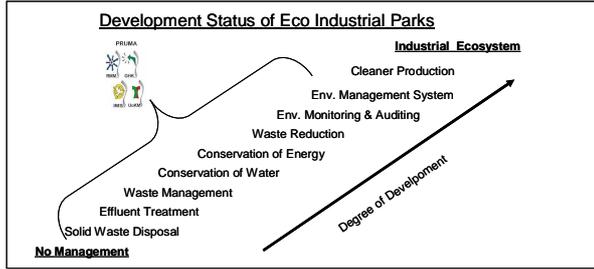


<p>SOURCE GTZ-P3U Tulpenfeld 2 D – 53113 Bonn Tel.: +49-228-60.47.1-0 Fax:+49-228-9857018 e-mail: gtzp3u@aol.com Where can you get this tool: http://www.gtz.de/p3u</p>	<p>BACKGROUND OF THE ORGANIZATION P3U is the Pilot Programme for the Promotion of Environmental Management in the private sector of developing countries. The programme promotes institutional and personal capacities in order to increase competitiveness in micro, small, and medium-sized companies (SME), and reduce environmental impact caused by industry. P3U is implemented by GTZ - German Technical Cooperation - on behalf of the German Ministry for Economic Cooperation and Development (BMZ). It is affiliated to Activity Area 4454 'Eco-Efficiency in Business and Industry'. The Programme is planned for a period of seven years (1996 - 2003) with a prolonging phase up to March 2005.</p>	
<p>SHORT DESCRIPTION OF THE TOOL Through systematic integration of the Non Product Output (NPO) perspective and of environmental aspects in the company's management, the PREMA[®] concept and its instruments aim at achieving a <i>triple win</i>: improvement of economic competitiveness through cost savings, reduction of environmental impact through more effective use of raw materials, as well as sustainable implementation of improvements through organisational learning, including improvement of workplace safety.</p>		
<p>SUMMARY: Profitable Environmental Management (PREMA[®]) is an integrated concept for the promotion of profitable, effective, and <u>environmentally sound management</u> practices designed for micro, small- and medium-sized enterprises (SME) in developing countries, but also applicable in bigger companies. Its application in about 30 countries has triggered a more systematic management of resources through check of raw materials, reduction of losses in storage, handling and transport, optimisation of production processes and plant organisation, especially in order to reduce NPO, reprocessing, waste; waste water and emissions, training and participation of personnel, change in client relations, and improvement in product design. The training and consultancy concept is built around 3 key issues: (1) It starts from the economic self-interest of SME, integrating a variety of quality, environmental and workplace safety management issues. (2) It uses a group approach in order to enhance mutual learning and networking between SME and to decrease training and consultancy costs. (3) The training design is based on a modular approach, which uses experiential learning and systematic support to implementation through coaching (and a specific counselling technique). PREMA[®] pursues a <u>triple win approach</u> (reducing production costs, improving the company's environmental performance and promoting organisational learning) by applying the Non-Product Output (NPO) concept, i.e. by identifying and assessing the flows (1), costs and environmental impact (2), as well as causes (3) of all those materials, water, and energy, which are used in production process, but which do not end up in the final product. By following 3 more steps of the PREMA[®] "cycle of change", i.e. development of measures (4), implementation (5), and evaluation and integration into the company's everyday practice, companies are enabled to practically implement and document effective changes. A continuous process of improvement is aimed at through a modular combination of Resource Management Module (RMM[®]) (for micro and small companies), Good Housekeeping (GHK[®]), Environment oriented Cost Management (EoCM[®]) and PREMAplus, which analyses the gap which still exists to certification according to ISO 9001, 14001, and OHSAS.</p>	<p>KEYWORDS:</p> <ul style="list-style-type: none"> • Economic Instruments, • Environmental Management, • Quality Management, • Workplace Safety, • ISO • Cleaner Production <p>LANGUAGES:</p> <ul style="list-style-type: none"> ■ German ■ English ■ French ■ Spanish ■ Portuguese ■ Hungarian ■ Turkish ■ Thai ■ Bahasa Indonesia ■ Arabic ■ Chinese ■ Singhala ■ Vietnamese <p>TOOL COMPLEXITY</p> <ul style="list-style-type: none"> ● SIMPLIFIED ○ COMPLEX ○ VERY COMPLEX 	
<p>TARGET GROUPS / USERS</p> <ul style="list-style-type: none"> ○ local and international consultants and advisors who contribute to disseminating GHK[®], ○ managing directors, operation managers, production managers and/or their technical staff, ○ small and medium sized enterprises, both in producing sectors and the service sector, ○ local institutions that ensure dissemination and quality assurance of both the instruments and consultants. 	<p>TOOL CLASSIFICATION</p> 	<p>AVAILABLE MATERIAL: Training-of-Trainers (ToT): RMM: 5-day training, plus coaching and supervision of own training activities GHK: 5-day ToT, including company visit, plus coached first training EoCM: 3 5 day ToT and one coached application PREMAplus 2-3 day ToT and coached practical applications</p>

MAIN FEATURES & COMPONENTS

1. Resource Management Module (RMM®):

This training module is oriented towards the practical needs of micro and small enterprises. The module can be used for training in the areas 'Environmental and Resource Management' and 'Private Sector Promotion'. It contains practice-related exercises regarding material flows, its costs, environmental impact, and causes; elaboration, by way of role plays, of cooperation strategies to implement measures in the entrepreneur's own company; promotion of the formation of coached self-learning groups ("circles of excellence") based on a counselling technique called Action-Learning Set.

2. GHK: Good Housekeeping (GHK®):

This instrument aims at engaging as many SME as possible in low-cost analysis of strengths, and NPO and optimisation potentials in order to develop and implement profitable and environmentally sound management measures: positive results are possible within a relatively short time and without much or no investment. In addition, GHK® offers a good basis for other PREMA® modules, more technical measures through a revised version of CP, and for further activities towards ISO certification. The main tool is a general of a large number of sector-specific "Good Housekeeping Guides" in many languages.

3. Environment oriented Cost Management (EoCM®):

This method has been further developed and adapted to developing countries conditions by GTZ-P3U, on the basis of studies on Environmental Management in Germany. EoCM examines the costs of Non-Product Output (NPO), i.e. those raw materials, water and energy which are used in production but do not form part of the finished product.

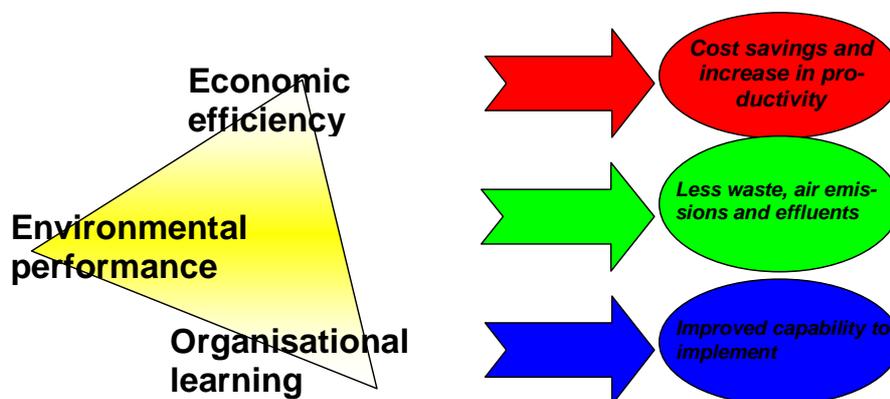
EoCM is introduced in a company (i.e. usually in a group of companies) in a change cycle of six steps which can be repeated as often as desired in a continuous improvement process.

During the analysis of material flows and costs, low-cost and easy-to-implement (GHK®) measures are being identified and immediate action triggered. Further NPO, their causes and measures for mitigation are systematically developed in the course of the change cycle; these are not only related to the production process as such, but also to purchase, product design, packaging, storage, trade returns and waste treatment.

4. Integrated Management System through PREMAplus:

The objective of this Management System is the optimisation of organisational structures and production processes, the improvement of the motivation and participation of staff members, the reduction of negative environmental impact (compliance with legislation), improved workplace safety, and reduction of costs for input materials and waste, by combining relevant elements of quality, environmental and workplace safety management systems. This module is an add-on to a PREMA® programme for companies who want to prepare for ISO certification according to 9001, 14001 or OHSAS, by identifying the gap which has to be closed for certification. PREMAplus may also include a Social Management System (SMS) start-up module, which is actually being tested in Vietnam and Indonesia.

PREMA means a triple win for a company



IMPLEMENTED CASES

Integrated Tannery & Shoe Manufacturer (Sri Lanka)

IN BRIEF

Using locally-available hides, this company produced finished leather in its own tannery, which was supplied to a sister factory located 35km away. This factory employed 350 people and produced 950 pairs of shoes on a daily basis, for the local market as well as for export. It was observed that a high proportion of the cardboard boxes used to package and protect the shoes during the transport process were damaged before even leaving the factory premises. An inexpensive method using recycled plastic material was suggested for binding the shoe boxes together for transport—which resulted in reduced materials use (as fewer boxes were damaged) and maintained the company's image as a high quality footwear supplier.

THE CHALLENGE

The company had already recognised the importance of protecting shoes during transport and handling that occurred during the wholesale and retail steps. Two workers had been dedicated to disassemble cardboard boxes that were initially used to ship raw materials to the factory. From these cardboard pieces, they cut made-to-measure inserts, which were placed inside the shoe boxes to provide added strength and protection. However, this effort was in vain, as during the process of binding groups of shoe boxes together for shipping, many boxes were being damaged by the rope which the workers tended to pull very tightly.

APPLICATION OF THE GOOD HOUSEKEEPING GUIDE

This company was introduced to the Good Housekeeping Guide of GTZ-P3U through the GTZ-PSP project based in Colombo. In going through the **Waste Checklist**, the Production Manager became aware of possibilities to reduce or entirely avoid waste from packaging materials by altering the company's own packaging approach (e.g. by not placing shoes in plastic bags and then also in cardboard boxes) and by recycling packaging for internal uses, as this shoe factory had already done.



ACTIONS TAKEN WITHIN THE ENTERPRISE

- A hand-held fixing gun was purchased and plastic packaging tape produced from recycled materials is now to be used in place of rope for binding shoe boxes together in preparation for shipping.
- Workers have been instructed to carefully bind, move, and stack shoe boxes within the factory and during transport steps in order to avoid damaging the materials.

ENVIRONMENTAL BENEFITS

Avoiding damage to packaging materials avoids replacement costs and materials and is therefore a benefit from both the environmental and economic point-of-view.

As the company manufactured its own shoe boxes, a system whereby local shop keepers could be persuaded to give back damaged boxes or shoe boxes left behind by customers would also be beneficial from an environmental and economic point-of-view as such material could then be recycled back into the box-making process.

ECONOMIC BENEFITS

Investment cost	15,000 rupees (US\$ 215)	<ul style="list-style-type: none"> • For the purchase of hand-held fixing gun and - plastic packaging tape (700 rupees per kg)
Annual savings	475,000 rupees * (US\$ 6,785)	<ul style="list-style-type: none"> • By eliminating the need to replace damaged shoe boxes (10% of boxes)
Payback period	Less than 2 weeks	

* The company makes 950 pairs of shoes each day @ 250 working days = 237,500 pairs per year
x 10% of packaging boxes that were being replaced due to damage (= 23,750) @ 20 rupees per box
 = 475'000 rupees in packaging material savings

ORGANISATIONAL IMPROVEMENTS

The company's idea to cut and reuse the cardboard boxes initially used for shipping raw materials to the factory was a good idea in terms of thinking about how to reuse materials and avoid added costs in the packaging process. In this case, the alternative for the company would be to buy better quality cardboard to provide additional strength and stability of packaging material (at a cost of 5-10 rupees more per box @ 950 pairs per day = 4,750 rupees minimum added daily cost versus the monthly labour cost for each worker of 3,500 rupees). From both an economic and environmental point-of-view, the approach chosen by the company is more advantageous.

