

WORKSHOP ON SOLUTION FOR SUSTAINABLE URBAN COOLING IN VIET-NAM



May 17, 2023

Fortuna Hotel, No.6B, Lang Ha, Ba Dinh District, Hanoi



KEY TAKEAWAYS

- Enhancing coordination among ministries and sectors is of utmost importance. It is strongly advised to establish a focal point for implementing and monitoring sustainable urban cooling initiatives.
- It is recommended to develop policies that incentivise individuals and organisations to utilise available lands for increased greenery for urban cooling.
- It is crucial to assess the feasibility of cooperative activity on urban cooling in cities across VietNam as well as Tam Ky (Quang Nam), Can Tho and Dong Hoi (Quang Binh).
- It is recommended to strengthen the dissemination of international experiences and practices of rapidly developing countries up to the local level in VietNam.

- It is integrated approaches that matter to mitigate temperature increases and cooling needs after UNEP has been studying successful cooling projects in tropical countries for many years.
- As Quang Nam province frequently faces climate change issues and the recurring impact of natural disasters, it has been dedicated to implementing climate change plans by proactively engaging in research and capacity building.

BACKGROUND AND OBJECTIVES OF THE WORKSHOP

Viet Nam's rapid urbanization and accompanying fast-paced real estate sector is driving growth in cooling demand and associated emissions. At the same time, heat is now a critical public health issue for many of Viet Nam's cities and this will worsen with rising temperatures due to climate change. Enhancing national policies is crucial but citizens turning to cooling to 'beat the heat' need stronger action from city governments who are critical to reducing heat island, protecting the most vulnerable to heat and accelerating sustainable cooling solutions.

Recently, Viet Nam has updated its Nationally Determined Contribution (NDC) and issued its National Strategy on Climate Change (NSCC) 2050 which has prioritized cooling as one of the key strategies to achieve Net-zero under the NSCC and integrated cooling into updated NDC 2022.

Department of Climate Change – DCC (under the Ministry of Natural Resources and Environment – MONRE) in partnership with UN Environment Programme & GGGI, under the framework of Cool Coalition implementing a project "Sustainable Urban Cooling in Vietnam's cities" to support national government & three

pilot cities on three intervention areas: (i) Local policy enhancement by adopting Urban Cooling Action Plans (UCAPs), that integrate action on cooling and extreme heat into a range of municipal plans and masterplans; (ii) Pre-feasibility and Design of Cooling Fund; and (iii) Capacity building and awareness raising to replicate sustainable cooling model at urban level through supporting implementation of Government Decree No. 06/2022/ND-CP on emission reduction greenhouse gases and protect the ozone layer. The objectives of the workshop are as follows:

- Introduce cooperative activities "Sustainable Urban Cooling in Viet Nam's cities" and "NDC Action project - Facilitating implementation of climate-resilient and low-carbon development aligned with national and global goals".
- Discuss international experience and policies on climate change adaptation and sustainable urban cooling.
- Discuss strategies to develop financial options to accelerate uptake of investment on climate change response including sustainable urban cooling.

CORE SESSIONS_ KEY SUMMARIES

Opening remarks



1) **Mr. Nguyen Tuan Quang**, Deputy Director General, DCC (MONRE), said urban heatwaves is one of the notable public health issues, especially in big cities in Vietnam. The workshop will be an opportunity for relevant ministries, branches, agencies, organizations, enterprises, and Vietnamese and international experts to exchange and discuss in order to develop proposals for sustainable urban cooling.



2) **Ms. Dechen Tsering**, Director, Asia and the Pacific Office, UNEP said that If we are serious about reversing current climate trends, we cannot go about cooling our planet with a business-as-usual approach. As Viet Nam's demand for cooling grows, it has a golden opportunity to forge a new pathway on cooling, demonstrating to the world a system-wide approach to cooling that is equitable, efficient, and climate-friendly.



3) **Dr. Jason Lee**, Deputy Director and Head of Emerging Economies Asia & Viet Nam Country Representative, GGGI said that it is imperative to take comprehensive actions to ensure the vision for sustainable cooling. GGGI supports the pilots cities in VietNam to formulate and implement their urban cooling action plans and mobilise municipal budget effectively to tackle cooling challenges.

Presentations



1) Overview of the projects - Sustainable Urban Cooling and NDC Action - **Ms. Nguyen Dang Thu Cuc**, Deputy Head of GHG emission reduction and ozone layer protection, DCC;



2) Mobilizing finance for Sustainable Urban Cooling - The role of Sustainable Finance market - **Ms. Tran Minh Hien**, Financial expert, GGGI;



3) Initial overview of financing sources in the cooling sector - **Ms. Dang Hong Hanh**, Project Consultant of the National Green Cooling Program (ETP/UNOPS);



4) Financing sustainable cooling in cities - **Mr. Benjamin Hickman**, Project Manager, UNEP;



5) Financial investment mechanism for sustainable urban cooling - **Mr. Sudheer Perla**, TABREED Company;



6) Role of Cities in Delivering Sustainable Cooling: International Experiences & Recommendations to Vietnam - **Mr. Zhuolun Chen**, UNEP Expert - online;



7) Assessment methodology of Urban heat island and Outdoor thermal comfort in Vietnam Cities - **Mr. Ngo Hoang Ngoc Dzong**, UNEP Expert;



8) Policy Mapping and Review Assessment to accelerate NDC Implement in Urban Cooling Sector - **Mr. Ha Quang Anh**, Director of the Center for Low Carbon Development (VN-LOCAD), DCC;



9) Assessing policies and programmes that will drive NDC implementation in adaptation - **Mr. Dang Quang Thinh**, Director of the Center for Climate Change Research (CCRC), Institute of Meteorology, Hydrology and Climate Change.

Workshop Agenda

Time (GMT+7)	Activity	Presented by
08:00 - 08:30	Registration	
08:30 - 08:35	Introduction of delegation	Department of Climate Change (DCC)
08:35 - 08:55	Opening Remarks	<ul style="list-style-type: none"> Mr. Nguyen Tuan Quang, Deputy Director General, Department of Climate Change (DCC), MONRE Ms. Dechen Tsering, Director, Asia and the Pacific Office, UNEP (Virtual) Dr. Jason Lee, Deputy Director and Head of Emerging Economies Asia & Viet Nam Country Representative, GGGI
08:55 - 09:00	Breaktime / photo session	
09:00 - 09:15	Overview of the projects - Sustainable Urban Cooling and NDC Action	Ms. Nguyen Dang Thu Cuc, National Ozone Coordinator; Deputy Head, Division of GhG Emission Reduction and Ozone Layer Protection, DCC
09:15 - 09:25	Green investment for cooling solutions in cities	Ms. Tran Minh Hien, Green Finance Officer, GGGI
09:25 - 10:00	Discussion on mechanisms and approaches to mobilize sustainable urban cooling investment	<ul style="list-style-type: none"> Ms. Dang Thi Hong Hanh, Consultant, UNOPS; Mr. Sudheer Perla, Representative, Tabreed (Abu Dhabi, UAE); Mr. Benjamin Hickman, Project Manager, UNEP; All participants
10:00 - 10:15	Role of cities in delivering sustainable cooling international experiences	Mr. Zhuolun Chen, UNEP-CCC (Virtual)
10:15 - 10:30	UHIE Assessment in Cities and Urban Cooling solutions	Mr. Dung Ngo, Extreme Heat Expert, UNEP
10:30 - 10:45	Tea break	
10:45 - 11:00	Assessing policies that will drive NDC implementation in urban cooling	Mr. Ha Quang Anh, Director, VN-LOCAD
11:00 - 11:15	Assessing policies that will drive NDC implementation in adaptation to climate change	Mr. Dang Quang Thinh, Director, CCRC
<i>Discussion</i>		
11:15 - 11:45	<ul style="list-style-type: none"> Sharing of pilot cities on integrating sustainable urban cooling into policies and practical projects in the locality (Can Tho, Dong Hoi and Tam Ky) Role of cities in implementing Passive Cooling Solution in buildings Approaches of urban planning to promote sustainable cooling 	All participants
11:45 - 12:00	Closing Remark	Mr. Nguyen Tuan Quang, Deputy Director General, DCC
12:00	Lunch	All participants

Discussion and Way Forward

Viet Nam Association of Civil Engineering Environment (VACEE) is a dedicated research and implementation unit focused on various aspects of the civil engineering environment including architecture, water supply and drainage, urban solid waste treatment and air conditioning. The VACEE actively engages in consultations with Ministry of Construction (MOC) and MONRE on these matters. Presently, the MOC has issued numerous mechanisms, policies, standards, and regulations (QCVN 09:2013/BXD, QCVN 09:2017/BXD, Decision No. 97/QD-BXD, etc) for 7 types of building to enhance building efficiency, conserve energy and reduce GHG emissions. However, **the practical implementation of these legal documents remains challenging, necessitating a comprehensive review, unification, and coordination among relevant agencies and ministries.** It is hoped that in the near future, these outstanding issues will be successfully addressed and integrated into the state's overarching policy.

Enhancing coordination among ministries and sectors is of utmost importance. It is strongly advised to establish a focal point for implementing and monitoring sustainable urban cooling initiatives. Presently, the refrigeration and air-conditioning (RAC) sectors contribute to a large amount of global warming emissions, particularly in urban areas where high buildings use large-scale cooling systems. Regrettably, measures on energy

efficiency and emission reduction have not been effectively implemented thus far. **Hopefully, after this workshop, the competent authorities will collaborate to devise cohesive policies applicable to major cities.**

During the presentations, several policies were discussed; however, there remains a lack of specific policies on sustainable urban cooling. **It is strongly recommended to develop policies that incentivize individuals and organizations to utilize available land for increased tree planting, with the goal of reducing urban temperatures.**

The cooperative activity on urban cooling is set to be implemented in three cities: Tam Ky (Quang Nam), Can Tho, and Dong Hoi (Quang Binh). However, as these cities are not considered key urban centers, it is crucial to also assess the feasibility of such initiatives in major central cities across Vietnam. Numerous international organizations, such as UNDP and IFC-World Bank possess extensive experience and financial mechanisms to support countries in implementing activities on sustainable urban cooling. During the workshop, it became apparent that the representation of participants from cities and provinces was limited, indicating insufficient policies and mechanisms at the local level. **Therefore, it is recommended to strengthen the dissemination of international experiences and the practices of rapidly developing countries in the region, such as**

Vietnam, not only for governmental agencies and businesses but also for the local people.

According to UNEP, the demand for cooling and air conditioning in urban areas is continuously rising at a rate of 5-10%. Consequently, integrated approaches have been proposed to mitigate temperature increase and cooling needs. Pioneering countries and cities in the field of cooling have already implemented effective policy packages, focusing on the development of natural landscapes, energy-efficient buildings and the optimization of cooling device usage. UNEP is actively studying successful cooling projects in countries that have dealt with high temperatures for several decades, with the aim of applying those lessons to tropical countries. Furthermore, UNEP is in the process of translating a handbook into Vietnamese that covers solutions for combating high temperatures and shares country-specific experiences.

In Can Tho, the policies reviewed in the scope of the project is relatively adequate to illustrate the situation of urban cooling in Viet Nam. The difficulties in workforce and financial mobilization are the main constraints of urban cooling. The major method for thermal comfort is air conditioning, which also emits more heat into space. **Hopefully, in the near future, the pilot activities in Can Tho can ease the situation.**

Located in the central region, Quang Nam province frequently faces climate change issues and the recurring impact of natural disasters. Since 2009, Quang

Nam has been dedicated to implementing climate change plans. Initially, the focus was primarily on adapting to climate change in vulnerable areas within the province. These efforts included the construction of river and sea embankments to mitigate riverbank erosion and coastal landslides, as well as the establishment of coastal forests to combat wave damage and sand erosion while protecting ecosystems. **As one of the provinces selected for pilot city in the cooperative activity, Quang Nam has been actively engaged in research and capacity building.**

Quang Nam has only received information about the project since last year, after reviewing and implementing it, it found that there are many difficulties, for example: staff's awareness of the cooling field is still limited, officials need to be trained and improved training, there is no budget, no financial support on climate change and cooling in the locality. **Hopefully in the near future, organizations will have resources to support the locality to implement the project.**

Quang Binh is one of the most vulnerable provinces with geographically exposure to climate change. **The extreme events are occurring more frequently, including storm, typhoon, flood, soil erosion, saltwater intrusion, and drought.**

Quang Binh Province realizes the necessity of urban cooling and also agrees on the engaging policies and programmes of urban cooling. Quang Binh Province targets the sustainable development with the combination of

climate change adaptation, socio-economic development, and ecosystem and biodiversity conservation. Hence, ecosystem-based adaptation (EbA) is a priority to application for Quang Binh Province. **EbA approaches are piloted at Dong Hoi city as the models including a building with “green walls and green roofs”, a park with “sustainable urban drainage systems”, and an intersection point with “water retention areas”. These approaches seem to be the combination of adaptation and urban**

cooling (green, blue, and grey infrastructural measurements).

The aforementioned report summarizes the outcomes of Workshop conducted in collaboration with 02 cooperative activities “Sustainable Urban Cooling in Viet Nam’s cities” and “NDC Action project - Facilitating implementation of climate-resilient and low-carbon development aligned with national and global goals” and has been submitted to the MONRE.

ANNEX AS PARTICIPANTS LIST

Agencies for organization of the Workshop

- Urban Cooling Project: Department of Climate Change (DCC), Global Green Growth Institute (GGGI), United Nations Environment Program (UNEP),
- NDC Action Project: Low Carbon Development Center (VN-LOCAD) and Climate Change.
- Research Center (CCRC).

Participants

a) Number of delegates: 60 delegates

b) Delegate composition:

- National agencies: Officials of DCC; Vietnam Environmental Protection Fund; Ha Noi Department of Natural Resources and Environment, Can Tho Department of Natural Resources and Environment; Quang Nam Department of Natural Resources and Environment; Quang Binh Department of Natural Resources and Environment; Institute of Meteorology, Hydrology and Climate Change; Institute of Heat-Refrigeration Science and Technology; Ecology and Environment Institute; Green Development Center, Vietnam Refrigeration and Air Conditioning Association; Vietnam Association of Civil Engineering Environment (VACEE); Association of Vietnamese Cities; School of Mechanical Engineering - Hanoi University of Science and Technology; Hanoi University of Civil Engineering; VN-LOCAD; CCRC; etc.
- International agencies: UNEP; GGGI; UNOPS Viet Nam; Red Cross; GIZ; Tabreed.