



Sustainable Urban Cooling in Viet Nam

The United Nations Environment Program (UNEP) and the Global Green Growth Institute (GGGI), in close cooperation with the Ministry of Agriculture and Environment (MAE), are implementing a project on sustainable cooling in urban areas in Vietnam.

Drawing on international best practices, the project will provide on-the-ground support to help pilot cities “Beat the Heat”. The project is developed in the framework of UNEP-led Cool Coalition.

THE CHALLENGE

According to the Climate Change Scenario report (2020), Vietnam's average annual temperature has been increasing nationwide over the period of 1958-2018, with an average rise of 0.89 degrees Celsius. This trend has led to an increase in the number of drought months in the Northern region and a rise in the number of hot days across the country. Due to the urban heat island effect, Vietnamese cities situated in urban areas are particularly vulnerable to extreme heat waves, posing a significant global risk.

cooling systems are estimated to contribute to 40% of residential electricity demand and 25-40% of electricity demand in the service and commercial/public sectors. Indirect cooling also contributes to climate change by increasing electricity demand (which is largely still generated from fossil fuels) and by releasing ozone-depleting substances and greenhouse gases that have a

higher global warming potential than CO₂ emissions.

Therefore, the need for sustainable cooling solutions is increasingly urgent, both in Vietnam and globally. However, current sustainable cooling solutions face challenges due to limited consumer awareness and high implementation costs.

A whole-systems approach to sustainable urban cooling needs to be deployed to adapt cities to the rising heat while reducing greenhouse gas emissions. In Vietnam, achieving sustainable cooling requires a unified effort from stakeholders in various areas, such as developing national policies and regulations focused on sustainable cooling and choosing appropriate technology as well as securing necessary domestic and international financial support to achieve the goals of the Montreal Protocol and the Kigali Amendment.

DID YOU KNOW?



MORE EFFICIENT AIR CONDITIONERS AND BUILDING EFFICIENCY IMPROVEMENTS, **CAN SAVE 110 TWH** OF ELECTRICITY BY 2040 IN ASEAN COUNTRIES.

THIS IS THE EQUIVALENT OF THE CURRENT ELECTRICITY CONSUMPTION OF MALAYSIA, THE PHILIPPINES, AND VIET NAM COMBINED.

THE SOLUTION

To help “Beat the Heat” in Viet Nam’s urban areas, UNEP and GGGI, with financial support from the Clean Cooling Collaborative, will work closely with MONRE to support two pilot cities, Can Tho and Tam Ky, in preparing Urban Cooling Action Plans (UCAPs) and the city of Dong Hoi as a learning city.

This project will make use of global best practices including those published in the “Beating the Heat: A Sustainable Cooling Handbook for Cities” published by the Cool Coalition, UNEP, RMI, Global Covenant of Mayors for Climate & Energy (GCoM), Mission Innovation and Clean Cooling Collaborative.

UCAPs will ensure the integration of actions on sustainable cooling and extreme heat into a range of municipal plans. These will include enacting strong building efficiency measures, passive cooling, urban design, nature-based solutions, super-efficient appliances, heat-resistant materials, and district cooling.

The project’s partners will perform spatial analysis of cooling and extreme heat, and identify drivers and recommendations for local policies, effective master plans, and financial instruments. Additionally, a National Cooling Fund will be established to catalyze UCAPs implementation and scale-up ongoing efforts in additional Vietnamese cities. Replicating pilot activities in 5 other cities could save over 30 MtCO₂-eq/year by 2040 and improve the thermal comfort and resilience of millions.

Through these interventions, cities can improve the health and well-being of their residents and build long-term resilience to protect those most vulnerable to extreme heat, support local productivity and economies, and contribute to city and state climate targets. By

MAIN COMPONENTS OF THE PROJECT

Local Policy Enhancement



Evaluate and propose solutions on sustainable urban cooling to integrate into local policy framework (development of Urban Cooling Action Plans (UCAPs) in Can Tho and Tam Ky, Quang Nam province and Rapid Assessment Report for the readiness of the next phase in Dong Hoi, Quang Binh province)

Design of Cooling Fund



Develop pre-FS for pilot projects in Can Tho and Tam Ky (Quang Nam province); Propose potential financial mechanisms to support sustainable cooling through VEPF to mobilize financial resources from domestic and international investors to overcome financial barriers for business activities on sustainable urban cooling in Viet Nam cities.

Mainstreaming Urban Cooling



Integrate sustainable cooling into National Policies or Regulations, such as the NDC Implementation Programme and the National Strategy on Climate Change.

showing their leadership on climate change, cities can also attract investors to develop and finance these solutions while encouraging local skill development and manufacturing capabilities within their cities.

This project is being offered under the framework of the Cool Coalition.

For more information, please visit: <https://coolcoalition.org/pilot-projects/sustainable-urban-cooling-in-viet-nam-cities/> and <https://gggi.org/project/vn11-sustainable-urban-cooling-in-viet-nam-cities/>

TO LEARN MORE AND REGISTER YOUR CITY’S OR ORGANISATION’S INTEREST IN THIS PROGRAM, PLEASE EMAIL UNEP-COOLCOALITION@UN.ORG ➔

About GGGI

GGGI is a treaty-based international, inter-governmental organization dedicated to supporting and promoting strong, inclusive and sustainable economic growth in developing countries and emerging economies.

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