

Detailed Case study information

Climate Finance

Description	The Cooling Program for Southern Africa (CooPSA) is introducing highly energy-efficient air conditioners that use natural refrigerants (notably propane/R290) into Southern African markets, leveraging carbon markets to finance the transition over the long term. Running from December 2021 to December 2027, the programme operates in Botswana, Eswatini, Namibia and South Africa. It is financed by the German International Climate Initiative (IKI) and implemented by GIZ in close cooperation with national ozone units and other national partners. As an Article 6 pilot, CooPSA couples technology deployment with market development measures such as installer training, safety guidelines, and targeted incentives to catalyse early demand for R290 equipment, while establishing the policy, MRV and financing frameworks needed to sustain scale-up through carbon revenues.
Achievements	- The first consignments of R290 room air conditioners arrived in Botswana and Eswatini for demonstration purposes and hands on training, supporting safe installation, servicing and recovery practices for flammable refrigerants. Initial technician trainings have taken place with an emphasis on women's participation. - CooPSA developed Mitigation Action Design Documents (MADD) for all four partner countries—a key prerequisite for accessing international carbon markets under Article 6 of the Paris Agreement. Botswana's MADD has been validated, with validation in the remaining countries underway. In parallel, the programme has advanced MRV concepts, baseline methodologies and eligibility criteria to translate emission savings into carbon credits. - The programme has prepared incentive mechanisms to help bring R290 models to market at competitive prices.
Benefits	- A high efficiency R290 air conditioner can avoid up to 24.1 t CO₂e over a ten year operating lifetime – roughly equivalent to seven return flights from South Africa to Germany – by combining superior energy efficiency with an ultra low GWP refrigerant. - Over the same period, a unit can save up to 27,100 kWh electricity compared to a conventional system, translating into several thousand euros in energy cost savings for end users and reduced peak load for power systems. - A targeted top up payment enables importers to offer R290 units at competitive prices during market introduction, reducing first cost barriers. - Avoided emissions are to be quantified and sold as carbon credits under Article 6. Revenues can be reinvested to continue and expand subsidies and training, creating a self reinforcing transition mechanism that accelerates adoption and sustains long term climate benefits.
Next steps	- Market introduction and demand creation for R290 ACs through coordinated outreach, demonstration sites, and partnerships with distributors, cooling contractors and large buyers. - Creation of carbon credits and identification of buyers under article 6 of the Paris Agreement by applying national carbon market frameworks. - Upscaling by widening product availability, expanding the trained technician base, strengthening safety compliance and end of life practices, and aligning national policies and standards to mainstream natural refrigerant, high efficiency cooling.
Source	How Carbon Credits Are Advancing Climate-Friendly Cooling Internationale Klimaschutzinitiative (IKI) Cooling Program for Southern Africa - GIZ Proklima

