

ENVIRONMENT AND SUSTAINABILITY

E & S Newsletter 8/2010

16.08.2010

The newsletter is issued monthly

Environment and Sustainability (E & S) is a non-profit communication platform to disseminate information on water, sanitation, clean energy and other environmental information on the Philippines, with the aim of helping business and industry, local governments and communities move onto a path of environmental sustainability, eco-innovation and eco-profits.

See what's new on our web sites: <http://www.urbanmgcenter.org> , www.envigor.net and www.philccttis.org

In the August 2010 issue of the E & S Newsletter:

>>> Pasay City: **BFAR Promotes Sustainable Fish Farming at Agrilink 2010**

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>>> Geneva: **UN issues declaration that water and sanitation is a human right**

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>>> London: **Bacolod Foundation a finalist at the BBC World Challenge**

>>> Makati City: **EU Switch Asia now in the Philippines implementing SCP projects**

The Delegation of the European Union to the Philippines currently sponsoring the projects of the EU SWITCH Asia in the Philippines.

>>> Marikina City: **A Park by the River**

Beneath a recreational park is an underground wastewater treatment plant that processes sewage flowing into the Marikina River.

>>> Makati City: **"GREENTECH 2011: Sustainable Enterprises, Eco-Innovation and Eco-Profits"** a business conference currently being developed by Mapua Tech Serv and the Center for Urban Management and Environment with the European Chamber of Commerce in the Philippines as co-organizer , focuses on green engineering solutions for greater ecological profits designed for CEOs, Presidents, engineering professionals, and managers of manufacturing and service firms, academic institutions and research organizations.

>>> Tokyo: **The Spread of Solar Power in Japan**

The article discusses the history of solar power in Japan and its spread with strong LGU support

>>> Scotland: **Siemens to supply 68 wind turbines to Scotland**

Siemens Energy has received an order for the supply of 68 wind turbines with a capacity of 2.3 MW each for the Scottish onshore wind park Griffin. Purchaser is SSE Renewables, a subsidiary of the energy provider Scottish and Southern Energy (SSE). The Griffin wind power project is located 30 km northwest of Perth in the Scottish Highlands. Upon its completion in 2012, the wind power plant will have a capacity of 156 MW and is expected to generate enough power to supply over 80,000 homes. more...

>>> Makati City: **"STRATSAN II: Preparing a Local Sanitation Plan"**, another course offering scheduled on the last week of March 2011 under the Environmental Governance Resources Series

>>> Wuppertal: **International Economics of Resource Efficiency**

A book on challenges and chances at handling resources

>>> **Environmental Governance Associates** now organized as our learning exchange circle.

BFAR promotes sustainable fish farming

The Bureau of Fisheries and Aquatic Resources (BFAR) is reaffirming its commitment to promote sustainable fish farming throughout the country. As part of this commitment, it will be holding seminars, live fish display and other interactive activities at the Agrilink 2010 which will be held on October 7 to 9 at the World Trade Center Metro Manila, Pasay City. BFAR's intensified activities in promoting fish production is brought about by a steadily increasing demand for fish and aquaculture products, both for the local market and export destinations like the United States, Japan and the European Union.

BFAR's recent projects focus on aquaculture practices that address the challenges of quality and safety in fisheries products, climate change and globalization, acceptability standards in international markets and efforts to increase the overall sustainability and productivity of fish farming communities.

BFAR's Director Malcolm Sarmiento explained, "Now that we have the expertise to raise major aqua-farmed commodities like shrimp, tilapia and milkfish, we will focus on the social and economic potential of high-value species such as shellfish, crab, sea cucumber, abalone, scallops, seaweed and groupers, as well as backyard cultures of sea urchin. For instance, Tawi-tawi is already harvesting 361,00 metric tons of seaweeds annually." BFAR's master plan includes ongoing construction of hatcheries of high-value marine species, as well as improvements of existing private hatcheries for their brood stock. They will also focus on aquaculture propagation by catching breeders from the wild using eco-friendly technologies.

Sarmiento added: "Traditionally, fishers use a trial-and-error checking method for catching species like lapu-lapu, which sometimes end up killing the fish. Right now, we are currently implementing a pilot brood stock development project in Dipolog. We will be using underwater cameras that can go deep to help the fishers determine what species can be caught and to determine the proper sequence of bringing the fish traps to the surface.

Developing mariculture park networks, which have been unveiled in Tawi-tawi and nearby islands of Sibutu and Sitangkai, is also part of BFAR's master plan to promote the propagation of high-value fishes, particularly groupers, sea urchin and abalone. Sarmiento added: "These projects will create more livelihood opportunities and increase the fishermen's income. BFAR envisions these mariculture parks as networks serving as trading posts for high-value fisheries, which will enable vessels with 'live wells' to ply nautical highways to pick up live fish enroute to local and international markets."

(Source: Manila Bulletin Online, 16 July 2010)

UN Issues declaration that water and sanitation is a human right

The right of every human being to safe drinking water and basic sanitation should be recognized and realized.

The United Nations estimates that nearly 900 million people live without clean water and 2.6 billion without proper sanitation. Water, the basic ingredient of life, is among the world's most prolific killers. At least 4,000 children die every day from water-related diseases. In fact, more lives have been lost after World War II due to contaminated water than from all forms of violence and war.

This humanitarian catastrophe has been allowed to fester for generations. We must stop it. Acknowledging that access to safe water and sanitation is a human right is crucial to the ongoing struggle to save these lives; it is an idea that has come of age. It was first proposed a decade ago by civil society organizations, like Green Cross International, which I helped establish in 1992. Today, it is a mainstream demand that many governments and business leaders support. That is a great achievement.

This month, for the first time, the U.N. General Assembly is preparing to vote on a historic resolution declaring the human right to "safe and clean drinking water and sanitation." It is a pivotal opportunity. (Source: New York Times, by Michael Gorbachev)

BACOLOD FOUNDATION A FINALIST IN BBC WORLD CHALLENGE

BACOLOD CITY, Philippines – Bacolod's Alternative Indigenous Development Foundation Inc. has been named one of 12 finalists in the BBC World Challenge 2010 for perfecting an indigenous hydraulic ram pump that brings water to remote hillside villages without the use of electricity.

"Using the power of a river's flow to literally push water uphill without any other energy input, it's proving to be a boon for poor villagers living in mountainous regions," BBC said on its Web site <http://www.theworldchallenge.co.uk/index.php>.

The ram pump can save both hours of back-breaking work carrying water and cash when expensive water pumps are repaired, it added. The pump perfected by the Alternative Indigenous Development Foundation, Inc. (AIDFI), which is based in Barangay (village) Mansilingan, Bacolod City, was selected out of more than 800 nominations worldwide, Thiago Meister, BBC World News marketing manager, said in a letter to Auke Idzenga, AIDFI chief executive officer.

Idzenga said BBC would come soon to film the hydraulic ram pumps at work in Negros Occidental. The winner will be decided by public voting, which can be done online on www.theworldchallenge.co.uk from September 27 until November 12, he said.

"Despite it being an old technology and having huge potentials, the ram never became widespread because of wrong timing in history. Commercial 'antique' looking models are hard to get and the other alternative models are inferior in quality," he added.

"AID Foundation developed a perfect working model with the best from both which can be made in many sizes and piece by piece. We installed them ourselves in 170 villages, exported ram pumps and offered technology transfer," he said. In the Philippines, AIDFI has installed ram pumps in 170 upland villages benefiting 50,000 people with free flowing water, he said.

It has also transferred its technology to countries like Afghanistan and Nepal, he added.

Source: www.inquirer.net , Philippine Daily Inquirer, by Carla Gomez, July 27, 2010

EU SWITCH Asia now in the Philippines

EU Switch Asia is currently implementing 3 projects in the Philippines; namely: 1) SMART Cebu which focuses on assisting furniture making companies in Cebu in developing their products for European markets; 2) Green Philippines Islands of Sustainability, a regional partnership, consultation and training programme attempting to switch the micro climate through sustainable production for the industries within Metro Manila and CALABARZON in the country; and 3) Zero-Waste Resorts in the province of Palawan.

The project directors of EU Switch Asia abovementioned will be speaking at GreenTech 2010, a business conference to be conducted on the last week of March 2010 by Mapua Tech Serv in association with the Center for Urban Management and Environment with the European Chamber of Commerce in the Philippines (ECCP) as co-organizer, and in cooperation with the Philippine Business for Environment and the Delegation of the European Union to the Philippines.

The EU Switch Asia Programme is being funded by the European Union.

A Park by the River

Beneath this recreational park is an underground wastewater treatment plant that processes sewage flowing into Marikina River

- The Olandes Sewage Treatment Plant (STP) in Marikina City can process up to 10 million liters per day of domestic wastewater from the homes of some 40,000 residents.
- The project aims to reduce the pollution in Metro Manila waterways and the Manila Bay, as well as reduce health hazards caused by human exposure to sewage.

MARIKINA CITY, PHILIPPINES—If not for square metal manhole covers laid strategically on the ground, a stretch of greenery on an easement by the Marikina River in Barangay Industrial Valley Complex (IVC) looks for all the world like a park where children run around on balmy afternoons.

The area actually hosts a no-nonsense underground wastewater treatment facility, the Olandes Sewage Treatment Plant (STP), which can process up to 10 million liters per day of domestic wastewater from the homes of some 40,000 residents in the surrounding communities.

The wastewater from the communities surrounding the Olandes STP flows into the underground facility and undergoes the following cleaning process before it is released into the Marikina River:

- Solids are screened and de-gritted to separate the debris from the liquid
- The filtered liquid is aerated in an equalization tank and infused with oxygen
- Micro-organisms degrade the remaining organic matter in the liquid
- The liquid undergoes further clarification, disinfection, and chlorination

At the end of the process, the water is so clean that local residents have taken to bathing in the outfall, catching the clear water before it joins the river flow.

The black sludge, a final end-product of the treatment process, is fed into a dehydrator to squeeze out any excess water. It is then hauled by a contractor to Tarlac where it is used in demo farms for sugarcane cultivation to condition the soil damaged by lahar spewed by Mt. Pinatubo when it last erupted in 1991. With a \$63 million loan from the World Bank under the Manila Third Sewerage Project (MTSP), Manila Water Company (MWC), a private water concessionaire, has built several sewage treatment plants in Marikina City, San Mateo in Rizal, Magallanes in Pasay, and the FTI Compound in Taguig City. Rey Ancheta, World Bank Operations Officer for Sanitation, explains that the project aims to reduce the pollution in Metro Manila waterways and the Manila Bay, as well as reduce health hazards caused by human exposure to sewage by expanding the septage-management approach of the Metropolitan Waterworks and Sewerage System (MWSS).

This is in line with the requirements of the Clean Water Act of 2004, the Philippine Medium Term Development Plan targets from 2004-2010, and a recent Supreme Court ruling ordering government to clean up Manila Bay.

When completed, the project will provide sewerage services to 3.3 million residents the cities of San Juan, Mandaluyong, Marikina, Pateros, Pasig, Taguig, some towns in Rizal and parts of Makati and Quezon City. In conjunction with other projects in the pipeline for the Marikina River Basin, the Olandes STP helps the city in its drive to clean up the 11-kilometer river.

Today, while the river still overflows during heavy downpours, what used to be a garbage dumping ground reeking with domestic and industrial waste is a flowing waterway lined on both banks with parks and playgrounds.

(Source: www.worldbank.org)

NATIONAL GREENTECH 2011: Sustainable Enterprises, Eco-Innovation and Eco-Profits

The European Chamber of Commerce in the Philippines is a co-organizer of the Mapua Tech Serv and the Center for Urban Management and Environment for a business conference entitled, "GREENTECH 2011"

scheduled on April 2011. The focus of the conference is on green engineering solutions for greater ecological profits and resource efficiency designed for CEOs, Presidents, and managers of manufacturing and service firms, academic institutions and research organizations. Watch out for this upcoming event and register in advance at www.envigor.net.

(Source: CUMEINC Newsroom)

The Spread of Solar Power Generation in Japan

This newsletter introduces the history, measures, and the current status of photovoltaic (PV) power generation in Japan, which carries high expectations with it as a clean energy source to help realize a more sustainable society.

History of PV Power Generation in Japan

The first solar cell was invented in the United States in 1954, and a prototype model of a solar cell was made in Japan in 1955. The nation's first PV system with a generating capacity of 70 watts was installed in 1958 at a radio relay station of the Tohoku Electric Power Co. located on top of Mount Shinobuyama in Fukushima Prefecture. The Sharp Corp. started researching and developing PV power generation in 1959, began commercial production in 1963, and launched its line of solar-powered calculators in 1976.

In 1978, researchers began connecting PV systems to the existing power grid. From 1990 to 1992, a compact PV generation system was developed for easy installation on houses, and legislation was improved to allow power companies to buy surplus electricity back from homeowners. In 1992, Sanyo Electric Co. started the practical application of installing PV generation systems on individual houses. With this system, which includes reverse power flow, surplus electricity generated at individual houses is sent to electric companies. Japan became the world leader in the total production of solar cells in 1999.

The total installed amount of PV power generation in Japan by 2004 was 1.13 million kilowatts (kW), the largest in the world. Germany was on the same track, and its cumulative installed capacity reached 1.43 million kW in 2005, moving Japan, with 1.42 million kW, into second place. Nevertheless, the annual world production of solar cells in 2005 was 820,000 kW, with Japanese companies producing almost 50 percent.

Reducing production costs is essential to the expansion of PV power generation, and technical development has contributed the most in this regard. For example, in 1994 the installation cost per kilowatt and generating cost per kilowatt-hour (kWh) were 2 million yen (U.S.\$20,200) and 140 yen (\$1.40), respectively, and in 2005 these fell to 665,000 yen (\$6,700) and 45 yen (\$0.45).

The New Energy and Industrial Technology Development Organization (NEDO) released a report titled PV Roadmap 2030 (PV2030) in 2004, which laid out targets for power generation costs of (1) the equivalent to the electricity charge for residential use by 2010, which is 23 yen (\$0.23) per kWh; (2) equivalent to that for business use by 2020, which is 14 yen (\$0.14) per kWh; and (3) equivalent to that for industrial use by 2030, which is 7 yen (\$0.07) per kWh. NEDO also expects that PV power generation will be competitive with other energy resources by 2030.

<http://www.nedo.go.jp/english/archives/161027/161027.html>

This road map sets a goal of achieving cumulative introduced capacity in the range of 100 gigawatts (GW) by 2030, at which time PV power generation could supply about 50 percent of residential electricity consumption (about 10 percent of total electricity consumption). The share of PV power generation compared to all electricity generated was below 0.1 percent in 2002 in Japan.

Support for Solar Power Generation

In Japan, solar power is one of the "new energy sources" designated by the Act on the Promotion of New Energy Usage, and the government supports research and development activities, including research on the wider use of PV systems. The law defines new energy sources as renewables that are essential as alternatives to petroleum and that are technically viable but not widely

used due to present cost inefficiency. It designates a total of 14 kinds of sources, including solar, wind and biomass, as new energy sources.

In 2003, the Renewables Portfolio Standard Law came into force, which requires electric companies to

(Source: Japan for Sustainability Newsletter #070)

Siemens to supply 68 wind turbines to Scotland

Siemens Energy has received an order for the supply of 68 wind turbines with a capacity of 2.3 MW each for the Scottish onshore wind park Griffin. Purchaser is SSE Renewables, a subsidiary of the energy provider Scottish and Southern Energy (SSE). The Griffin wind power project is located 30 km northwest of Perth in the Scottish Highlands. Upon its completion in 2012, the wind power plant will have a capacity of 156 MW and is expected to generate enough power to supply over 80,000 homes.

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Source: Sun and Wind Energy Newsletter, 8/2010

STRATSAN II now being scheduled for March 2010

STRATSAN II: Preparing a Local Sanitation Plan, jointly organized by the Mapua Tech Serv and the Center for Urban Management and Environment, is scheduled to be held on the last week of March 2011 to be held at 3/F, AV Room, Mapua IT Center, Sen. Gil Puyat Avenue cor. Nick Garcia (formerly Reposo St.).

Those interested to attend this course should send their registration form to ycvelez@gmail.com or send by fax to Mapua Tech Serv at (632) 811 6443 and avail of an early bird discount.

(Source: www.envigor.net)

International Economics of Resource Efficiency A book on challenges and chances at handling resources

Human societies face a threatening future of resource scarcity and environmental damages. The book "International Economics of Resource Efficiency. Eco-Innovation Policies for a Green Economy", edited by Raimund Bleischwitz, Paul J. J. Welfens and ZhongXiang Zhang addresses the challenge of turning these risks into opportunities and policies. It is a collection of high level contributions from experts of sustainable growth and sustainable resource management. Focusing on economics, sustainability, technology and policy, the book highlights system innovation, leapfrogging strategies of emerging economies, possible rebound effects and international market development. It puts natural resources centre stage and will make an important contribution to achieving the goal of a 21st century Green Economy. For further information please refer to the following link: http://www.wupperinst.org/en/publications/entnd?beitrag_id=1349

Source: Wuppertal Institute Newsletter

Environmental Governance Associates now organized as our learning exchange circle.

All course delegates, resource speakers, consultants and partners attending ENVIGOR courses are now organized informally as the Environmental Governance Associates, our learning exchange circle. Non-course delegates interested in joining our learning exchange circle can send their information sheet and email address to ycvelez@gmail.com .

We hope you enjoyed this issue of the Environment & Sustainability Newsletter.

We will be delivering more information every month from the Philippines on activities and developments in the water, sanitation, and renewable energy sectors. Please visit our website for the latest news! <http://www.envigor.net> and www.urbanmgcenter.org

And please send your comments or articles that you wish to contribute for our next issue of E & S newsletter to ycvelez@gmail.com or info@urbanmgcenter.org

We will be back next month with more news.

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