

COSTA RICA, INDONESIA, GHANA



GREEN
CLIMATE
FUND

GLOBAL
PROGRAMMING
CONFERENCE

Project title				
Green Cooling – accelerating the transition to climate-friendly and energy-efficient air conditioning				
Result areas	Sector	Total financing, USD	GCF financing, USD	Financial instrument
Buildings, cities and industries and appliances	Private	USD 85.7 million	USD 43.7 million	Grant
Description of specific climate change problem and how the project will address it	<p>The cooling sector is one of the fastest-growing energy-consuming sectors in developing countries, with an estimated market growth rate of 7% per annum until 2050. GHG emissions in the sector are of primarily of two types: (i) direct emissions from the use of highly climate-damaging refrigerants (hydrofluorocarbons – HFCs, and hydrochlorofluorocarbons – HCFCs), and (ii) indirect emissions from electricity consumption, in countries where power generation is fossil fuel-based. The combined annual emissions from the cooling sector amount to an estimated 2.7 gigatonnes (GtCO₂eq) in developing countries, or 10.5% of their total emissions. This is the equivalent, for example, to the GHG emissions from the entire transport sector. Within the cooling sector, AC represents the single most significant sub-sector, contributing over two-thirds of total emissions. Using conservative assumptions, worldwide cumulative savings from enhanced energy efficiency in the AC sub-sector alone could amount to USD 2.9 trillion over the period 2017-2050.</p> <p>The GC programme aims to accelerate the transition to climate-friendly (low-GWP refrigerant) and energy-efficient split AC in residential, commercial and public buildings, thereby contributing to countries' climate targets (NDCs) in a cost-effective and sustainable manner. The project is ambitious in its scale, aiming to reduce 36.6 million tCO₂eq during the project lifespan. In addition, by supporting fundamental change in the three target countries, the project will also lay the foundation for acceleration of this process in other countries. The project is extremely cost-effective, offering a mitigation cost to the GCF of USD 1.29/tCO₂eq.</p>			
Alignment with key country priorities and stakeholders engaged	<p>All three participating countries are characterized by increasing average temperatures, population and urbanization, resulting in vast growing demand for air conditioning. The project is explicitly aligned with countries' commitments under the Paris Agreement and the Kigali Amendment, and is explicitly embedded within, and supportive of, those frameworks. The adopted approach is, therefore, applicable, relevant and attractive to all countries with such commitments.</p>			

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Activities

- Policy framework development to accelerate the transition to green AC is created, adopted and enforced
- Technical capacity development and awareness-raising to enable proper application of green AC
- Market support measures to increase demand-side 'pull' and supply-side 'push' for green AC
- Inter-country technical assistance, coordination and project management

Expected outcomes

M5.o. Strengthened institutional and regulatory systems for low-emission planning and development.
M7.o. Lower energy intensity of buildings, cities, industries and appliances.

Residential, commercial, and public building owners and operators purchase and operate climate-friendly (low GWP) and energy-efficient room ACs, installed and serviced by properly trained and certified cooling technicians.

Paradigm shift potential

The project will initiate, support and accelerate the development of the nascent market for green AC appliances, shifting market development away from climate-damaging and inefficient technologies and towards radically lower-emission technologies. The project is ambitious in its scale, aiming to reduce 17 million tCO₂eq during the project duration. Accelerating the market share of more efficient and climate-friendly air conditioning will lead to avoided energy costs for households and businesses while and increased energy security beyond the programme. Enhancing capacities of the local AC industry will lead to improved practices and additional jobs.