



Water Link & Solid Waste

Newsletter 11

January 2008



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Dear friends and colleagues,

Manigong bagong taon!

The last months of the past year were pretty busy, and the early months of this year promise to be similarly buzzing with activities – plus a new horizon opening up in the south: the very successful visit by Ms. Henke of BMZ and the subsequent re-orientation of Philippine-German cooperation. In line with the Philippine Medium-term Development Plan, BMZ activities will concentrate on Southern Visayas and Mindanao, with specific emphasis on poverty reduction and peace building.

In Northern Mindanao, the demands have not been identified yet. But we have to be ready to think differently, beyond present limitations. New planning will require a new set of minds, if we want to address real needs felt by the population.

One of the lessons we learnt in all of our endeavours, projects and programs is the absolute necessity of political support, without which there can be no success, let alone sustainability. This Program has made such experiences in Bantayan and in Palawan. In both locations, the projects were discontinued when the political administration chose new, different priorities despite the obvious demand. Let us hope that the new efforts will not end as victims to the worst fate that a project can suffer: to fall out of political fashion.

Hanns-Bernd Kuchta

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RP-Germany Development Cooperation Agreement for Visayas and Mindanao signed

The inter-governmental negotiation between the Philippine and German governments concluded last October 2007. The agreement which was signed by NEDA Deputy Director General Rolando G. Tungpalan and Kerstin Henke of the Federal Ministry for Economic Cooperation and Development put emphasis on development interventions in Visayas and Mindanao.



Ms Kerstin Henke, BMZ, at a lunch in her honour with German Ambassador Christian-Ludwig Weber-Lortzsch

The cooperation agreement is aimed at reducing poverty as well as promoting and building peace in Southern Philippines. In particular, the cooperation shall address the underlying causes of poverty and conflict through improvement of economic, social, ecological and political conditions.

Apart from the on-going activities supported by the cooperation in VizMin, CARAGA region in Mindanao is the initial regional focus of the development assistance looking at decentralization and local governance as entry points of initiatives. Furthermore, close collaboration with other ODA players shall be strengthened to create a more synergetic impact of interventions.

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Reminiscing the Good Old Days

After a span of nine years, the original staff of Pilipino-Aleman Proyecktong Tubig sa Palawan (PALTUBIG) reunited and met with former Project Manager Hanns-Bernd Kuchta on the evening of October 4, 2007 at Kalui Restaurant in Puerto Princesa City. Engr. Kuchta served the project from the beginnings in 1992 until December 1998, when it became the cornerstone of the present DILG-GTZ Water and Sanitation Program. Twelve former Paltubig staff got together, some having travelled for hours all the way from their hometowns down south, updated of each other's current activities, and reminisced those good old days.

PALTUBIG, jointly implemented by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and the Provincial Government of Palawan, served the rural populace of the seven municipalities in

Southern Palawan with safe and reliable drinking water and sanitation facilities. From its inception in 1992 until its assumption into the still on-going Water and Sanitation program, PALTUBIG exerted extensive efforts in organizing project beneficiaries to ensure sustainability of the physical facilities installed. Under the leadership and with the full support of the late Gov. Salvador Socrates, the ideas of the Local Government Code were introduced into rural water supply for the first time. The numerous BWSAs and the large number of wells in operation are visible proof of the project's success. Beyond the provision of drinking water supply and sanitation facilities, the project prioritized capacity-building in the Provincial Government by training numerous staff for the decentralized rural water supply in remote areas of Southern Palawan.

In fact, many Paltubig staff experts from Palawan helped establishing the present Water and Sanitation program's infrastructure in the locations of San Mariano, Isabela; Lagawe, Ifugao and Bantayan, Cebu.



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Raw Water Pricing Project Holds Handing Over Ceremony

A simple handing over ceremony for the Raw Water Pricing: Philippines Project was held last 18 December 2007 at the Sky Lounge of the Linden Hotel in Ortigas Center, Pasig City, M.M., Philippines.

The event was a symbolic transfer of functions from the Raw Water Pricing Project Team of GTZ-Rodeco to the (project) counterpart staff of the National Water Resources Board (NWRB), who will now oversee actual implementation of the pricing system in the Municipalities of Manjuyod and Valencia in the Province of Negros Oriental.

Commissioned by the German Technical Cooperation (GTZ), the Project was carried out by RODECO Consulting, GmbH, a German consulting firm with extensive expertise in the water sector. The project's time frame was from July 2005 to December 2007 and

focused on elaborating pricing mechanisms for raw water resources management and promoting good water governance.



Provincial Partners from Negros Oriental headed by Vice-Governor Jose A. Baldado (front photo). Photos from right to left: Municipal Mayor Rodolfo V. Gonzalez, Jr., Vice-Mayor Diodoro L. Olasiman & Sangguniang Bayan Presiding Officer, Mr. Earl Tale - Municipal Administrator, Mr. Godofredo Anqui - Municipal Planning & Development Officer, Mr. Conrado Dinampo - Municipal Waterworks Supervisor

The overall objective was to improve supervision and environmentally sound management

of raw water resources starting in two pilot sites. This objective was to be achieved by (1) a methodical review and selection of a tariff alternative for raw water pricing, (2) support in the restructuring of NWRB as a regulatory body, (3) exemplary testing and introduction of a raw water tariff in two pilot sites, and (4) the provision of advice in the elaboration and amendment of the necessary legal framework.

In attendance were Mr. Ramon B. Alikpala, NWRB Executive Director, Atty. Nathaniel C. Santos, NWRB Deputy Executive Director, the members of the NWRB project counterpart staff, representatives from the National Economic and Development Authority, as well as members of the Project Team led by Atty. J. Norman R. Hocson. The Province of Negros Oriental was ably represented by its Vice-Governor, the Hon. Jose A. Baldado, Hon. Rodolfo V. Gonzalez and Hon. Diodoro Olasiman, Municipal Mayor and Vice-Mayor of Valencia, respectively.

Gracing the affair were several prominent GTZ officials headed by no less than Mr. Jochem Lange, GTZ Country Director, Mr. Hanns-Bernd Kuchta, GTZ-Water Program Director, and Ms. Claudia Wölk, GTZ-Project Supervisor. Likewise, Rodeco was represented by the company's Managing Director, Ms. Gabriele Holder.

Aside from individual messages from the GTZ officers, Rodeco and NWRB, the handover ceremony was marked by the presentation of the "Raw Water Pricing Implementation Manual" to Exec. Dir. Alikpala. This manual is designed as a practical guideline and reference tool for future implementation of raw water pricing in the country. Preparation of the manual was a product of the combined efforts of the project team, NWRB counterpart staff and members of the respective Municipal Planning and Development Offices in the pilot municipalities.

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Advanced Training Course on Solid Waste Management Conducted for DBP Officials and Staff

Seventy-five (75) officials and staff of DBP attended the Advanced Training Course on Solid Waste Management conducted in Mindanao, Visayas, and Luzon. The three (3) training runs were held in Cagayan de Oro City on August 14-17, 2007, Cebu City on November 13-16, 2007, and Makati City on November 20-23, 2007 to accommodate participants from the five (5) Super Regions.

The training was conducted to enhance DBP's internal capabilities in the technical evaluation of loan applications from LGUs and private enterprises for SWM projects. It is part of the technical assistance component of the Credit Line for Solid Waste Management (CLSWM) with funding from the Kreditanstalt für Wiederaufbau (KfW). This DBP-KfW partnership aims to assist the LGUs in developing and implementing effective and sustainable solid waste management (SWM) projects by providing sub-loans to finance investments in SWM projects for LGUs.



Handing-over of the "Raw Water Pricing Implementation Manual". (Photo: left to right): Atty. J. Norman R. Hocson, Team Leader Raw Water Pricing Project; Mr. Hanns-Bernd Kuchta, Program Director GTZ Water and Sanitation Program; Mr. Jochem Lange, GTZ Country Director; Ms. Florimel Balbedina, NWRB Counterpart Staff Focal Person Raw Water Pricing; Mr. Ramon B. Alikpala, Executive Director NWRB; Ms. Claudia Wölk, GTZ Supervisor Raw Water Pricing Project

The primary objective of the training course was to guide the participants through the procedures in conducting technical evaluation of SWM projects leading to the preparation of Project Evaluation and Endorsement Report (PEER) and in conducting Environmental Performance Monitoring (EPM) on existing solid waste management facilities.



Luzon Run – Tiara Oriental Hotel, Makati City (Caption)

To enhance learning, half of the course was spent in group work for the preparation of PEER for SWM projects that included a Material Recovery Facility (MRF), acquisition of waste collection and transport equipment, closure and rehabilitation of dumpsite, and a proposed sanitary landfill. The EPM was conducted on SWM facilities that were in the proximity of the training venue, such as the Pilot MRF of Iligan City (for the Mindanao run), the mobile garbage bins and compactor trucks of Mandaue City (for the Visayas run) and the Payatas Solid Waste Disposal Facility in Quezon City (for the Luzon run). Site visit was conducted for the preparation of the EPM Report on the subject facility.

The resource persons for the training course were composed of the TA consultants of KfW-CLSWM and an official from the regional office of the Environmental Management Bureau of the Department of Environment and Natural Resources (EMB-DENR) where the training was conducted. The DBP Program Development facilitated the training course in cooperation with the DBP Training Center.

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San Carlos City SWM Team participation - SWAPP Conference 2008

On November 19-21, 2007, the Solid Waste Management Team through the German Development Service/DED partner support attended the SWAPP Conference held in Pines View Hotel, Baguio City with the theme dubbed "Solid Waste Health and Sanitation for a Livable Community."



Wastewater Treatment facility of Baguio City

The opening day of the said conference was graced by no other than BAGUIO City Mayor Reinaldo Bautista Jr. and SWAPP president, Bais City Mayor Hector Villanueva.

Also present during the said occasion were former DENR Secretary Bebet Guzon and NSWMC Executive Director, Atty. Zoilo Andin.

The San Carlos City's Solid Waste Management Team presented the Eco-Center project which attracts attention to participating LGU's nationwide. Some were inquiring possible cross visits in San Carlos City for possible project study and repli-cation. Likewise, the team had participated the scheduled study tour which focuses on Baguio City's SWM initiative. The tour were anchored on site visits of various facilities; controlled dump with composting facility and waste water treatment plant of Baguio City.



Study Tour participated by the Solid Waste Management Team in Baguio City's Material Recovery Facility (MRF), Composting

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Solid Waste Management Office (SWMO)
City Hall, San Carlos City LGU
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GTZ joined the Gawad-Kalinga Expo 2007

Gawad-Kalinga (GK) launched its biggest expo last October 26-28, 2007 at the SM Mall of Asia entitled **GK1World. One Hope. One Vision. One Global Army Against Poverty.**

Among the activities during that day were (1) forums for GK programs (shelter, environment, health, education and productivity) (2) Bayani Marathon, KB Olympics and Paraisong Pambata (3) Salo-salo ng mga Bayani and Gabi ng Parangal (4) Martsa ng mga Bayani and GK1MB Concert. The expo was attended by over 600 partners and advocates of GK.

An Eco-village site was set-up during the expo, headed by the former DENR Secretary Elisea Gozun. Gawad-Kalinga which aims to provide 700,000 homes to homeless Filipinos plan to transform the existing GK villages into eco-villages by incorporating more environmental components.

This includes sitting homes to consider the natural flow of wind and the sunlight, rain water harvesting, sewage/wastewater treatment, waste segregation and among others.

The miniature model of the 1st constructed wetland which treats domestic wastewater in Bayawan City, Negros Oriental was displayed at the Eco-village. The wastewater treatment plant is part of the Fisherman's Village constructed by GK together with the City for the fisher families who were relocated due to the construction of the new coastal road. The housing project provided 704 housing units and social infrastructures (health center, multi-purpose hall, etc) for the relocated fisher families.

With its continuous effort in providing local government units with affordable and sustainable sanitation options, GTZ presented as well the model of the urine-diversion dehydrator toilet (UDDT). UDDT is one of the ecological sanitation (ecosan) technologies being promoted by GTZ together with the constructed wetlands. To date, 30 UDD toilets were implemented in Bohol and 50 UDD toilets in Negros Oriental.

If you are interested to know more about the projects of GTZ Water and Sanitation Program, please email us at gtzwater@info.com.ph or log on at www.watsansolid.org.ph

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With Our Own Hands: Promoting Ecological Sanitation in Mindanao

The idea of ecosan was first introduced to the Local Empowerment Foundation (LEF), a grassroots NGO I am directing by one of our partners, the German Doctors for Developing Countries based in Frankfurt. In one of the visits of its Project Officer, Mr. Peter Wychodil, he brought with him a piece of paper with some diagrams about ecosan. The diagram was not very clear but I got the web address and conducted a search and came in contact with Ms. Ulrike Lipkow, a German technical expert from GTZ. I got also some information that a nearby university here is promoting ecosan with their peri-urban gardening project. With this serendipitous confluence of events, our ecosan project came into being.

The present practices in defecating and relieving oneself here are; a) using water-sealed toilets common in lower to upper middle class homes, b) using an "antipolo" system which is no more than a hole in the ground and a piece of wood or bamboo planking at the mouth for people to sit, and, c) just doing it under the open sky.



Negative consequence of defecating and urinating anywhere is well documented and we can see it in scrawny children with bloated stomachs which is a sign of infestation of all kind of worms be it tape, round, ring or even schistosomiasis. Small children bear the brunt since they like to play hide and seek and explore the nooks of the neighborhood and it is here where a mound of feces often sits and are trodden upon by innocent feet. Parasites are freely exchanged in the water table as feces and urine seeped through the numerous open wells to be drunk and partaken by all including the salmonella, helminth ova and enteric viruses associated with it.

How we promote ecosan

Promoting ecosan in our areas is fraught with inaction, benign distrust and resistance simply because it challenges local values and age-old practices. One problem also is the lack of political will (and budgets!) of the local government units in pursuing waste management here. Fortunately for us, the German Agency for Technical Cooperation (GTZ) has an entire website promoted to ecosan and we make full use of this. The steps on how to start an ecosan initiative is particularly helpful although during our implementation we found out that the steps outlined consisting of awareness, launching, baseline study, social preparation, decision making and implementation is not necessarily linear but is an iterative, recurring process, with no particular order at all. For example, awareness-raising should not be seen as a one-shot deal but should be done all throughout. Ms. Ulrike Lipkow also sent us practical tips and communication materials appropriate for our needs.

Here I can cite some of our success factors;

- a. Identification and mobilization of local promoters – the local promoters comes from the rank of innovative farmers in the locality whom we think have the leadership capability and stamina to promote ecosan to his or her neighbors.
- b. Use of incentive under our water, agro-forestry, nutrition and development (WAND) project. Our WAND project is an award-winning initiative (Development Marketplace 2004)

and focuses on providing a package of assistance to the small farmer consisting of support to their need for water, need to conserve soil and water via agro-forestry, promotion of vegetable gardening and organizing them into functional neighborhood clusters.

c. Use of multiple teaching and learning techniques - We use multiple teaching methods like lectures, field demonstration, bringing them to see actual ecosan operation, using posters and simple illustrated manuals in the local dialect (Cebuano). Added to this we added a senior promoter coming from our staff to focus closely on capacity-building activities.

d. Establishing communal ecosan models. We constructed one ecosan toilet in the LEF main office in Libertad and ask all the staff to use it. In this way, farmers coming to the office to conduct their business or attend trainings will be able to see that we ourselves are practicing what we are preaching. We also constructed communal ecosan toilets in 4 barrios in Misamis Oriental.

Some Recommendations

At this point, some of the recommendations that we can offer are the following;

- a. In terms of policy, for the government to come up with a pronouncement that will institutionalize ecological sanitation in schools and in public places.
- b. For the department of education to institutionalize ecosan teaching in the schools.
- c. Our present practice is to promote ecosan at the communal level since cost of constructing one is too high for a household to consider. One direction should be for ecosan to be adopted at the household or family level with NGO and local government support and incentive.
- d. In the arena of research, more research should be done in the area of actual cost-benefit measurements using multi-criteria analysis to determine the actual benefit (and cost) in using ecosan toilets versus in just defecating and relieving under the hot sun.

Cora Z. Sayre

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DILG - GTZ pledge support to International Year of Sanitation (IYS) 2008

The joint Water and Sanitation Program of DILG-GTZ together with other national agencies, non-government organizations, academe and partners from the WATSAN Sector gathered last **January 21** for the **Unang Bugso para sa Kalusugan at Kapaligiran**.

Inspired by the theme "Building a Strong Nation through Sustainable Sanitation", **Unang Bugso** marks the first series of activities to culminate in the Visayas-Mindanao Regional Sanitation Summit planned for April 2-3, 2008 in Dumaguete City, Negros Oriental.



Press Conference of "Unang Bugso..." led by USEC Austere Panadero of DILG and Engr. Hanns-Bernd Kuchta of GTZ WatSan Program

Unang Bugso started with a **press conference** at the DILG Central Office. The **DILG - GTZ** together with the officials of **DOH, DPWH, DENR-EMB** and **LWUA** signed a **Pledge of Commitment** to support programs on sustainable sanitation. Media

practitioners were encouraged as well to take an active role in this commitment.

The celebration was highlighted by an **art exhibit** and a **free concert** at the S.B. Plaza Hall in Quezon City Hall. The art exhibit showcased the painting and **slogan** entries of students who joined the contests of **Unang Bugso**. Professional artists from the U.P. Artist's Circle were invited as well on the exhibit.



Proud students from the different participating schools in Quezon City

The free concert featured a number of prominent artists, to tackle issues on sanitation through singing and live performances on stage. Among them were **Aiza Seguerra, Bayang Barrios, Lolita Carbon** of Asin and **Cookie Chua** of Color it Red. The official jingle ("**Palasyo**") of the program for this year's celebration of Year of Sanitation was also launched during the concert.

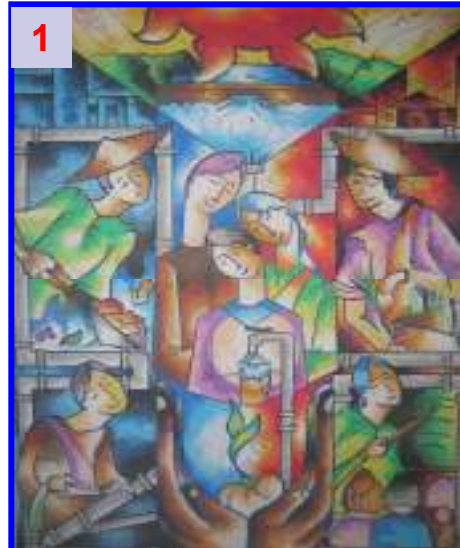


Art Exhibit Opening Ceremony at the S.B. Plaza Hall, Q.C. Hall with guests NWRB Director R. Alikpala, Quezon City Mayor S. Belmonte, DILG USEC A. Panadero, German Embassy Counsellor P. Heltmann and GTZ WATSAN Program Director H.B. Kuchta

Unang Bugso aimed at informing and encouraging the public to take action on the silent crisis of sanitation. More than 300 people joined DILG-GTZ in the celebration.

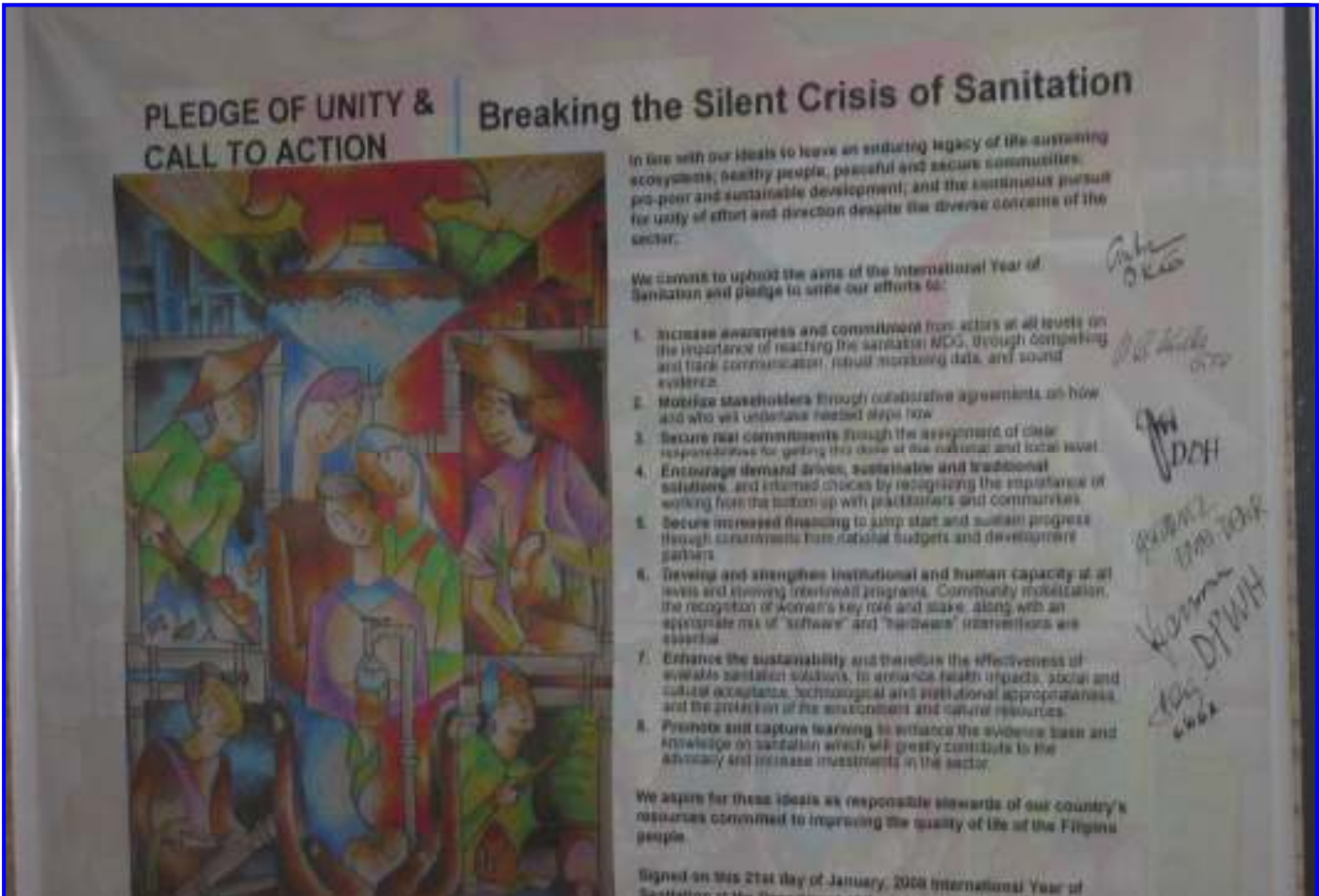
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(1)
1st Prize Winner
from Ramon
Magsaysay
(Cubao)
Elementary School

(2)
1st Prize Winner
from Lagro
Elementary School



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This article is the second in a series of selected travelogues of the Philippine Water Study Tour in Germany organized by the GTZ Water and Sanitation Program for the partners of the Philippine Water Supply Sector Roadmap Project. The study tour, across five states in five days, focused on German water institutions, policies and instruments for water supply and wastewater management.

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Day 2 TRAVELOGUES Philippine Water Study Tour 18 September 2007, Tuesday

Ramon B. Alikpala (NWRB)
Ruben S. Reinoso Jr. (NEDA)
Agnes C. Balota (GTZ)



From left to right: A. Balota, R. Alikpala, R. Reinoso, J. Wummel and W. Ksoll

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Sachsenwasser is a consulting, operation and management limited firm that is majority owned by the City of Leipzig. After the reunification of Germany, factories and utilities were sold based on market-driven principles where the money goes to the German government. The city of Leipzig decided to acquire the utility and create a holding company integrating water, electricity and public transport. The three sectors were combined as a strategy to save on taxes paid by the city to the federal government. The city does not have to pay taxes because the combined sectors have a total financial deficit even – even though the water, light, heat and energy sectors are on full cost recovery this is negated by the heavy subsidies required by the public transport sector.



It took Sachsenwasser ten years of reforms after reunification to produce enough profit to finance the deficit in the previous years. The first two years of reforms focused on system/network rehabilitation to improve service delivery. The next three years focused on fulfilling the requirements set by the European Union regulations. The remaining years focused on upgrading and re-tooling the utility based on technological advancement (e.g. efficiency in water and wastewater treatment) and with focus on improving the utilities profitability.

Sachsenwasser adheres to the company policy of quality in the water produced, personnel and company processes. It outsource networking, repair, servicing and organizing to its subsidiaries and maintain a minimal number of workforce mainly for administrative operation.

Sachsenwasser has 5 subsidiaries one of which is *Kommunale Wasserwerke Leipzig* (KWL) which operates in the City of Leipzig. There was a need to form Sachsenwasser to operate in the surrounding areas of Leipzig, including 3 cities and municipalities, as a joint-body for water supply and sewage disposal.

The KWL utility produce water supply up to four times the demand of the City of Leipzig. However, the utility faces a challenge of decreasing overall demand, from 250 liters per capita per day during the GDR time to 90 LCP in the recent years. Water supply demand during GDR times require 80 million cubic meter water production, now the reduced demand only requires 35 million cubic meter production. Reduced demand and consumption reduces the profit of the utility, profit that is used to improve the system and further reduce the water tariff. In which case, the decreasing demand actually gives the utility profitability problems.

The decrease in demand is attributed to the decrease in the number of small business in the city, improvements in the water use efficiency of facilities (e.g. water saving flush toilets) and changes in the household water consumption pattern induced by the introduction of block water tariff (based on meter size) compared to the flat rate in GDR time. Also, changes in the inhabitant distribution because of change in land use policy and the favorable development of some areas in the city also presents a problem in terms of the required adjustments in the utility's network system.

Pipe networks had to be extended to the outskirts of the city where the population relocated. Changes in the traffic flow also caused network failures in areas where the load in the road where distribution pipes are buried were not designed for heavy traffic.

Sachsenwasser, like any water service provider in Germany, applies a full cost recovery policy. The German Communal Law regulates public company profit to not more than 6% and this rule applies to Sachsenwasser because of the majority ownership of the City of Leipzig. Inhabitants of the city of Leipzig pay on the average 185 € per capita per annum, roughly 0.50 € per capita per day, for water supply, wastewater and rain water treatment. In general, people of Germany use 2% of total household income for water supply and sewerage, much lower than the international set standard of not more than 5% of household income. The drinking water price structure is based on the size of the water meter, of which 15-20 different sizes are available, and the basic price that covers the connection cost. Unlike in the Philippines where there are individual household connection meters, KWL has individual building connection for apartment flats. In this set-up, the utility only deals with the building landlord and not with individual flat owner. While this reduces the transaction cost of dealing with a number of connections, it presents a problem with cases of absentee landlords/building owners because they are the only legitimate customer for the utility.

Tariff setting and adjustments are proposed by the managing director of the utility in a five-year forecast and approved by an independent multi-stakeholder controlling board, a regulatory body created by the concession contract. KWL has been fortunate in its years of operation that increases in water rates were not met by strong public opposition because of the parallel two-fold increase in individual income of the city inhabitants.

In conclusion, profitability should be the dominant factor in utility reforms, legal form (management model, whether public or private) is secondary. The utility should be prepared for competition with other similar utilities through benchmarking and adopt management to act as private.



Increasing and maintaining the utility profitability is based on the following programs adopted by the company:

- ✦ Organizational, structural streamlining
- ✦ Combined activities for water supply and wastewater
- ✦ Adopting the “center” principle for the organization: profit center, service center and cost center
- ✦ Optimizing processes for organization:
 - 1985 Department organization
 - 1995 Process organization
 - 2005 Project organization
 - Optimizing processes for customers:
 - Processes
 - Structure
 - Environment
 - Employee enhancement, human resources development (i.e. external training)

Increase profitability through voluntary, target-oriented and competitive benchmarking with similar utilities

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Using Alternative Fuels and Raw Materials for Cement Kiln Co-processing: A Sustainable Waste Management Option

Despite relentless efforts by various groups and sectors, finding appropriate approaches in waste management remains one of the most critical and complex environmental challenge in the Philippines. With estimated daily generation of 30,300 per day, waste disposal means serious business from the perspective of those who are tasked to handle it. Likewise, for those who would like to harness other potential uses for waste, such as material recycling or energy recovery, this estimate promises a viable proportion worth pursuing.

Concept of Co-Processing

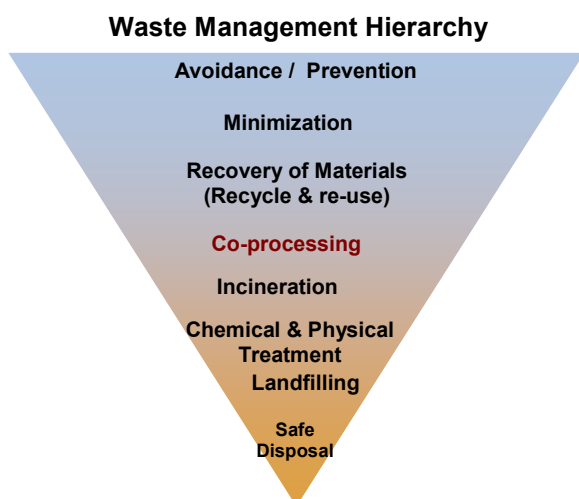
This is the premise behind the efforts of energy intensive industries (EII), such as cement manufacturing, to seriously work on enhancing their production capacities by adopting Co-processing. **Co-processing** refers to the use of waste materials in industrial processes, such as cement, lime, or steel production and power stations or any other similar large plants. The main objective is not the final disposal of waste, but rather the substitution of **primary fuel and raw material** in the process by waste, and as such, it is a recovery of energy and material from refuse.

Re-use and recovery of energy content of waste materials is done while simultaneously manufacturing cement in a single or combined operation.

Cement manufacturing is a very important sector in the economy, in terms of investments and function. The impact in terms of sustainable development efforts coming from Cement sector is definitely considerable. The concept of co-processing goes very much in line with sustainable development such as conserving natural (non-renewable) resources, reduction of greenhouse gases emissions, and more importantly reducing the environmental impacts of the cement production processes. The practice of feeding waste materials into cement kilns have been undertaken in various countries since the early 1970's thereby enabling cement plants to conserve on fuel and raw material consumption and at the same time providing service to the community through proper waste disposal.

With the cement industry as a heavy user of energy for its kilns, the use of waste materials as alternative fuels helps conserve primary fuels such as coal and bunker oil. Energy content of one ton of used tires is equal to that of one ton of coal. Some waste fractions can be used as alternative raw materials providing minerals essential in the production of clinker (raw material for producing finished cement) thereby displacing the extraction of these minerals through mining or quarrying.

Waste is usually taken to landfills, but somehow could likewise be irresponsibly discharged to sewers, illegally dumped at unsuitable locations, or other options that fail to meet requirements for the environmentally sound final disposal of waste. This can cause contamination of soil, water resources, and the atmosphere, leading environmental damage, affecting living conditions and health of the adjacent populations. As a waste management option, CKC can save the landfill space and pollution caused by improper disposal methods. CKC fits well in the waste management hierarchy, given the two aspects of material recycling and energy recovery.



Promoting Cement Kiln Co-Processing Through Active Partnerships

Considering these benefits from co-processing, and the worldwide interest to build up capacities on this practice, the GTZ, together with Holcim Group Support Ltd have formed a Strategic Alliance to promote co-processing and this has been operating since July 2003 through a Private-Public Partnership (PPP) agreement supported by the Federal German Ministry for Economic Cooperation and Development (BMZ). The main objective of this alliance is the elaboration of internationally recognized guidelines governing the co-processing of waste materials in cement production and their model application in selected countries, which includes the Philippines. The program has already completed a 1st Phase (2004 – 2006) which brought together local stakeholders to coordinate efforts and interests on CKC, and propose an initial draft of policy guidelines on CKC. The ongoing 2nd Phase (2007 – 2008) focuses on supporting the local implementation and capacity development of key partners (cement manufacturers, regulators, NGOs, LGUs and Academe) on CKC through development of learning tools and piloting of CKC application in selected waste streams.

Initiating activities for 2008, GTZ, together with partners, the Cement Manufacturers Association of the Philippines (CeMAP), the DENR – Environmental Management Bureau (EMB) and the DOST – Industrial Technology Development Institute (ITDI), launched a partnership to promote the use of Alternative Fuels and Raw Materials (AFR) in Cement Kiln Co-processing (CKC), last 17 January 2008 at the Hotel InterContinental in Makati City. The highlight of the event is the turn-over of the **Guidance Manual on CKC**, from the DOST – ITDI to the CeMAP and the signing of the **Memorandum of Understanding** between the partners to support the responsible adoption of CKC by cement manufacturers and the promotion of this approach as a viable waste management option.





Partners join hands to seal the partnership. L-R: Dr. Nuna Almanzor, Director DOST-ITDI, Dr. Ernesto Ordonez, President CeMAP, Julian Amador, Director EMB, Jochem Lange, Country Director, GTZ

“The guidance manual is a most welcome development in the cement industry, especially since the buzzwords in industries today are environmental protection and increased productivity,” said Ernesto Ordonez, president of the Cement Manufacturers’ Association of the Philippines (CeMAP). “With the guidelines, we hope to be able to achieve our objectives as partners in development and protectors of the environment more realistically,” Ordonez added.

The Guidance Manual is a collaborative effort between government and industry to provide information on how CKC can be adopted in the Philippines. Development of this DOST-ITDI publication was supported by the GTZ-Holcim PPP Strategic Alliance. The content resulted from a series of consultations between DOST-ITDI, DENR-EMB and CeMAP, facilitated by GTZ. These Guidelines are addressed to stakeholders and decision makers from the private and public sectors engaged in waste management and cement production. The document offers guiding principles and provides a general orientation concerning the conditions under in which co-processing can be applied. Eventually, these Guidelines embody main stipulations and details which can be adopted by government regulatory agencies when formulating policies and other issuances.



Mr. Lange addresses the CeMAP members and other partners during the Launch Event at Hotel Intercontinental Makati

These efforts are setting the stage for heightened multi-sectoral discussions on the strategic uses of cement kiln co-processing. GTZ will continue to support the partners in the promotion and information efforts encouraging decisions to consider CKC as an alternative waste management option, as well as policy development for the adoption of CKC and the uptake of investments by the private sector to enhance cement manufacturing capacities. Most importantly, GTZ works to ensure ownership and sustainability of the initiative through the upscaling of the partnership to engage the rest of the cement manufacturers through the CeMAP, from the catalytic work with Holcim in the previous years. This type of upscaled partnership can only be found in the Philippines, among the other countries covered by the GTZ-Holcim Strategic Alliance. These initial accomplishments show proof that the synergy from a public-private partnership brings about outstanding results.

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