

IDENTIFYING HOT SPOTS BY IMPLEMENTING CLEANER PRODUCTION AUDITS



**IN ONLY ONE YEAR 95 PARTICIPATING COMPANIES SAVED
2.3 MILLION EURO BY WORKING WITH THE GREEN
PHILIPPINES ISLAND OF SUSTAINABILITY PROJECT**



THE CHALLENGE

Manila Bay is the Philippines' major economic centre. At the same time it is the country's hot spot for pollution. Manila has been cited by the World Health Organization as one of the most polluted places in the world. The challenges for Metro Manila and the linked CALABARZON region are great as the country has a huge energy deficit. The Philippines are heavily dependent on fossil fuels. The level of government enforcement for environmental compliance by business is low.

OBJECTIVE

The SWITCH-Asia project *Green Philippines Islands of Sustainability (GPIoS)* aims to minimise the environmental impact of SMEs in Metro Manila and the CALABARZON region. It helps to reduce the level of pollution by encouraging preventive environmental production and integrating sustainable growth, social progress and environmental protection, into the business of participating companies.

The project aims for the following impact, by working with different industries:

- an average 40% reduction in mixed waste
- an average reduction of water use of 20%
- an average 10% improvement in electricity conservation
- an average rise in fuel conservation of 25%
- an average reduction in hazardous material of 20%



TARGET GROUPS

The project targets the following groups:

- small and medium-sized enterprises (SMEs) and large companies in Metro Manila (mainly in the areas of Pasay, Quezon, Marikina, Taguig, Pasig) and the CALABARZON region (specifically Laguna, Cavite, and Batangas)
- local administrations and local government units (LGUs) of the targeted regions of Metro Manila and CALABARZON, responsible for policy formulation and uptake of project results
- experts and trainers for capacity building, consulting and coaching of SMEs

ACTIVITIES / STRATEGY



At the heart of the project are workshops in cleaner production and individual consulting by experienced consultants. The project aims to transfer know-how through training workshops and coaching, combined with a system of quality assurance

and monitoring. The basis is a 12-month capacity building programme of workshops to help interested companies clean up their production processes. Workshops are tailored according to the varying needs of different sized companies: ECOBONUS for larger companies able to participate in several training courses and make time for more consultancy; ECOFOCUS for medium-sized companies; and ECOSENSE for micro-sized companies with less available time. At the end of the 12 months, companies are given an environmental audit for legal compliance and environmental performance. Those performing well receive an ECOSWITCH award which the project developed and which provides an additional incentive to make the changes required.

The project trains and consults 400+ companies through the workshop programmes; and consults 180 businesses which have undergone further training under CLUB programme to continue to improve their eco-performance. The CLUB Programme is an additional programme with regular meetings for companies and consultants to share their experience and update their knowledge.

REPLICATION STRATEGY

The *GPIoS* project reaches out to industries through the chambers of commerce it has partnered with. Through this network, *GPIoS* encourages more companies to switch to cleaner production. The ECOSWITCH award offers further motivation for enterprises to participate.

Next to business intermediaries, the supply chain of successfully participating companies offers a high potential for replication. Companies that have improved their environmental performance significantly by working with the *GPIoS* team, then make environmental demands of their suppliers. They reach out to a wide pool of SMEs through their supply chains and by demanding certain standards of their suppliers

By offering different services to different sized companies, the *GPIoS* project provides the opportunity for bigger companies in the ECOBONUS programme to demand their smaller suppliers to join the ECOFOCUS or ECOSENSE programmes.

Further replication is fostered by engaging the companies continuously through the CLUB programme. Once a company has gone through the first year it can join the ECOCLUB programme where regular meetings are held for companies and consultants to share their experience and update their knowledge. The club functions as motivator for many companies planning a continuous improvement process.

To expand the approach, the project partners local government units and the private sector. It has already set up a partnership with Plantersbank and Rizal Commercial Bank Corp (RCBC). The Plantersbank will undergo a cleaner production audit itself and will mobilise the participation of their existing clients by providing logistics for workshops



Our first year with the GPIoS team has been a very fruitful year. Our champions have taken their learnings from the workshop and applied them in our vision to become a leader in water, waste water and other environmental services which empower people, enhance sustainable development and protect the environment.

*Tom Mattison,
Operation Support Services Director,
Manila Water Company, Inc.*



and on-site assessment visits. In the future it is envisioned that the bank will recommend audits to clients seeking financial support for environmental projects.



*Dr. Thomas Dielacher,
Senior Project Manager,
GrAT*

Metro Manila is one of the five most polluted cities in the world largely due to fossil fuel combustion from SMEs, and the unsolved waste management problems. In the south, it is linked within the CALARBAZON area where many of the SMEs in the manufacturing sector in Metro Manila have already re-established themselves. Almost 50 % of all the SMEs and large companies in the Philippines are located in these two regions and most of them have huge potential in material efficiency, energy efficiency and care issues for workers. To tackle these topics is one of the tasks of our project.



RESULTS

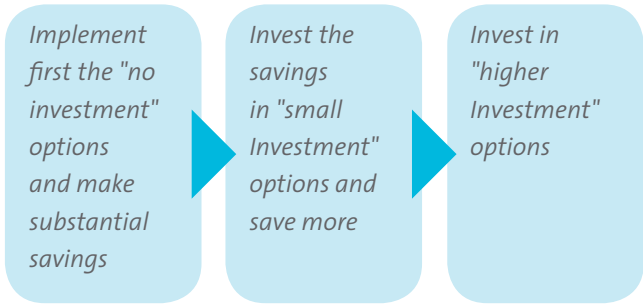
The GPIoS project established a training centre to provide environmental services to enterprises beyond the duration of the project. It trained local experts to become cleaner production specialists who, in collaboration with the companies, developed individual recommendations to enable them to improve their environmental balance. The project convinces SME owners that sustainable consumption and production is a self-propelling business case, using facts and figures from show case examples.

The cleaner production approach is being taken up rapidly by companies. Its application enables access to high-level executives and leads to significant behavioural change within a company, and ultimately within a region.


1027 ENVIRONMENTAL RECOMMENDATION IMPLEMENTED


During its first phase, the project engaged target groups within its geographical scope, and successfully acquired 95 companies during the first year of its implementation (2010-2011). The companies had an initial assessment and were then given recommendations to improve their environmental performance. A total of 1 763 recommendations with an average of 40 per base company were provided.

The companies received free training and consultancy, and an ECOSWITCH certification which is built on the triple bottom line philosophy of balanced social (people), economic (profit), and environmental benefits (planet). Most of the recommendations given were those which involved no investment cost.








Prioritising implementation options





 **INCREASED AWARENESS**
The cleaner production approach is now becoming well-known in some parts of the region because of good public relations and advertisements in the media. The project's concept has also reached local government units, coordinating with the City and Municipality Mayors to incorporate the project as part of their environmental initiatives. It will eventually influence industries within their city or municipality to participate in the project. To institutionalise the approach an appointment has already been made with the Municipal Mayor of Pasig to sign a Memorandum of Understanding. Pasig City will host workshops for companies within their jurisdiction. The GPIoS-ECOSWITCH approach will serve as a tool for Pasig City to become a "Green City".

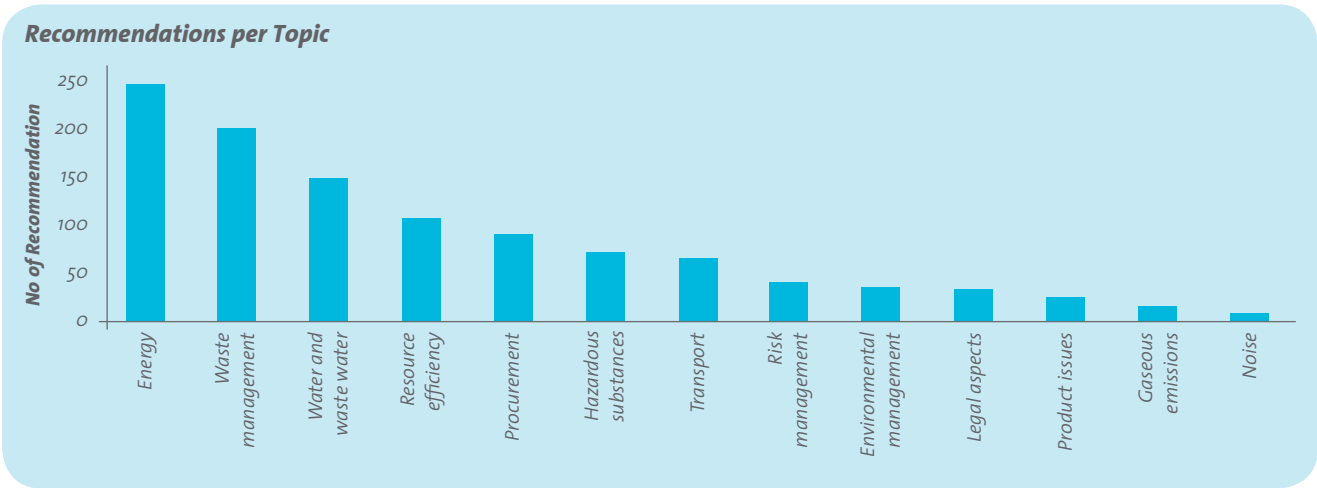
 **ENVIRONMENTAL AND FINANCIAL SAVINGS**
The project achieved the following results from 72 companies from phase one.

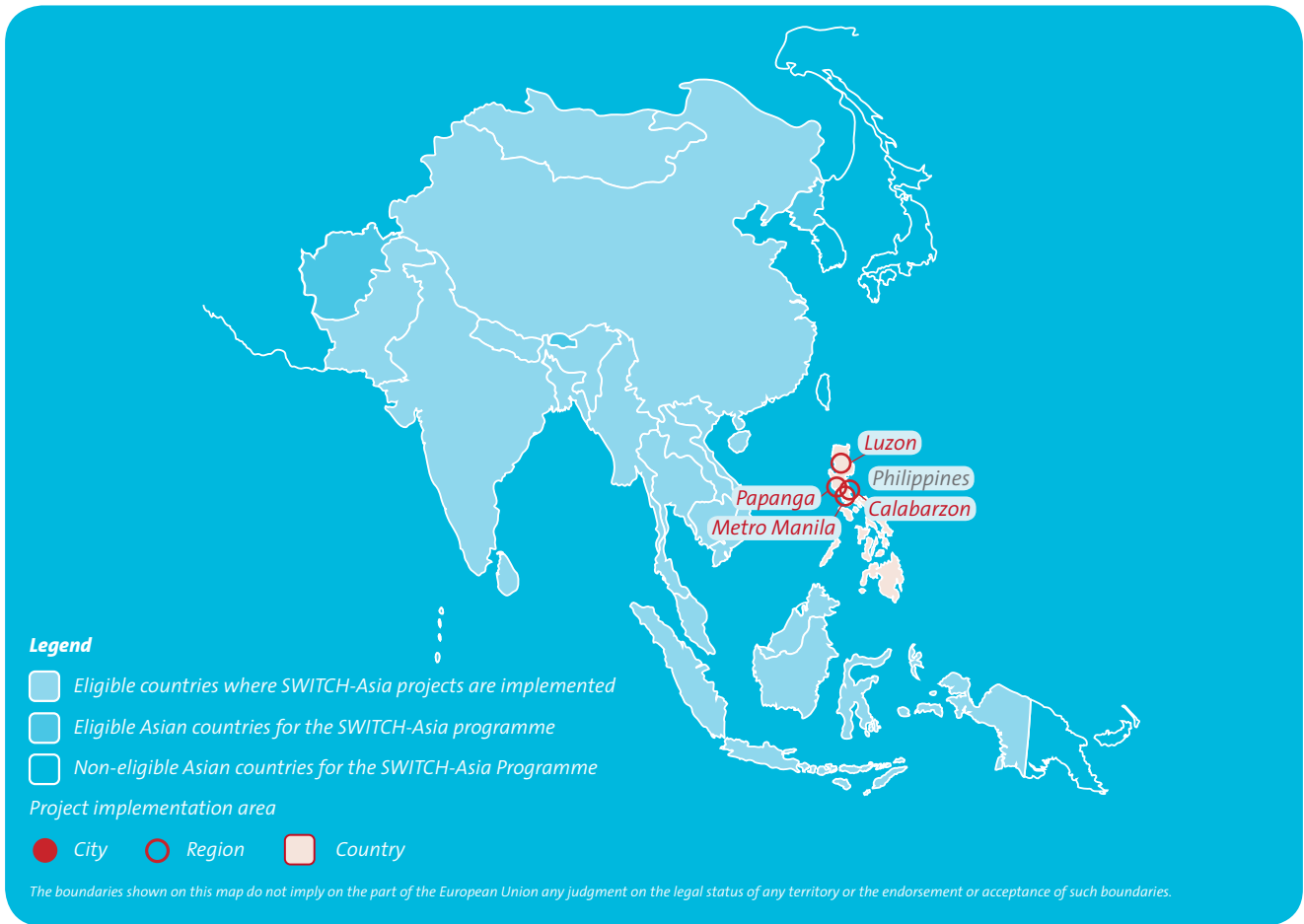
Environmental and financial savings in the 1st year of Project operation

ITEM	ENVIRONMENTAL SAVINGS	UNIT	% ENVIRONMENTAL SAVINGS	FINANCIAL SAVINGS (PHP)	AMOUNT INVESTED (PHP)
 Electricity	8,907,445	kWh	7%	80,185,117	107,454,159
 Fuel	877,852	litre	13%	24,020,075	2,200,000
 Hazardous waste	15,277	Kg	63%	1,045,213	109,593
 Solid waste	315,464	Kg	76%	29,525,153	613,870
 Water	640,662	m ³	39%	9,066,215	5,473,086

IMPACT IN NUMBERS

<p>ECONOMIC IMPACT</p> 	<p>Substantial financial savings:</p> <ul style="list-style-type: none"> • € 2.3 million / Php 14 million from 72 certified companies which implemented measures between June 2010 and August 2011 • Return on investment 0,8 , payback period of 9 months
<p>ENVIRONMENTAL IMPACT</p> 	<p>1 027 recommendations implemented</p> <ul style="list-style-type: none"> • Energy saving: 16,597,430 kWh (up to 9% of average baseline data of participating companies) • Water savings: 640,662 m³ (up to 39% from average baseline data of participating companies) • Hazardous chemicals avoided: 15,277 kg (up to 63% from average baseline data of participating companies) • Solid waste avoided: 315,463 kg (up to 76% from average baseline data of participating companies)
<p>ENGAGEMENT OF TARGET GROUP</p> 	<ul style="list-style-type: none"> • 95 companies engaged in phase one, 80 companies engaged in phase two (by December 2011) • Project presentations at supply chain meetings at Toyota, Honda, Lufthansa Technik
<p>POLICY LINKAGES</p> 	<ul style="list-style-type: none"> • Legal compliance presentation and consulting with Department of Environment and Natural Resources (DENR) representatives and companies during a workshop • Partnership with the National Eco-labelling Program of the Philippines (Greenchoice) • Partnership with the Municipal Government of Pasig City to promote the project





OBJECTIVE

To minimise the environmental impact caused by SMEs in the target region by adopting preventive environmental production and to integrate sustainable growth, social progress and environmental protection with the business of the participating companies

DURATION



FUNDING

EU co-financing; EUR 2,386,970 (EU contribution: 80%)

PROJECT CONTACT

Ms. RND. Alena Labodova, PhD
 VSB – Technical University Ostrava
 17.listopadu 15, 708 33 Ostrava-Poruba, Czech Republic
 Alena.labodova@vsb.cz
 +420 59 699 5540 / +420 59 6918589
<http://en.vsb.cz/>

Dr. Thomas Dielacher, Ms Juvy Perez
 Level 5, A&V Crystal Tower, 105 Esteban Street,
 Legaspi Village, 1229 Makati City, Philippines
 +632 403 1890 / +632 403 8358

alena@greenphilippines.com.ph
 dielacher@greenphilippines.com.ph
 juvy@greenphilippines.com.ph

PROJECT CONSORTIUM

Technical University Ostrava (VSB)	Center for Appropriate Technology (GrAT)	Austria Recycling (AREC)	Asia Society for Social Improvement and Sustainable Transformation, Inc. (ASSIST)	European Chamber of Commerce of the Philippines (ECCP)	Philippine Business for the Environment, Inc. (PBE)	Philippine Chamber of Commerce and Industry (PCCI)