

**GIZ PROKLIMA**  
**Sustainable Technology Cooperation**  
**Cooling in Developing Countries**

**Abstract**

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*Introduction and dissemination of innovative technology concepts for cooling, air conditioning and insulation contribute substantially to meeting basic needs while developing in a sustainable manner.*

*Climate emissions from cooling and foam blowing processes grow at a rate of 15-30% per year in most of the developing countries. By 2050 projected emissions will amount to up to 45% of total GHG emissions.*

*The field (cooling, air conditioning, foam production) is extremely relevant due to its potential climate impact as well as growth rates. EIA estimates average annual growth of 7 per cent until 2050. Latest by then energy demand for cooling will overtake energy demand for heating worldwide. Currently about 1.6 billion people have access to cooling. In the next few decades another 2 billion people will be added. Two of the top four investments of poor families are refrigerators and air conditioning unit (next to lighting and television). Sustainable consumption and production patterns are key to meeting such demands. Modern, innovative technologies, already available now in the developed world, can substantially contribute to sector transformation, not just efficiency gains.*

*Over the last 15 years Proklima, a global programme for integrated ozone and climate protection, implemented about 240 projects in about 40 countries with the measured climate impact of ca. 100 Mio tCO<sub>2</sub>eq of reduced greenhouse gas emissions at a cost of approximately 1-2 EUR/tCO<sub>2</sub>eq. The programmatic, comprehensive approach, originating from the Montreal Protocol, promotes creation of new, green jobs, increases job security as well as job safety, and proves decoupling of growth and climate impact.*

The paper presents the overall programmatic approach, relevance for climate protection as well as contribution to green economy and growth through sustainable sector development (consumption and production) with concrete case studies in various developing countries. An excellent example for technology cooperation between Europa and the new markets in transition and developing countries.

**Key words:**

*Integrated ozone and climate protection • Green Economy and Green Growth • Green Jobs  
• local & regional economic development • sustainable sector development & transformation  
• low carbon economy • supply chain management and technology • energy efficiency*