A cool network for greater sustainability

‘Cool und Sustainable’ Development Dialogue: Climate-friendly cooling technologies drive development

Berlin, 31 May 2012. Refrigerators and air conditioning units top the wish list of people living in hot countries. To help satisfy this demand, representatives from politics, industry and research recently met at the GIZ Representation in Berlin to discuss how to design and disseminate cooling and refrigeration technologies in ways that are sustainable and energy efficient. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) organised the Cool and Sustainable event on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

Against the backdrop of the upcoming United Nations’ Rio+20 Conference, BMZ representative Peter Christmann said that involvement of the German private sector and its innovative expertise is a must, if the goal of sustainable and energy-efficient refrigeration and air conditioning is to be achieved in emerging economies. ‘Establishing technology partnerships is an important means to this end,’ stressed Christmann. ‘With the support of the Federal Government, German companies provide partner countries with the designs, equipment, components and advice they need to build efficient appliances.’

Christmann believes that investment should be channelled into environmentally-friendly technologies that operate without the use of potentially devastating chemicals. ‘In developing countries, the market is still dominated by fluorinated greenhouse gases, which are used as a substitute for ozone-depleting CFCs,’ Christmann pointed out. ‘However, natural refrigerants are available and offer reasonably-priced and efficient solutions.’ The Proklima programme, which was launched over 16 years ago as part of Germany’s BMZ-funded contribution to supporting the Multilateral Fund to implement the Montreal Protocol on Substances that Deplete the Ozone Layer (MLF), has placed an emphasis on natural refrigerants from early on and incorporated them into MLF projects.

Peter Christmann stressed that the setting in partner countries must be conducive to the transfer of climate-friendly and environmentally sustainable technologies, to ensure success. Willingness to invest in climate-friendly technologies, which are often more expensive to manufacture (even if they are usually more efficient and more cost-effective as a result), will be encouraged above all by laying down technology standards and enforcing environmental and quality criteria. The market must also be transparent and the competitive playing field must be fair if technology providers are to forge climate-friendly partnerships. Another requirement is policy support. ‘Evaluating and further developing environmental and technology standards are essential elements in German climate cooperation,’ said Christmann. ‘The German Environment Ministry also plays a role in this context and has, in the framework of the International Climate Initiative, provided an additional EUR 33 million for this purpose.’

Proklima programme manager Bernhard Siegele agrees. Commenting on the growing market for sustainable refrigeration and cooling technologies in partner countries, he noted ‘Proklima’s projects also have a contribution to make here because they help set the bar in terms of appropriate quality standards.’ However, the ‘after-sales’ stage is also important because climate-friendly products can only break into a market if adequate service and

maintenance processes are in place. Training manufacturers and technicians therefore constitutes a standard component of the Proklima project. German expertise has a significant role to play here.

Tish Foster, from the Swazi company The Fridge Factory, emphasised that technology transfer drives progress in Africa. 'Without German know-how, our company would never have been able to develop a vaccine refrigerator,' she said. The solar-operated appliance was presented at the event and was welcomed with great interest by the 70 or so participants. The refrigerator is designed to keep vaccines and other medicine cool for up to 72 hours without electricity. This project is supported by the German Government, with a view to improving medical care in Africa. Foster mentioned in passing that it is difficult to launch innovative products such as the refrigerator on the market. 'In Africa, there are no standards for cooling appliances that are equivalent say to those in the USA or in Europe,' she said. 'Cheap Asian imports therefore distort the market.' Foster called on the German Government to exert its influence and do what it can to have uniform environmental and quality standards for the refrigeration industry introduced worldwide.'
Climate expert Wolfgang Lohbeck from Greenpeace also called on manufacturers to assume more responsibility and ensure that the HCFCs currently used are not simply replaced with fluorinated substitutes in some countries. Both participants expressed these views in a closing panel discussion, which included refrigeration scientist Prof. Ullrich Hesse from the Technische Universität Dresden, Dr Stephan Paulus Director of the Environment and Climate Change Division at GIZ, Dr Christian Meineke, Head of Division at the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), and the Head of Research and Development at GEA Grasso GmbH, Wolfgang Sandkötter.

The panel agreed that projects such as those assisted by Proklima can clearly add significant momentum to the international debate on climate change and to dialogue on the sustainable use of resources within the framework of Rio+20. Dr Christian Meineke, representing BMU, praised the initiative, saying 'The beauty of the Proklima projects presented to us today is that they not only reduce CO_2 emissions, but also help sustainably improve the standard of living for local families, for example, by lowering energy costs or increasing the availability of important medicine.' He also pointed out, however, that more strategies are needed to link sustainable cooling technology with other areas of climate protection. Dr Meineke referred to the Green Cooling Initiative project, which is also funded by the BMU Climate Initiative. It aims to help develop structures for technology networks initiated during the climate negotiations based on specific examples from the refrigeration and climate control sector. It was therefore proposed to set up a forum with representatives from the private sector, politics and research. 'We are looking for technology providers who can offer innovative, robust and practical solutions for climate-friendly cooling technologies that can be marketed in developing countries and emerging economies.' This would also improve the likelihood that progress can be made at the international level, among other things as regards regulatory measures.

The Proklima programme

On behalf of the German Government, GIZ's Proklima programme helps implement sustainable refrigeration, air conditioning and insulation solutions. Since 1996, about EUR 100 million has been channelled into measures in more than 40 partner countries, to support new technologies, advisory services, training and education. Most of the measures supported were funded by BMZ as part of its contribution to the Multilateral Fund to implement the Montreal Protocol on Substances that Deplete the Ozone Layer (MLF).

Proklima also implements climate protection projects that are commissioned and funded by the BMU in the sectors already mentioned. The projects assist partner countries in fulfilling their commitments and goals set out in the Montreal and Kyoto Protocols.

The participants in the panel discussion from left to right: Wolfgang Sandkötter (GEA Grasso GmbH), Tish Foster (Fridge Factory), Prof Ullrich Hesse (TU Dresden), Hans Jessen (moderator, ARD), Wolfgang Lohbeck (Greenpeace), Dr Christian Meineke (BMU), Dr Stephan Paulus (GIZ)

Guests inspecting the new solar-operated refrigerator. It uses natural refrigerants, runs without batteries and will be used primarily in rural areas in Africa.