

# *Inclusive Communities*





## 6 Inclusive Communities

Climate change renders poor communities both physically vulnerable to the impacts of extreme weather events and economically vulnerable as their livelihoods, which are dependent on natural resources, are affected by climatic change. At the same time, they often do not have access to basic services and provision for themselves in ways that can have negative consequences on their health and wellbeing such as drinking contaminated water and burning fossil fuels indoors for cooking and heating purposes. Dire financial and environmental implications are also imminent as sourcing fossil fuels can be expensive and deforestation arises from excessive timber sourcing as well as local atmospheric pollution from burning fossil fuels and wood.

People living in low-income housing spend a disproportionate amount of their income on energy and suffer a disproportionate health burden. Illness include major respiratory diseases which result from extreme temperatures and the local pollution (and high levels of condensation, in some areas) from the burning of fossil fuels such as paraffin for heat and cooking<sup>2</sup>.

Energy efficiency and the introduction and roll-out of renewable sources of energy are priorities for South Africa. The process is guided by the country's Integrated Resource Plan.

Key amongst developing nations participating in the COP negotiations was the concern for poor communities to be adequately supported in developing climate-resilient coping strategies. Therefore, a significant proportion of time and energy was devoted to developing demonstration projects that could be showcased during COP17/CMP7 to illustrate climate-friendly development solutions.

Two projects were particularly noteworthy as they dealt predominantly with the issue of energy security. The Cato Manor Green Street is located in a vast urban informal settlement in the heart of Durban and the Sustainable Energy Access for All initiative is located in a peri-urban settlement to the north of Durban.

### 6.1 Cato Manor Green Street

South Africa's first 'green street' was celebrated during COP17/CMP7. The retrofit programme in a Cato Manor cul-de-sac was implemented by the Green Building Council of South Africa (GBCSA), inspired by the Kuyasa low-cost housing project in Khayelitsha, Cape Town. Kuyasa was South Africa's first internationally registered Clean Development Mechanism project under the Kyoto Protocol and was the first Gold Standard Project registered in the world.

<sup>2</sup> FRIDGE 2004, 'Study to examine the potential socio-economic impact of measures to reduce air pollution from combustion'. Air shed Planning Professionals and Bentley West Management. Consultants for Trade and Industry Chamber / Fund for Research into Industrial Development, Growth and Equity (FRIDGE), Johannesburg.

This innovative retrofit project in Cato Manor was funded primarily by the British High Commission in South Africa. It was endorsed by DEA, and implemented in collaboration with the eThekweni Municipality. The retrofit was implemented by Carbon Programmes. Carbon Programmes worked with a local Durban partner, Khanyisa Projects, a partnership that also accommodated knowledge transfer.

The site, known at uMuthi MAYCHE, was chosen due to a collaboration between South African and Dutch architects in 2009. They built a rehearsal space for musicians, made entirely of recycled material from the area.

The retrofit included solar water heaters, insulated ceilings, energy efficient lighting, rainwater harvesting systems, food gardens and heat-insulation cookers. The process demonstrated a range of benefits including improved energy efficiency, cost savings, reduced illness and safety risks, skills training and job creation, reduced greenhouse gas emissions and negative environmental impact as well as better water and food security.

*An exciting aspect of the Cato Manor project is the Wonderbag™ heat insulation cooker, a product of local social enterprise, Natural Balance. Used an average of three times a week, a Wonderbag™ can save 0,5 tonnes of carbon emissions per year per house.*

In addition to the funding received, several organisations contributed to its success. Eskom provided energy efficient CFL light bulbs and efficient showerheads; the Botanical Society sponsored shade and



Figure 26: A resident of the Cato Manor Green Street enjoys the benefits of her insulated ceiling and efficient lighting.

fruit trees to be planted in the street; ISO Board sponsored all the insulated ceiling boards; the local Municipality installed LED street lights, whilst Natural Balance donated heat-insulation cookers known as Wonderbags.

The Cato Manor retrofit is currently being registered as a Voluntary Emission Reduction project on the voluntary carbon market, through an independently audited registry called Credible Carbon. As a small-scale project, the sale of credits will generate only a small level of carbon revenue. Nonetheless, the symbolic value of the initiative far outweighs the carbon credits being generated by the project.

For more information on the project, please refer to [www.gbcsa.org.za](http://www.gbcsa.org.za).

## 6.2 Sustainable Energy Access for All

The Solar Water Heater Programme, as described in Section 4.4.4, describes the supply, installation and maintenance of 69 solar water heaters to rural clinics. As a follow up on this initiative and a contribution to the Vision Statement by Ban Ki-moon, Secretary- General of the United Nations "Sustainable Energy for All by 2030", South Africa developed a demonstration project entitled 'Integrated Energy Solutions for Rural Communities' and this process led to the development of a demonstration project entitled 'Sustainable Energy Access for Rural Communities'.

The demonstration project was a partnership between the GEF as the funder, UNIDO as the main implementing agency with additional implementation support from the United Nations Development Programme (UNDP) and World Bank, and DEA and DOE as national project partners and the KwaZulu-Natal Department of Health as the provincial partner.



Figure 27: Energy efficient boundary lighting at Dr Vilakazi Primary



The project demonstrated how a rural village's energy poverty could be improved in a climate-friendly manner. In this instance, the identified village was Groutville situated in the iLembe District Municipality. The project was initiated with the installation of the solar water heaters at the Groutville clinic. Leading on from there, solar water heaters were installed at the two primary schools, Dr Vilakazi Primary and Aldinville Primary as well as energy efficient boundary lighting at Dr Vilakazi Primary. Thirty households in proximity to the clinic were also recipients of renewable energy and energy efficient technologies. Phillips, one of the project sponsors, donated energy efficient cook stoves together with the solar powered torches, lanterns and energy efficient indoor lighting to them.

The pilot project was demonstrated during a high-level, side-event hosted on 08 December 2011. Please refer to Section 8.3.2 for further information.

The content of Chapter six put policy into practice. Events such as COP17/CMP7 can turn into academic exercises far removed from the realities of the conditions of the ground and cut off from the experiences those who experience the brunt of climate change because of their socio-economic status. COP17/CMP7 overcame this tendency through two projects focused on climate-friendly development in poor communities. These projects demonstrated that through simple technologies, households can improve their standard of living sustainably and in climate-friendly ways. Side-events were organised to demonstrate these interventions and to enable high profile delegates to engage with those people whose lives would ultimately be impacted by the outcome of the negotiations, thereby closing the gap between the high level talks at the UN Precinct and those most affected by climate change.