



## Triple Win Approach Reduces Costs and Environmental Impacts while Building Capacities to Implement Change

### The Challenge for Business and Industry

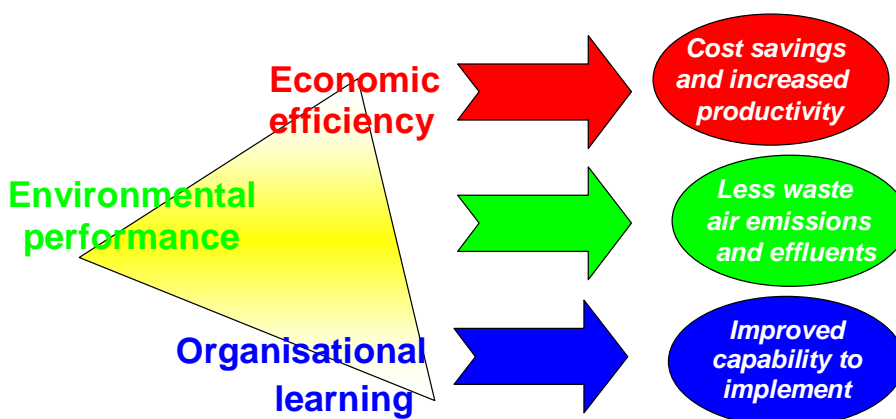
Confronted with a deteriorating environment and pressure to adapt to new market developments driven by globalisation, industry in developing countries faces a pressing need to raise the economic efficiency of production and, at the same time, cope with new environment-related standards and consumer demand in industrialised countries for environmentally- and socially-sound products. Too often equipped with poor managerial capabilities, scarce funds, no experience in using external consultancy, and risk aversion, particularly small- and medium-sized firms (SMEs) have encountered enormous stumbling blocks on the road to higher economic and resource efficiency, and to overcome resistance to change.

### A Pragmatic Approach

On behalf of the German Ministry for Economic Co-operation and Development (BMZ), GTZ's Pilot Programme for the Promotion of Environmental Management in the Private Sector of Developing Countries (P3U) has approached the challenge from a practical angle -- by developing an integrated training concept that taps the self-interest, problem-solving capabilities, knowledge, and creativity already available within companies to fuel action.

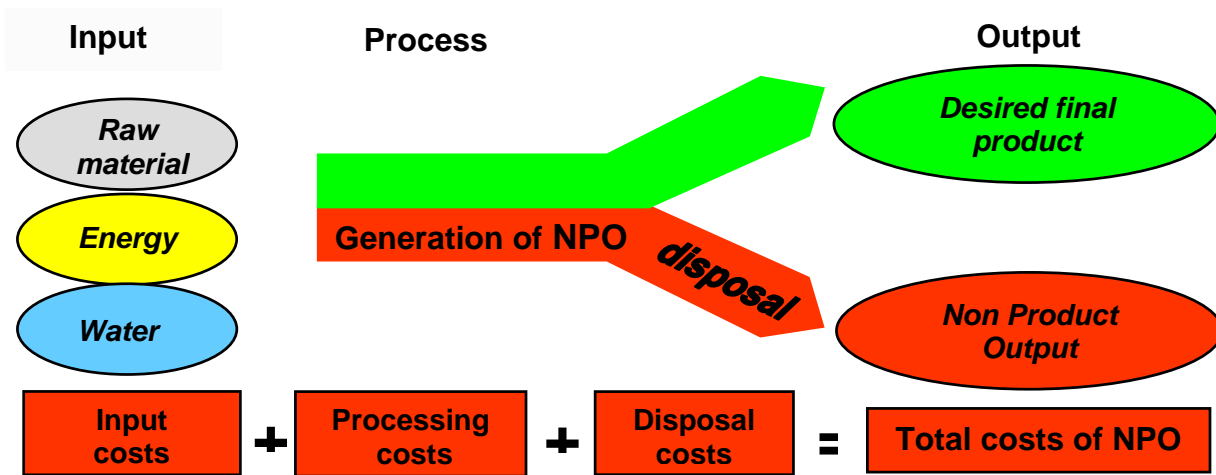
P3U's Profitable Environmental Management (PREMA<sup>®</sup>) programme starts from the entrepreneur's core interest - profit - and strives for a "triple win" (see *Figure 1*): cost savings and better environmental performance through the reduction of Non Product Output (see *Figure 2*) and organisational development through structured learning processes, which follow a "cycle of change" (see *Figure 3*).

**Figure 1: PREMA<sup>®</sup> Leads to a "Triple Win" for the Company**



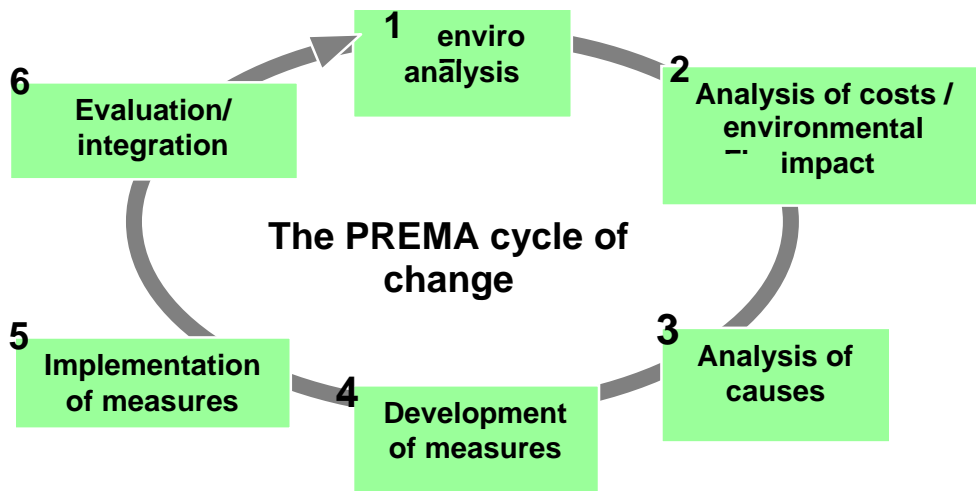
In the PREMA<sup>®</sup> training approach, improvement potentials and the enterprise's costs, environmental impact, and causes are identified. Then measures are sought that reduce costs by making better use of raw material inputs (win 1), which reduce environmental impact by generating less solid waste, waste water, and emissions (win 2), and involve staff in analysing and developing better procedures, working conditions, and communication methods (win 3), which lead to higher motivation (see *Case Study*).

**Figure 2: The Concept of Non Product Output (NPO)**



The NPO concept gives companies a vital new perspective on their operations. NPO includes those raw materials, water, and energy used during the production process that do not end up in the final product desired by the customer. NPO turns into solid waste in landfills, waste water in sewage systems, and waste heat and emissions to the air. NPO also occurs in a less visible, often more costly form of off-specification products or trade returns that have to be reprocessed or sold at a lower price, often below production cost. Depending on the sector, NPO accounts for 10 – 30% of total production costs. These costs are not shown by traditional accounting systems and represent a critical “blind spot” for the company – and therein lies the potential to make tangible improvements.

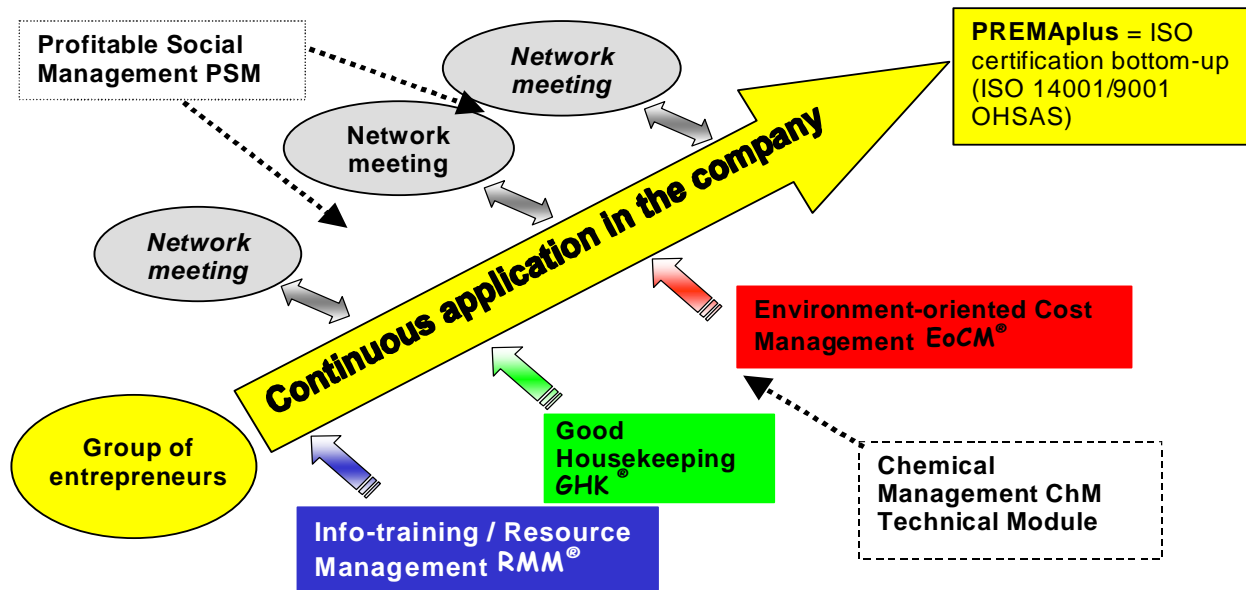
**Figure 3: The PREMA® Cycle of Change**



PREMA® consists of a set of training modules of increasing degrees of complexity (see Figure 4) that incorporate an inductive approach where participants realise mostly by themselves the relevance - from a cost/benefit perspective - of the environmental dimension of production. This approach is highly suitable for SMEs as it first addresses modest, then more complex improvement measures, and ideally leads to continuous improvement. Implementing modest tasks with quick wins from multiple angles is preferable to a comprehensive, costly, and time-consuming analysis of all options which may not be realised.

PREMA® training modules take participants through a determined sequence of phases: fact-finding, consensus-building, mobilising energy for change, developing an action plan, implementing improvement measures, and evaluating their impact. By following this “cycle of change”, it is more likely that the change process will not get blocked, conflicts can be avoided, and people will maintain their enthusiasm rather than get discouraged by yet another unfinished change project.

**Figure 4: The Modular PREMA® Programme Incorporates Increasing Degrees of Complexity**



**Impact**

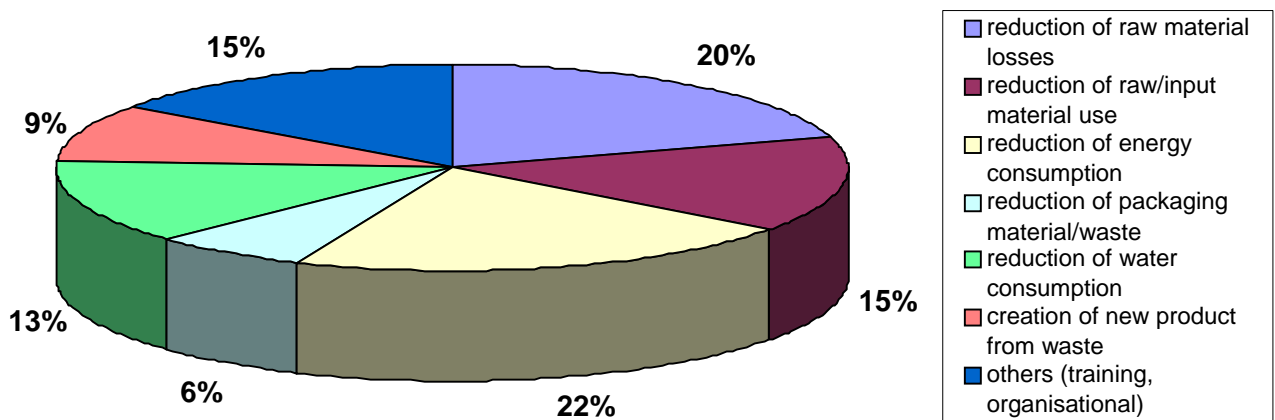
PREMA® modules have been developed in collaboration with co-operation projects and local partners. Upwards of 300 training courses (including 55 training-of-trainers) have been carried out in 33 countries reaching 3,500 entrepreneurs and consultants in Latin America, Africa, Asia, and Europe. PREMA® training materials are available in English, German, Spanish, French, Portuguese, Chinese, Vietnamese, Thai, and Romanian and have been legally protected as registered trademarks. An international network of trainers and consultants (PREMAnet), will make the training and materials available to interested parties beyond the existence of GTZ-P3U which, having fulfilled its mandate, will phase out by mid-2005.

A 2004 analysis of 220 PREMA® case studies spanning 18 countries and 31 branches (see Figure 5) showed that reduced losses/use of materials constituted the most significant gain for companies (35%), followed by less energy consumption (20%), and reduced use of water (15%). Remarkably, one third (31%) of the measures could be realised with no investment. These were achieved solely on the basis of organisational changes or improved material use and processes. In 26% of the cases, payback was immediate; in 33%, less than 6 months; in 9%, 7-12 months; and in 15% of the cases, more than one year.

**Benefits**

The PREMA® approach has the benefit of helping companies identify concrete actions that can be implemented in the short-term. Companies develop a list of strengths and optimisation potentials, draw a material flow chart to identify Non Product Output (NPO), and analyse the cost, environmental impact, and causes for major NPOs using mind-maps. They calculate costs and benefits of possible measures and leave the training with an action plan, which forms the basis for continued improvement.

**Figure 5: Type of PREMA® Measures Yielding “Triple Win” Benefits**



## Lessons Learned

The experience of P3U in developing and disseminating the PREMA<sup>®</sup> programme shows that:

- The economic angle of the “triple win” (reducing cost through increasing productivity, quality, resource efficiency, etc.) is the key selling point to catalyse companies to embark on a change process. Entrepreneurs are not inclined to join environmental programmes, as such, although they do consider a reduction of environmental impact and improvements in workplace safety and occupational health as useful valued-added.
- Inexpensive, practical tools that bring quick results at each step can overcome the natural resistance to change, an attitude of risk aversion, and companies’ lack of tradition to work with and pay for external consultancy.
- Through interactive learning, coached change processes, and counselling during networking meetings to overcome implementation, companies improve their overall problem-solving capacities, and co-operation with other companies in the same sector, region, or industrial zone.
- Entrepreneurs naturally concentrate on implementation. It is rather difficult to convince them to document results achieved, even though such data is extremely useful for monitoring and evaluating performance improvements and communicating successes. Therefore, a concept for documentation and dissemination has to be integrated into any training approach from the beginning.
- Services, even those provided to SMEs, should (as far as possible) be paid for. Something that is offered free of charge is not adequately valued, whereas market-oriented services can be institutionalised and more sustainably disseminated.
- Companies that have gone through PREMA<sup>®</sup> can more easily reach ISO certification in the areas of quality, environment, or workplace safety and health (PREMAplus). Companies can also obtain added value through the Chemical Management and Profitable Social Management modules developed with and for other GTZ projects (see [www.gtz.de/chs](http://www.gtz.de/chs) and [www.gtz.de/social-standards](http://www.gtz.de/social-standards), respectively).

## Case Study

Through PREMA<sup>®</sup>, an Algerian carton manufacturer identified an improvement potential whose implementation brought significant annual net savings and reduced waste. The procedure and technology for unloading and handling kraft paper rolls upon arrival in the port were insufficient. Having become aware of the substantial losses of raw material being generated, the company’s management informed the port employees and company staff about the value of these losses and developed procedures to more effectively handle the rolls. In addition, new equipment (grip lifters) and adequate storage facilities (an additional platform) were provided. By investing US\$119,000, annual net savings of US\$375,000 were obtained with a 4-month payback period. The environmental benefits were also significant, resulting in a dramatic reduction of wasted raw material and the need for its disposal. Organisational benefits included a more conscious and careful handling of the rolls by trained employees whose working conditions were considerably improved at the same time.

### ***For further information:***

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