Renewed communities through renewable energy

Strong wind currents vigorously rotate turbines at the foot of the scenic Ngong hills in Kenya’s Rift Valley. The turbines are a landmark of Olosho-Ibor, home to 6,000 Maasai who are not yet connected to the national electricity grid but can now tap into an alternative source.

The United Nations Industrial Development Organization (UNIDO) erected the turbines as part of a micro-scale hybrid power plant. The plant combines wind, solar energy and plant oil with a diesel generator to create electricity. The manager of the centre and a resident Maasai, Simon Parkesian, says the wind turbines generate 3,000 watts while the 16 solar panels on the rooftop generate 2,000 watts. This is boosted by a 12,000 watt generator that can run on either diesel or vegetable oil.

“We are now distributing electricity to the community centre, a nearby school, a dispensary and soon to the nearby church,” says Parkesian.

Before the Olosho-Ibor center was set up in 2009, residents were forced to walk 25 km to the Ngong Township to charge their mobile phones or watch TV. But now the energy centre serves as an office, a battery charging room, a computer laboratory, a TV room, a welding area and a barber shop. For just a small fee of less than USD 0.50, the locals can enjoy these amenities.

The impact of having electricity in the area is felt by students of the Olosho-Ibor primary school whose academic performance has improved. They can study longer hours under good lighting, and the school ranked top in the region. UNIDO also assisted in the distribution of LED lights so that the students and their parents can use at home and recharge at the Olosho-Ibor Community Power Centre.

Thirty-year-old Kennedy Mambui, a local resident, is among the many in the area who personally benefited from...
A cooking stove improves lives in Kenya

On the outskirts of Nairobi in Kenya, an elderly woman forages in the Ngong Forest for fallen branches. In a small village in Karachuonyo, in Kenya’s Nyanza province, a mother prepares a meal for her family in a smoke-filled kitchen. With her eyes bloodshot and watery she coughs as she helplessly waves off the acrid smoke from the cooking stove. In Kawangware, one of Nairobi’s diverse neighborhoods, a student has not finished her homework, but knows that she needs to turn off the kerosene lamp or risk using more than the week’s share of light.

Firewood is one of the key energy sources that 3 billion people in Africa, Asia and Latin America rely on. Many poor families have a limited choice of fuel to cook their meals, heat their water or generate electricity. According to Moses Mbego of the United Nations Environment Programme (UNEP), in addition to the wanton destruction of forests for firewood, harmful emissions from inefficient biomass cooking lead to an array of upper respiratory complications. Chronic obstructive pulmonary disease, asthma, cancer of the nasopharynx and larynx tuberculosis, low birth weight and eye diseases such as cataract and even blindness result from constant exposure to biomass fumes.

Fortunately, there is a solution: Project Surya—Sun, in Sanskrit—has teamed up with UNEP, the Energy and Resources Institute of India and other organizations to fight air pollution and climate change.

Project Surya invented a cooking stove that requires less than half of biomass fuel and emits less greenhouse gases. Designed with a solar-panel powered fan, the stove improves

CONTINUED ON PAGE 1

the wind turbines project. Although he holds a diploma in electrical wiring, he had been jobless until the centre tapped his skills and gave him a job as a welder. Kennedy also collects fees from visitors who come to watch TV and movies at the Olosho-Ibor Community Power Centre’s social hall. “I am now able to take care of myself and my family,” he says.

The centre has also become a social hub for young people. Elijah Pulei, 18, spends most of his free time with his friends. “We now come to the centre and share ideas of projects that we can start off and are able to connect with the rest of the world by browsing the internet,” he says. Many young people have also learned computer skills at the centre, giving them an advantage as they seek employment.

The hospital dispensary can now boast of caring for more patients instead of referring them to other far-off hospitals, since it is able to offer drugs which require refrigeration, especially immunization drugs.

The Olosho-Ibor project offers a sense of ownership to the residents. It provides them opportunities to generate their own revenue and access two key social pillars: education and health. The residents have gone further to form a community-based organization to come up with other income generating activities such as soap making and renting out tents for events. Now they plan to build a safe house to protect Maasai girls whose parents plan to marry them off when they are too young.

Additional plans include installing another solar panel to provide an even wider area with power connection.

Changara Community Power Centre in western Kenya is another project similar to the Olosho-Ibor project, and also initiated by UNIDO. The centre also uses renewable energy with eight solar panels generating 1,800 watts. The community is now able to produce their own sunflower oil as an alternative to diesel fuel.

These community-based initiatives have enabled residents to access affordable and renewable sources of energy. They are examples of sustainable growth in the community that will not only benefit the residents, but the future generation.
combustion by supplying a small volume of high velocity air that increases the mixing of oxygen. An added bonus is the solar lamp, providing light from a renewable resource.

In March 2011, the Appropriate Wood and Solar Energy Network (AWSEN), a renewable energy community group in Kenya, received the improved cooking stoves from Project Surya. Ban Soon-taek, wife of the United Nations Secretary-General, who was the guest of honour at the hand-over ceremony of the cooking stoves said, “The United Nations is constantly seeking simple solutions to major problems that afflict many of us, particularly women.”

In Kiawamagira in Dagoretti, Anne Muringi Gikaria, AWSEN’s chairperson, and her colleagues demonstrated how the improved cooking stove worked. As Anne lit the stove with a handful of wood, the other women spoke of their experience with the new technology.

Mary Watiri, the eldest in the group, said she was relieved her eyes no longer flushed red or filled with tears while cooking. Anne added that to the relief of all the women, their children no longer frequented hospitals with respiratory complications. Then she brought a length of wood—10cm in diameter and one meter long—from her yard. Wood that previously might have lasted to cook one meal; the improved stove used the same amount for more than three days.

Using less fuel translated into significant savings. One of AWSEN’s members said that with the new technology she now spends USD 0.2 per day to buy kerosene to cook and light her home, down from USD 0.5 previously.

Project Surya’s cooking stoves reduced Kiawamagira’s contribution of greenhouse gases and improved the health of its inhabitants. Globally, each stove can slow down the rate of deforestation and climate change. While the women of AWSEN are a symbol of what is possible, Project Surya aims to have the stove locally manufactured so that this global solution finds a local home.

CONTINUED FROM PAGE 2

Vaccine cooler powered by nature

The major environmental concerns regarding all refrigeration technologies are their contribution to ozone layer depletion and global warming from substances in their refrigerant cycle or insulation foam.

When the international community moved to phase out the use of chlorofluorocarbon (CFCs) in the 1980’s, the chemical industry introduced replacement substances such as hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs). But HCFCs are also to some extend harmful to the ozone layer, and both HCFCs and HFCs are potent global warming substances.

Under the terms of the Montreal Protocol, CFCs were totally phased out as of 1January 2010 while HCFCs are scheduled to be phased-out worldwide by 2030. HFCs are included in the basket of greenhouse gases whose total emissions must be significantly reduced to protect global climate under the terms of the Kyoto Protocol.

As the world marks the 25th anniversary of the Montreal Protocol on Substances that Deplete the Ozone Layer this year; an international film crew is developing a short documentary on “Phasing out HCFCs- Taking on the challenge” to highlight the alternatives of HCFCs, including refrigeration equipment that is eco-friendly.

On 12 April, 2012, the film crew visited a remote area in the southern end of the Rift Valley in Kenya, Iloodokilani, a semi-arid area in Kajiado County that boasts of a medical center that is using a CFC free vaccine cooler powered by nature.

Iloodokilani is considered to be a hardship area with no electricity, but the
Kenya has made significant strides in the control of malaria in the recent past, but more investments are needed to sustain these gains, save lives and further reduce the country’s burden of malaria. This was the message at this year’s World Malaria Day national celebrations held at Mrima Primary School, Kwale County in the Coast region. The ceremony was presided over by the local Member of Parliament, Hon. Omar Zonga who delivered the speech of the Minister for Public Health and Sanitation, Hon. Beth Mugo. Hon. Zonga reflected on the country’s key achievements in malaria control: “Kenya has achieved a reduction in malaria specific illnesses and deaths in young children by between 44 and 52 percent, contributing to the overall reduction in child mortality by 36 percent and infant mortality by 31 percent.”

The Government has also removed user fees for malaria treatment in all public and faith-based health facilities, developed a policy on diagnosis before treatment to ensure rational use of medicines and improve treatment. In addition, a campaign on the use of insecticide-treated bed-nets was initiated, resulting in increased use...
More than 400 guests attended the observance of the 18th anniversary of the genocide in Rwanda on 12 April 2012, organized by UNIC Nairobi and the Rwanda High Commission.

In a message presented on behalf of the Minister of Foreign Affairs by the Assistant Minister, Professor Samuel Ongeri acknowledged the progress made by Rwanda since the genocide. “Rwanda has made substantial progress in stabilizing and rehabilitating its economy to pre-1994 levels…A milestone of Rwanda’s journey from a country devastated by war to a peaceful and stable one, is manifested by its ability to contribute troops to peacekeeping missions in the region.”

Stressing on the importance of the theme for the commemoration-‘Learning from history to shape a bright future’- the Charge d’Affaires of the Rwanda High Commission, Yamina Karitanyi, noted how the theme underpins the principle that had shaped post-genocide Rwanda. She emphasized how it was the responsibility of every Rwandan to provide any contribution they can to transform Rwanda into a great nation.

Presenting the UN Secretary-General’s message for the anniversary, the Director-General of the UN Office at Nairobi (UNON) Sahle Work Zewde reminded the audience how preventing genocide was a collective obligation.

“Let us continue to work together to ensure a future forever free of genocide. This would be the most fitting way to remember those lost in Rwanda 18 years ago, and to honour the resilience of the survivors,” the Secretary General emphasized.

During the ceremony, an arrangement of white carnations was laid at a table in honour of the victims of the genocide, and in order to symbolize the number of years since the tragedy, 18 candles were lit. The guests who attended the ceremony had an opportunity to write messages of hope to the people of Rwanda on a white cloth which was placed next to the flowers and the candles.

One of the highlights of the observance was a two-and-a-half-kilometres “Walk to Remember” by the guests, from the Rwanda High Commission to UNON and back to the High Commission led by youth from Rwanda. ‘Walk to Remember’, is an annual event where Rwandan youth march in remembrance and honour of those who died in the 1994 genocide.

As a continuation of activities to observe the anniversary, a week-long photo exhibition was mounted at the UN complex and attended by about 200 UN staff, members of the diplomatic corps, civil society organisations and other guests. A documentary film entitled Sweet Dreams was screened.
Kenyan scientists awarded for outstanding innovations

Five Kenyan scientists were recently awarded for their outstanding innovations during the First African Forum on Science, Technology and Innovation (STI) held in Nairobi from 1 – 3 April 2012.

Under the ICT and agriculture sector, Calvin Okello was awarded for inventing M-Shamba, a mobile application aimed at relaying timely agricultural information to farmers, while Lawrence Matolo from Machakos Technical Training Institution was awarded for a Multipurpose seed based absorber. In the industry category, Prof Richard Mibei, the Vice-Chancellor of the Moi University, was awarded for developing Tamidye, a product used in fabric dyes.

Under the ICT and security category, Mbeta Technologies Ltd. was recognized for innovating a car tracking and security system which uses a mobile phone to track and show the actual geographical location, speed and travel direction of a stolen vehicle. Elijah Kupata was awarded for developing a 3G mobile remote camera, which detects the presence of an intruder in one’s house or property and then sends a live video to the home owner thorough a 3G enabled mobile phone.

The First African Forum on STI was organized by UNESCO, the African Union Commission, the African Development Bank, the United Nations Economic Commission for Africa, and the Association for the Development of Education in Africa and the Kenya Ministry of Higher Education, Science and Technology. The Forum was aimed to highlight the need to invest in STI to foster sustainable growth and development, and provide job opportunities for youth and women. It included an Expert’s Meeting on 1 – 2 April and a Ministerial Conference on 3 April.

The awards were presented by the President, Mwai Kibaki of Kenya during the opening session of the Ministerial Conference. Other key guests present at the opening session were the Director-General of UNESCO, Irina Bokova, the President of the African Development Bank, Donald Kaberuka, the Deputy Chairperson of the African Union Commission, Erastus Mwencha, and ministers of Science and Technology, Finance and Planning and Education from various countries in Africa.

In his speech, President Kibaki noted that though Africa was currently experiencing rapid economic growth, there was urgent need to ensure that innovative technology catapulted the growth to another level. He advised that in order for Africa to compete effectively on the global market, the continent must be able to develop technologies that will trigger Africa’s industrial revolution.

Ms. Irina Bokova highlighted the initiatives UNESCO is undertaking to promote science, technology and innovations (STI) in Africa. She elaborated on how UNESCO is working with more than 20 African countries to review existing STI policies and formulate national frameworks. The agency is also strengthening the capacity of researchers, policymakers, development partners and the private sector in Kenya, Rwanda and Uganda and in seven countries of the Economic Community of West Africa. The organization is also actively promoting links between science, technology, innovation and industry under the University Science Partnership Programme on the governance of science and technology parks.

At the close of the Forum, the African ministers of Science, Technology; Finance and Planning and Education adopted the Nairobi Ministerial Declaration, which was read by Professor Margaret Kamar, Kenya’s Minister of Higher Education, Science and Technology. In the communiqué, the ministers committed to, among other steps, strengthen higher education and research institutions including research infrastructure, contribution to the initiatives aimed at promoting STI for development in Africa, support the full establishment and management of the Pan African University, the African Observatory for Science, Technology and Innovation and the African Union’s research grants.
A Consultative Conference of the Association of African Aviation Training Organizations (AATO), organized by the International Civil Aviation Organization (ICAO) and hosted by the Kenya Civil Aviation Authority was held in Nairobi, Kenya from 2 to 4 April 2012. The Conference was officially opened by the ICAO Secretary-General, Mr. Raymond Benjamin, and also addressed by the Director General of the Kenya Civil Aviation Authority, Col (Rtd) Hillary Kioko.

The Conference reviewed and made recommendations on the draft constitution and organizational structure of AATO. In addition, an interim Governing Council was established.

The Conference brought together 150 delegates from twenty-three States representing twenty civil aviation authorities, eight aviation services providers, twenty-eight aviation training organizations, and six regional and international organizations.

After the Conference the ICAO Secretary-General, accompanied by the ICAO Regional Director for Eastern and Southern Africa, Mr. Meshesha Belayneh, met with Staff of the Regional Office and commissioned the Organization’s offices at the New Office Facility at UNON.

****