



Transfer of Environmentally Sound Technology (TEST) in the Danube River Basin

Donors

Global Environment Facility (GEF)
UNIDO
Hungarian Government
Czech Government



Situation before: As a result of the UN Development Programme GEF Pollution Reduction Programme in the Danube River Basin, experts had identified 130 major manufacturing enterprises, which were contributing to trans-boundary environmental problems. UNIDO took on the challenge of effectively demonstrating to the industries concerned in the Danubian countries (Bulgaria, Croatia, Hungary, Romania and Slovakia) that it is possible to respect environmental standards and still maintain or even enhance their competitive position. There was also a need to enhance the cleaner production capacities of environmental management institutions in the Danubian countries.

In April 2001, UNIDO launched the TEST programme on Transfer of Environmentally Sound Technology (TEST), which aims at reducing the barriers perceived by enterprises to compliance with environmental norms. The Programme, concentrates on building capacity in industrial service institutions to undertake seven analytical assessments, which together identify the least costly option for environmental compliance. The environmental management tools applied include: cleaner production; environmental management systems and accounting; and environmentally sound technology selection.

The programme's primary financial supporter was GEF (US\$ 1 million), with some participation from UNIDO (US \$ 150,000) and other donors (the Hungarian and Czech Governments US\$ 100,000). The project's national partners (counterparts) were the National Cleaner Production Centres (NCPCs) of Croatia, Hungary, and Slovakia (members of the UNIDO/UNEP network of NCPCs), the Institute for Industrial Ecology (ECOIND) in Romania, and the Technical University of Sofia in Bulgaria.

Situation after: The UNIDO TEST Programme was used to select 17 enterprises for technological upgrading on the basis of enterprise viability - their potential to remain in business for a further period of five years given their market position and production costs.

The participating industrial polluters have been introduced to the " *TEST integrated approach*" having the opportunity to learn how to use environmentally sound technologies to reach continuous improvement of their economic and environmental profiles. Tangible results were achieved, both in terms of increased productivity and in terms of improved environmental performance. The threats identified in the business environment, often perceived by the companies as survival threats connected with environmental compliance issues and production costs were reduced and new opportunities were identified. The least costly procedures were then identified to bring the enterprises to compliance with the environmental norms of the Danube River Protection Convention and IPPC-EU Directive, while also accommodating their need to remain competitive.

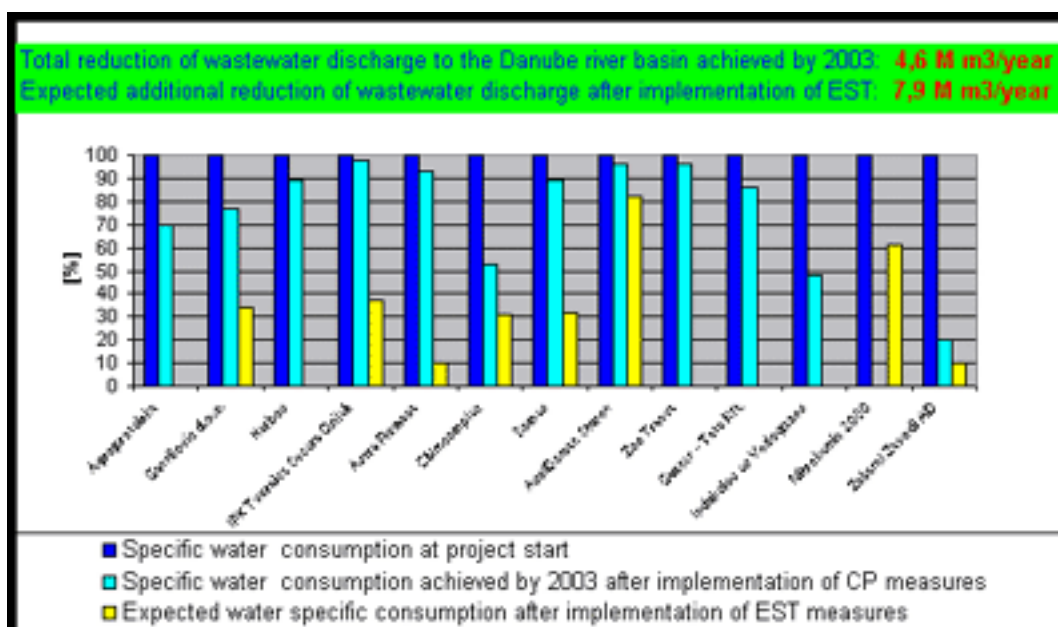
National counterparts from the five Danubian countries have been introduced to the TEST Programme as part of the capacity building measures in existing cleaner production institutions and it is expected that they will in turn, pass on the additional expertise acquired to other enterprises and institutions in their own countries and throughout the Danube River Basin.

Concrete results: *The following concrete results have been achieved confirming the feasibility of the project objectives, and the effectiveness of the UNIDO-TEST integrated approach:*

1. Capacity was built at the national counterparts (more than 90 trainees) and at the demonstration enterprises (more than 600 employees) in the TEST approach and in the use of modern diagnostic and environmental management tools for approximately 2000 man/days of training
2. More than 230 cleaner production measures were implemented at the selected enterprises leading to total financial savings equivalent to US\$ 1.3 millions per year
3. Environmental Management Systems were introduced in 11 companies: by the project end 4 companies have received international ISO14001 accreditation
4. Environmental Management Accounting systems were designed and fully implemented in 6 demonstration enterprises
5. Environmentally Sound Technology assessments were completed at the selected plants in accordance with IPPC Directive of EC. Pre-investment studies have been prepared for a total of US\$ 47 millions and are currently under implementation
6. Environmental and social dimension integrated into the business strategies

There were significant environmental benefits that were achieved at the industrial polluters sites as a result of the TEST project, in terms of reduced consumption of natural resources (including fresh water consumption and energy), reduced wastewater discharges and pollution loads into the Danube River and its tributaries, as well as reduction of waste generation and air emissions. The figure below provides a summary of the reductions in specific water consumption at each TEST enterprise after implementation of the identified CP/EST measures. By the end of 2003, the reduction of fresh water consumption varied between 2 and 89 percent of the initial value, leading to an impressive total reduction in wastewater discharges, into the Danube River basin, of 4,590,104 m³/year. Additional reduction of 7,862,563 m³/year in wastewater discharges is expected after the full implementation of the identified EST investments.

Figure 1: Specific Water Consumption at the TEST pilot enterprises, at Project Start, at Project End (December 2003), and After Implementation of EST



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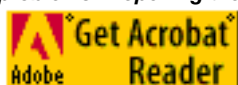


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