department of Science, Technology and Environment (DSTE) /MOC	Former Director, Project Director
11	Ms. Luu Linh Huong	DSTE/MOC	Official
12	Mr. Hoang Huu Tan	Department of Building Materials (DBM)/MOC	Deputy Director
13	Ms. Pham Thi Hong My	International Cooperation Department/MOC	Official
14	Ms. Do Nguyet Anh	International Cooperation Department/MOC	Official











15	Mr. Luu Duc Cuong	Vietnam Institute for Urban and Rural Planning	Official
16	Mr. Truong Viet Cuong	Industrial Safety Techniques and Environment Agency (ISEA)/MOIT	Official
17	Mr. Dao Quoc Cuong	Department of Foreign Economic Relations	Official
18	Mr. Nguyen Lanh	Institute of Strategy and Policy on Natural Resources and Enviornment/MONRE	Official
19	Ms. Hong Hanh	Vietnam Chamber of Commerce and Industry	Official
20	Mr. Luong Thai Son	Department of Renewable Energy/MOIT	Official
21	Mr. Nguyen Hoan Cau	Vietnam Cement Association/MOC	Director
22	Ms. Nguyen Thi Thu Huyen	Vietnam Institute of Building Materials (VIBM)/MOC	Official
23	Mr. Nguyen Van Hoan	Vietnam Institute of Building Materials (VIBM)/MOC	Official
24	Mr. Le Duc Thinh	Vietnam Institute of Building Materials (VIBM)/MOC	Official
25	Mr. Thai Duy Sam	Vietnam Association of Building Materials/MOC	General Secretary
26	Mr. Nguyen Ngoc Quy	Cement Investment and Development Consulting Company	Director
27	Mr. Luong Xuan Tuan	Centre for Cement Information/VNCA/MOC	Director
28	Mr. Bui Thanh Hung	Bach Khoa Energy Efficiency JSC	Specialist
29	Mr. Nguyen Duc Vinh	Bach Khoa Energy Efficiency JSC	Specialist
30	Mr. Nguyen Manh Tuong	Institute of Cement Technology	Specialist
31	Ms. Nguyen Thi Thanh An	AFD	Expert
32	Mr. Do Duc Tuong	USAIDS	Expert
33	Ms. Vu Phuong Lan	Embassy of Denmark	Expert
34	Ms. Tran Hong Viet	Embassy of Denmark	Expert











35	Mr. Nguyen Van Kien	NAMA GIZ (IMHEM)	Expert
36	Mr. Iacob Kurian	UNDP/MOIT CCIT project ("Strengthening Capacity on Climate Change Initiatives in the Industry and Trade sectors	Expert
37	Ms. Pham Thi Nga	"Promoting Energy Efficiency in Industries by optimization of system and energy management standards in Vietnam" Project/GEF	Expert
38	Mr. Hoang Dung	CPEE - WB	Expert
39	Ms. Phan Thi Hanh Nhan	LCEE project/Danida	Expert
40	Mr. Nguyen Xuan Quang	LCEE project/Danida	Expert
41	Mr. Nguyen Tuong Khanh	GIZ	Expert
42	Mr. Le Duc Chung	BTC-GGSF	Expert
43	Mr. Phung Van Quan	BTC-GGSF	Expert
44	Mr. Hoang Thanh	EU Hanoi Delegation	Expert
45	Mr. Nguyen Van Khang	Hai Phong VICEM Co., Ltd	Production Deputy Director
46	Mr. Dao Xuan Phuc	Duyen Ha Cement Company	Deputy Director
47	Mr. Nguyen Tien Dat	Duyen Ha Cement Company	Head of Planning Department
48	Mr. Dang Ngoc Thao	Quang Son Cement Company	Production Deputy Director
49	Mr. Truong Quang Loi	Long Son Cement Company	Project manager
50	Mr. Kieu Van Mat	Song Da Cao Cuong JSC	Deputy Director
51	Mr. Nguyen Van Toan	Phu Tan Cement Company	Technician
52	Mr. Pham Viet Hung	AFI JSC	Deputy Director
53	Mr. Tran Anh Tu	ABB Vietnam Co., LTD	Consultant
54	Mr. Vo Van Tot	ALPI Vietnam	Director
55	Mr. Bui Thanh Hung	Bach Khoa Energy Efficiency JSC	Director
56	Mr. Bui Minh Hai	VETS	Technician
57	Ms. Le Hong Nhung	VETS	Technician











58	Mr. Nguyen Thanh Ha	VESCO	Expert
59	Ms. Nguyen Thanh Mai	RCEE - NIRAS	Consultant
60	Mr. Phillipe Lavoie	RCEE - NIRAS	Consultant
61	Mr. Nguyen Tien Dat	RCEE - NIRAS	Consultant
62	Ms. Nguyen Thi Huong Diu	EPRO Consulting JSC	Consultant
63	Mr. Tran Hoang Long	EPROTECH Co., Ltd	Consultant
64	Mr. Bui Huy Phung	Vietnam Energy Association	Expert
65	Mr. Khong Minh Phuong	Electric Power University	Expert
66	Ms. Martina Jägerhorn	NDF	Programme Country Manager
67	Ms. Sara Almqvist	Swedish Environmental Protection Agency	Senior advisor
68	Ms. Ulla Jennische	Swedish Environmental Protection Agency	Senior advisor
69	Mr. Jurgen Wiesmamn	Greenstream	Consultant
70	Mr. Terje Kronen	Norwegian Ministry of Climate and Environment	Senior advisor
71	Mr. Nguyen Tuan Anh	RCEE - NIRAS	Cement Expert
72	Ms. Phan Minh Thao	RCEE - NIRAS	Administration Deputy Team Leader
73	Ms. Dang Hong Hanh	VNEEC	MRV and Climate Finance Expert
74	Ms. Nguyen Hong Loan	VNEEC	Public Awareness Campaign Specialist
75	Mr. Nguyen Tien Hai	VNEEC	Modelling Expert
76	Mr. Tran Minh Tuyen	VNEEC	Database Manager
77	Mr. Le Anh Tung	VNEEC	Project Officer
78	Reporter	Online Labor and Society Magazine	
79	Reporter	Online Labor and Society Magazine	
80	Reporter	MOC News	











81	Reporter	MOC News	
82	Reporter	MOC News	
83	Reporter	MOC News	
84	Reporter	Information Centre/MOC	
85	Reporter	Information Centre/MOC	
86	Reporter	Consumers Magazine	









