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GREENPHILIPPINES

The ECOPROFIT approach as a tool for GREENING THE PHILIPPINES



GREENING The Philippine Industries with the ECOPROFIT Approach



**A regional partnership, capacity building and training
programme approach for the industries within the Region
Central Luzon in the Philippines**

This project is funded by The European Union's Asia-Pro Eco Programme

A project implemented by VSB-Technical University of Ostrava

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ECOPROFIT – a tool for environmental management



Ecocity Graz



- 1988/89 - Smog
- 1991 – Analysis and first „programme framework“
- 1992 - UNCED-conference in Rio de Janeiro - Agenda 21
- 1995 - Programme „Ecocity 2000 – Local Agenda 21" passed by the city council

Ecocity 2000 – goals (1995)

Factor	Sustainability parameter	Goal by 2000
Air	Emission of SO ₂ , CO, dust	-30%
	Emission of Nox, VOC	-60%
Noise	Streets with more than 65 dB	-10%
Energy	CO ₂ -emissions	-20%
	Energy consumption	-7%
	Proportion of renewable energy sources	25%
Traffic	Private traffic	-2%
	Public traffic (km)	+10%
Waste	Residual waste,	-30%
	Industrial waste	-30%
	Hazardous waste	-50%
Water	Drinking water	-5%
Soil	Built up surface	Balance
Nature	Additional protected areas	50 ha
	Additional natural monuments	7

Ecocity 2000 – the projects



OKOprofit

- Cleaner Production for the local industry



OKOdrive

- Biodiesel for the public buses



THERMOprofit

- Contracting to reduce the energy consumption of public buildings, industry, and private buildings

Aim of approach

The overall aim in brief is to

- Increase the efficiency of the companies by reducing demand of raw and auxiliary materials
- Minimize the environmental impacts by adopting preventive environmental production leading to cleaner production & service providing
- More motivated employees and more attractive work
- Costs & environmental benefit at the same time
- Sustainable growth, social progress and environmental protection parallel in companies work processes.



Sustainability at work:

Is a business strategy, which integrates economic, ecological, and societal criteria in an optimized way and by doing so creates competitive advantages

= economic success with values

(W. Autischer)

Quelle: K. Woltron, 2001

Ecology

Economy

Socialty

Sustainability-

Leaders

135.9%

Sustainability-

Laggards

83.3%



Structure of the Programme

The programme approach consists of :

- Workshops and Seminars – Cleaner Production & Service tools
 - Interactive Exercises
 - Topic description
 - Learning with fun
 - Performing in with and in front of experts
 - Conducting the same at their end
 - Homework – Preparation of an Environmental Report as a main tool
- Individual consulting through company visits
- Training – Onsite Training, Individual company training
- Technical assistance (Internal & External)
- Facilitating Technology supplies (If required)
- Certification for ongoing ecological and economical performance



Workshops

Base Programme

- Cleaner production and waste minimisation, input/output analysis,
- Setting up An Environmental Team and Corp. Responsib.Policy.
- Energy: Conservation and Renewable Energy.
- Mass Flow Analysis, Energy Analysis
- Waste Management (waste logistics and waste separation)
- Innovation and Creative Techniques
- Local and European environmental Laws and regulations
- Ecological Purchasing & Hazardous waste handling, Supply chain management.
- Standards (ISO,EMAS, others), Controlling, and Indicator sets.
- Technical Input for priority areas by practical Input: Demonstrate up to date Technologies and best practices for selected Priority Areas.



Workshops

Club Programme

- Cleaner Production, Waste Minimization, Input Output Analysis and Data Collection.
- Tools for efficient CP & Environment management From Cleaner Production to EMS according to ISO 14001, Emergency preparedness and response, FMEA, Failure Mode and effect analysis,
- Effective communication as quality criteria
- Material flow Management starting with Water management, project management
- Renewables & energy management part I
- Logistics & re-logistics,
- Corporate social & sustainable responsibility
- Life Cycle Thinking, Eco Design
- Project Management, Efficiency enhancement
- Sustainable Entrepreneurship
- Knowledge management
- Environmental marketing, and much more !



Interactive Exercises

A regional partnership

Steps

Topic description

Learning with fun,
getting in touch

Performing with
experts

Self conducting at
companies end



In-house Training & Onsite Training

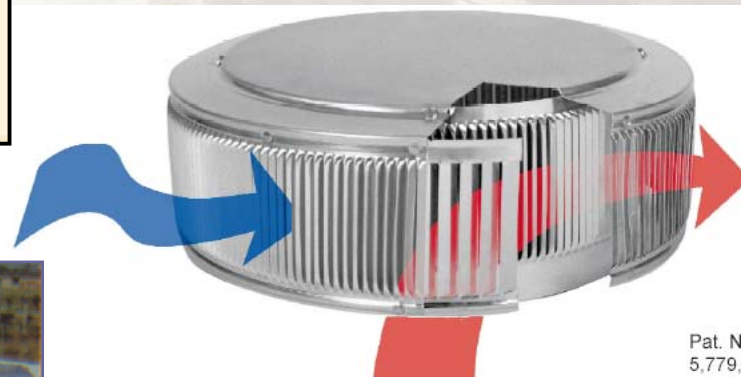


KNOW-HOW TRANSFER

Bringing latest technologies for efficiency and Sustainability enhancement to the industries.



FLUX maxiox™ β
Industrial Fuel Utility



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Technical Assistance: Internal & External





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Results of this Cleaner Production Practice and Service approach in ECOPROFIT Gurgaon, India As a tool of the EINS strategy

A success story of business response to Sustainability



Project Results Gurgaon India 2002- 2005

2002 - 2003:

Base Program with 10 companies had 451 implemented measures with a

ROI of: 13,8

and a pay back time of project costs/year: 4 weeks!

2003 - 2004:

Base Program with 10 companies
Club Program with 9 companies
had together 798 implemented measures with a

ROI of: 8,7

and a pay back time of 6 weeks.

2004 - 2005:

Base Program with 10 companies
Club Program with 19 companies
had together 1.196 implemented measures with a

ROI of: 8,9

and a pay back time of again around 6 weeks.

The project period **2002-2005** was financed by EU under Asia-Invest and Asia-Pro Eco programme and Co-financed by Austria.

The follow up project period **2005-2006** is financed 2/3 by the participating enterprises and to 1/3 from Germany. This new base Program with 10 companies started in Sept. 05 and will be finished Dec. 06.

A program for **2007** is under preparation.

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After



Process: 36 pieces of mirror are placed on a standard brick for convex process in an oven.

Measure: Number of pieces increased from 36 to 39 per slot. Size of brick altered within the possible regime to occupy more pieces thus saving energy on one hand and enhancing productivity on the other.

Savings/a: 3.000 €

Cost: 480 €

ROI: 6,25



➔
After



Process: Operation of motors/fans in cooling towers

Situation: Loss of energy due to continuous operation of system

Measure: Temperature control in cooling towers by installing sensors

Savings/a:	2.400 €
Cost:	390 €
ROI:	6,15

A Process: Heating of zinc slabs and maintaining them in liquid state for dye casting purposes.

Situation: Loss of heat in the process

Measure: Installation of heat jackets to save heat loss and subsequent power saving

Savings/a: 3.800 €

Cost: 480 €

ROI: 7,9



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Greening the Philippine Industries with the **ECOPROFIT** Approach



Knowledge management, Know How transfer and common trainings with sharing of experiences on energy efficiency for interested club companies through one other club company as one example for a **Sustainable Business Strategy.**

IMPLEMENTED MEASURES

A regional partnership

Gurgaon / India:

IMPLEMENTED MEASURES Summer 2002 - Summer 2005 through:



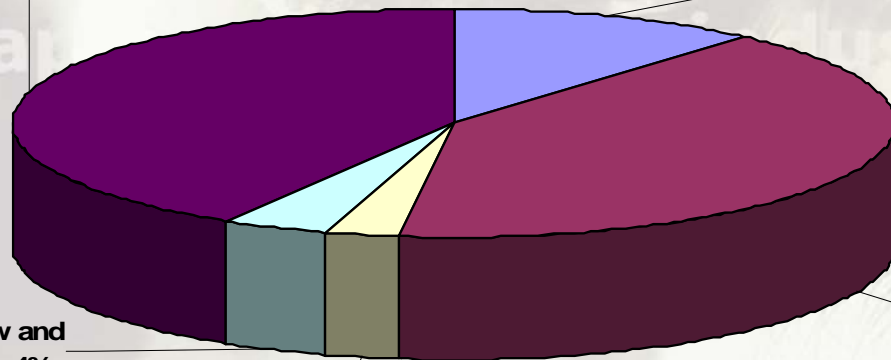
Good housekeeping changes
41%

Organisational changes
11%

Technological modifications including
10% Product & Service changes
41%

Replacement of raw and process materials
4%

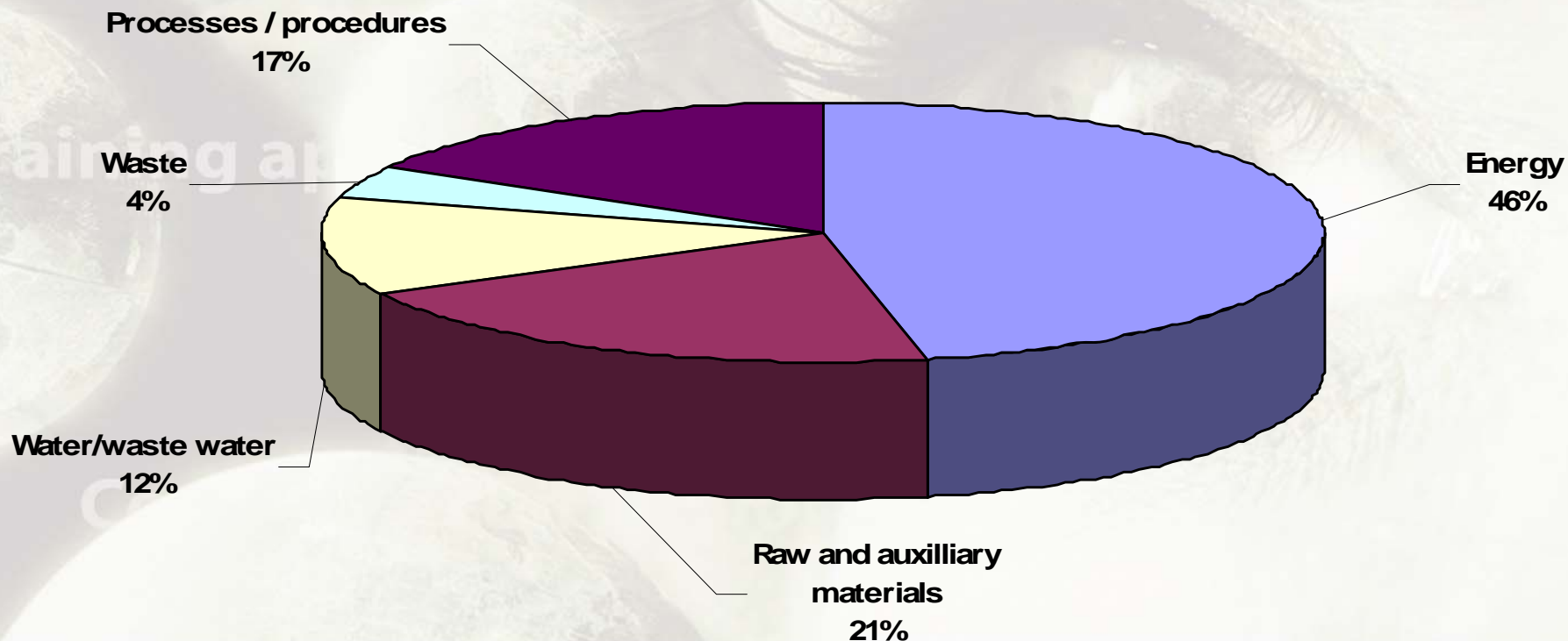
Recycling
3%



AREAS OF IMPLEMENTATION:



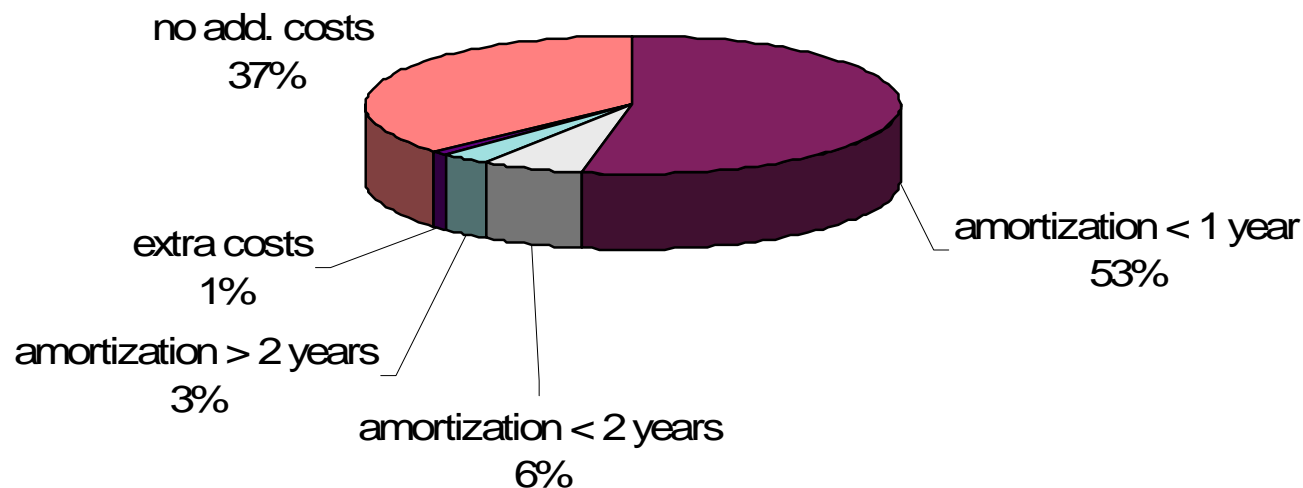
Gurgaon / India:
IMPLEMENTED MEASURES Summer 2002 - Summer 2005 in the areas of:



ECOPROFIT PAYS BACK

Gurgaon / India:

**Economic effects of IMPLEMENTED MEASURES summer
2002 till summer 2005:**



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A This approach involves management and employees & at the same time to over think their processes, products and services.

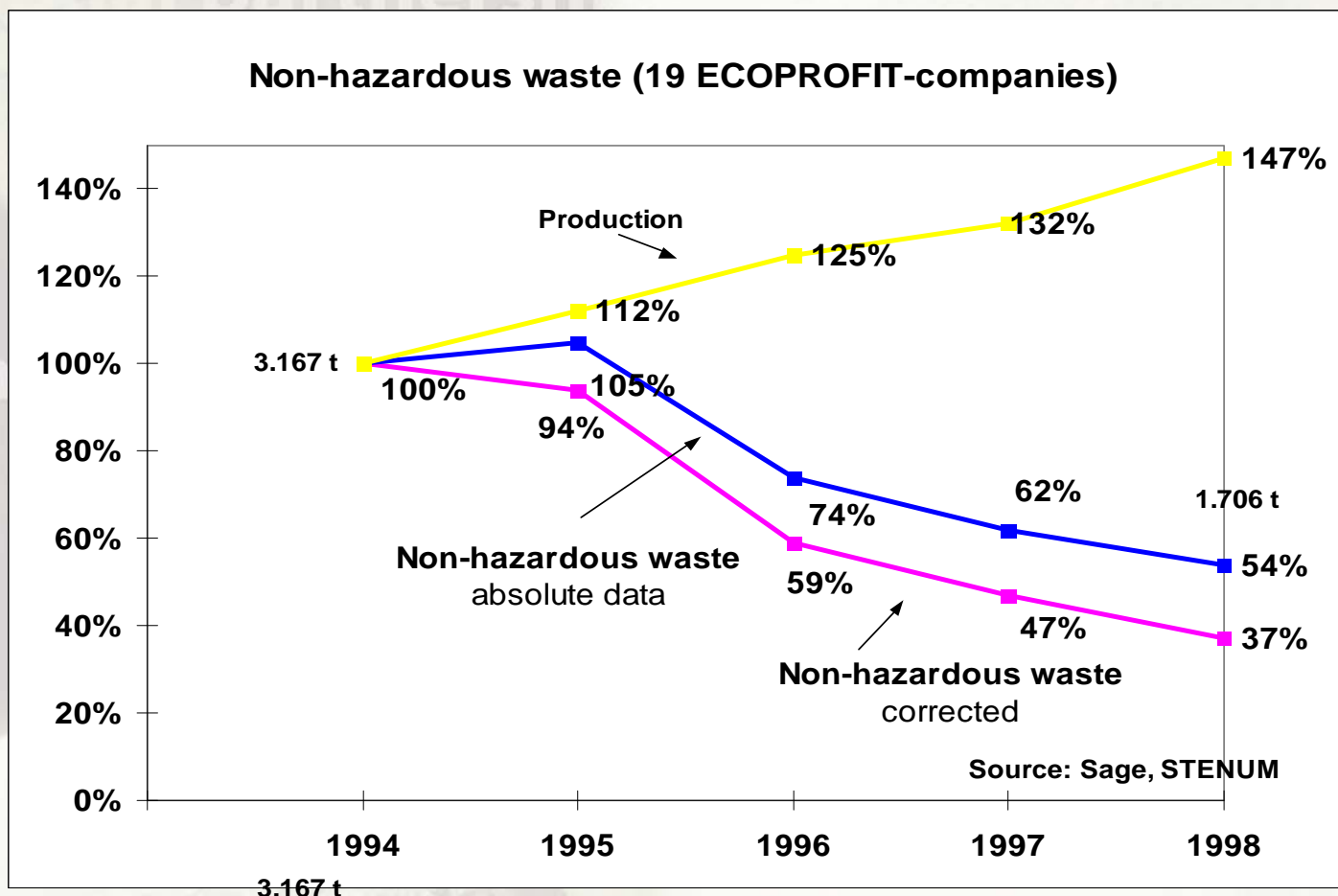
Result are solutions for cost reduction through more efficient production & service implemented by highly motivated teamwork.

This common approach leads also to more motivated employees.

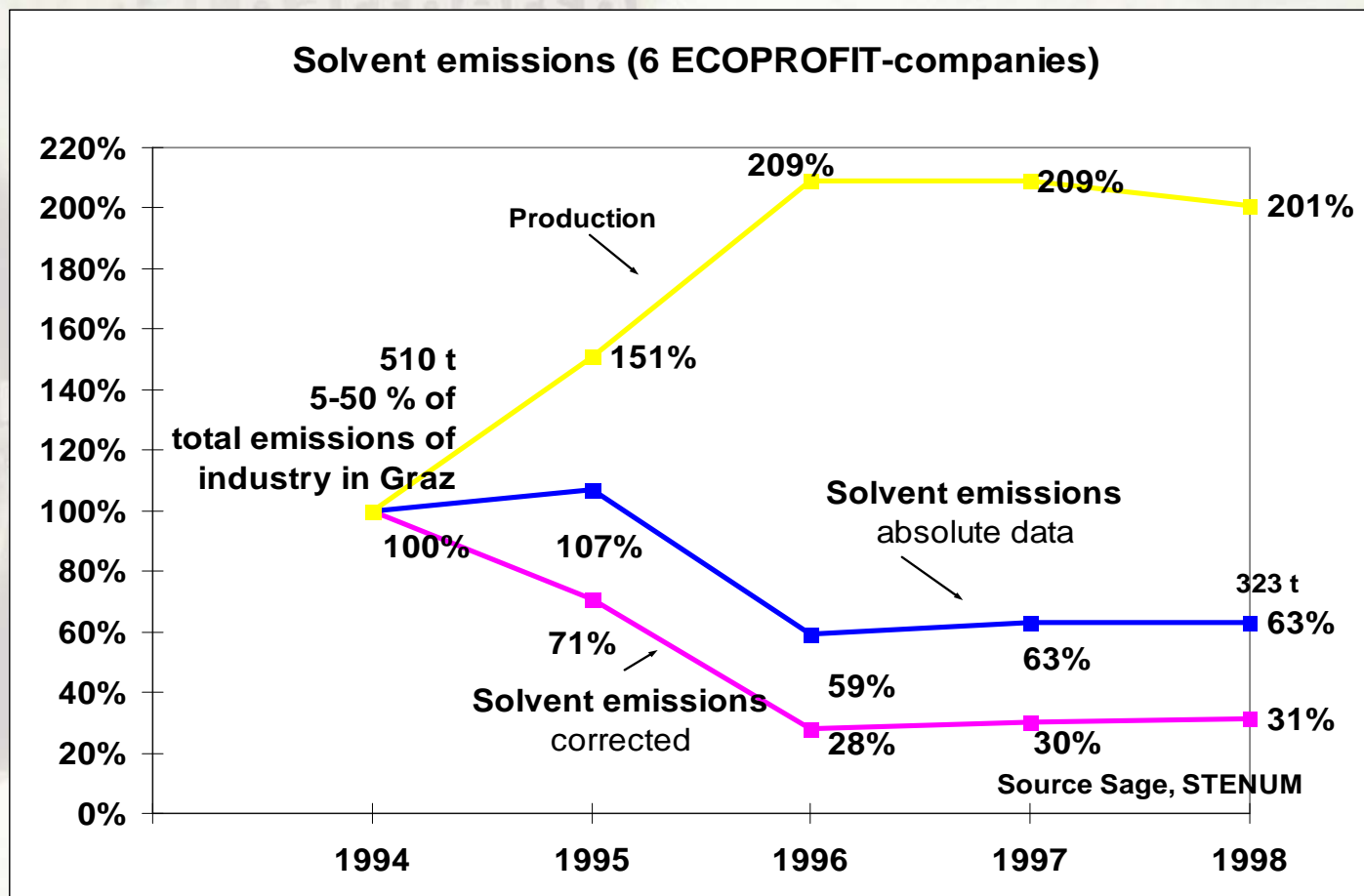
Through improved efficiency, health & safety. The companies become more attractive for new employees!

Activities to a more positive image of companies in society and in the region.

Regional influence & effects of ECOPROFIT



Regional influence & effects of ECOPROFIT



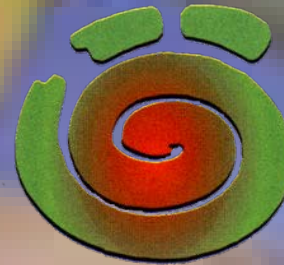
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Site Security

Eco-Efficiency



**Competitiveness
towards
business
response to
Sustainability**

Cost-Efficiency

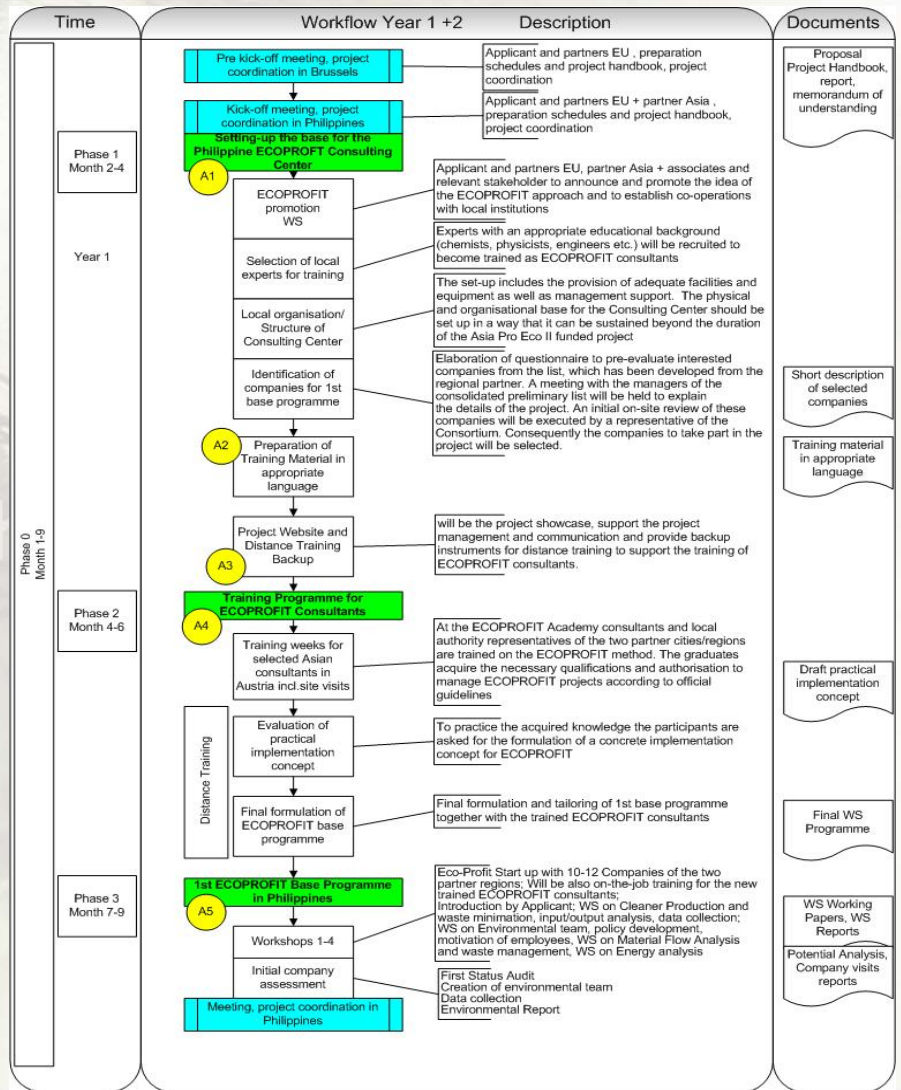
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THE GREEN PHILIPPINES APPROACH 2006-2009

- Promotion of EP
- Selection of trainees for capacity building
- Selection of industries from representative sectors
- Preparation of tools & materials
- Train the trainees
- Start of first ECOPROFIT base programme



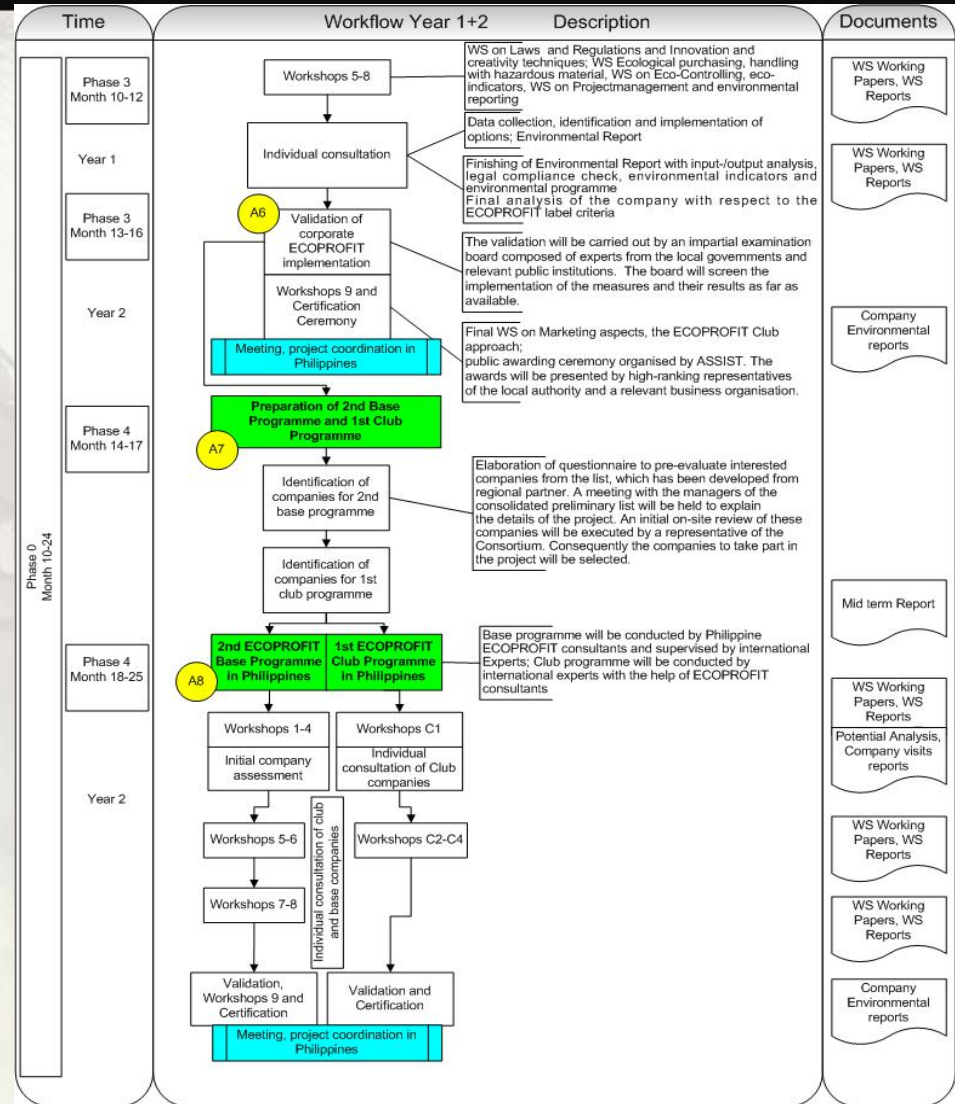
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THE GREEN PHILIPPINES APPROACH

- **ECOPROFIT** base programme
 - individual consulting & workshops
 - certification
-
- **2nd ECOPROFIT** base programme
 - parallel ECOPROFIT club programme
 - individual consulting & workshops
 - certification



THE GREEN PHILIPPINES APPROACH 2007-2009

