

Detailed Case study information

Sustainable cooling

Description	The project “ROCA – Ozone and Climate Friendly Cooling in West and Central Africa” aimed to promote the widespread adoption of Green Cooling technologies in Burkina Faso, Cameroon, Mali, and Senegal. Green Cooling combines the use of natural refrigerants, energy-efficient appliances, and sustainable cooling solutions across key sectors. These included buildings, food systems, and healthcare, where reliable cooling is essential for development and resilience. The project responded to rapidly growing cooling demand in the region, which is increasing energy consumption and the use of climate-damaging refrigerants. To address these challenges, ROCA combined policy advisory, capacity building, and practical pilot projects. It supported governments in strengthening regulatory frameworks, improving RAC sector data through inventories, and facilitating access to climate finance, while simultaneously demonstrating sustainable cooling solutions in real-world applications. ROCA was funded by the European Union (EU) and the German Federal Ministry for Economic Cooperation and Development (BMZ). The project was implemented by GIZ Proklima in collaboration with national ozone units and relevant ministries in its partner countries from 2021-2025.
Achievements	The ROCA project has delivered concrete and measurable results across its partner countries. More than 350 energy-efficient air conditioning units using the natural refrigerant R290 were installed in public buildings across Burkina Faso, Cameroon, Mali, and Senegal. These installations replaced conventional systems and demonstrated both the technical feasibility and performance advantages of low-GWP technologies in real operating conditions. The project supported the development of national energy efficiency strategies for domestic and industrial refrigeration and air conditioning, including detailed recommendations for introducing Minimum Energy Performance Standards (MEPS) and energy labelling. This provides a structured roadmap for reducing national energy demand and emissions in the cooling sector. ROCA also implemented targeted pilot projects in key sectors, including: • Cold rooms for agricultural cooperatives in Mali and Senegal to reduce food losses, • A cold chain system linking the slaughterhouse with the main market in Burkina Faso's capital city Ouagadougou, • An ice production system for a fishermen's cooperative in Senegal, and • Climate-friendly cooling systems for vaccine and blood storage in Burkina Faso and a hospital in Cameroon. In addition, the project developed RAC sector inventories and policy recommendations in partner countries, strengthening national data systems and supporting evidence-based policymaking. Capacity building was a core achievement, with multiple technical training programmes for RAC technicians, delivered both locally and internationally. These trainings focused on the safe handling and installation of natural refrigerants, directly addressing a key barrier to market uptake. There was a special focus on female empowerment. Finally, ROCA organised regional workshops on climate finance and business models, bringing together governments, financial institutions, and private sector actors to design mechanisms that support the large-scale adoption of Green Cooling technologies.
Benefits	- Reduced use of ozone- and climate-damaging cooling systems

	- Improved energy efficiency and lower operating costs - Strengthened food security and medical cold chains - Enhanced skills development, female empowerment and local workforce capacity - Increased resilience through sustainable and reliable cooling access
Next steps	The project operated from 2021-2025 and advised for further regional cooperation and financing models to replicate and scale pilot projects across more sectors.
Source	Ozone and Climate Friendly Cooling in West and Central Africa (ROCA) - GIZ Proklima National energy efficiency strategy for domestic and industrial air conditioning and refrigeration in Cameroon - GIZ Proklima Preserving Meat and Climate in Ouagadougou, Burkina Faso - GIZ Proklima