



# UNIDOScope WEEKLY NEWS

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## 25 - 31 August

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## Eco-fingerprinting for Moroccan Dyeing Industry

UNIDO and BASF, a leading transnational chemical corporation, met for the first time during UNIDO's expert group meeting on business partnerships in October 2000. At this meeting, where the UNIDO guide on Business Partnerships for Industrial Development was presented, the idea of jointly developing a project supporting small firms in the developing countries was conceived.

BASF was among the first trans-national corporations to sign up to the [Global Compact](#), initiated by the Secretary-General of the United Nations (UN) in 1999. The Global Compact provides a basis for dialogue between the UN, the business community, labour and civil society on human, social and environmental aspects of business, to ensure that globalization benefits all.

In Morocco, the dyeing industry plays a vital role, providing significant employment by many SMEs. In order to stay competitive in an environmentally sound and economically viable manner, companies must continuously change and modernize their production systems. This not only requires resources, but first and foremost, access to methods of analysis and introduction of new production processes at the highest international standard. However, these technologies and methodologies are difficult to obtain and, moreover, to apply, at the SME level. It is within this framework that UNIDO, BASF and UNEP have initiated a pilot Eco-Efficiency Programme for seven SMEs in the Moroccan dyeing industry. Phase II, to be launched in January, 2003, will disseminate the methodology to 27 developing countries, via the network of [UNIDO / UNEP Cleaner Production Centres](#).

During phase I of the Programme, from February to September 2002, ([view or download the report](#)) the main objective has been to develop an eco-efficiency analysis tool that makes production safer for both the environment and workers. The methodology, based on exclusive know-how of BASF, is made available for the first time through this partnership to SMEs in a developing country.

The first step of an eco-efficiency analysis is to define a specific benefit by comparing economic and ecological advantages and disadvantages across several product or process solutions which can fulfil the same function. This means that products are not compared with one another in overall terms but rather their performance in applications such as "painting a square meter of furniture front" or "dyeing 1000 pairs of jeans". It is important that the analysis is conducted from the point of view of the final consumer since eco-efficient solutions provide consumer benefits better than other alternatives, in terms of costs and environmental viability.

The eco-efficiency analysis focuses on each phase of a product's life cycle, "from cradle to grave", beginning with the extraction of raw materials from the earth up to the recycling or waste treatment after use. The basis of the

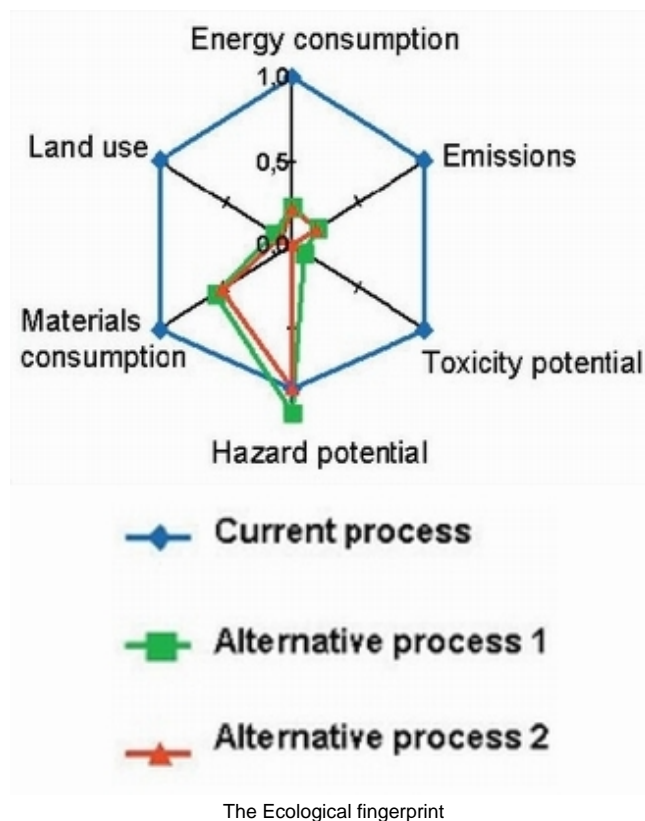
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analysis is a life cycle analysis according to standard ISO 14040 et seq. The analysis allows, for example, the measurement of pollution due to the products used. The usage behaviour of the final consumer together with the various possibilities for reuse and disposal are also analysed. The entire economic picture is recorded and the economic and ecological advantages and disadvantages are compared.

The "ecological finger-print" has six indicators: consumption of raw materials; consumption of energy; land use; emissions into air, water and soil (wastes); toxic potential of the substances employed and released; and potential for misuse and hazard potential. Each of these six categories covers a large number of detailed individual criteria, which are assessed by so-called relevance factors. These state how strongly individual criteria contribute to the overall environmental pollution, i.e. how ozone destruction potential is weighted relatively to the green-house warming potential. The availability and natural occurrence of raw materials is also included in the calculation. The overall pollution of the environment by a product or process is given by the combination of the individual categories. In parallel the economic data are put together. For this purpose the material and energy flows, including all

relevant incidental flows, are taken into consideration. Labour and machine costs are also included. Weak points, driving costs and areas affording potential for cost reduction can therefore be readily identified.

In the textile dye works industry, three important production steps take place: pre-treatment of the yarn or fabric; dyeing; and post-treatment. For each step, chemicals, energy and water are needed, while emissions and solid wastes possibly occur. Eco-fingerprinting makes it possible to identify weaknesses in this process. The impact of a current process, of which companies are often only vaguely aware, is presented in visual terms. Alternative fingerprints can be simulated a basis for the selection of the most viable production process.

In a nutshell, with Eco-fingerprinting, SMEs are able to: capture, calculate, evaluate and then transparently depict even complex matters within the production process; improve their decision-making relating to alternative production processes; communicate with customers and consumers; increase acceptance of defined solutions to problems; promote understanding for thinking in overall contexts; and prove and illustrate acceptance of corporate responsibility principles. A full report on [Phase one of the UNIDO - UNEP - BASF Eco-Efficiency for SMEs in the Moroccan Dyeing Industry](#) is available here for viewing or downloading.

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## PHAROS + Produce IT©

The [UNIDO - PHAROS software](#), named after the island of Pharos, the location of [the lighthouse of Alexandria](#), one of the seven wonders of the ancient world, is a business navigation software. It has been successfully implemented in over 200 enterprises in over 20 countries ([see story this issue](#)) to monitor business and quality performance. [Produce-IT©](#) a product of the UK firm [Mike Dillon Associates \(MDA\) Ltd.](#), is a software for production management and planning. MDA UK specializes in consultancy, training and research on cost effectiveness in manufacturing industries, especially the food industry, and is working with UNIDO on projects in Africa. PHAROS was developed by UNIDO together with the Austrian firm [GOLEM integrated microelectronic solutions](#), which has been working with UNIDO for a number of years in the development, training and distribution of UNIDO software.

During the last six months, a team of experts from GOLEM and MDA has been working to finalize the specifications for a new software integrating the UNIDO / GOLEM Pharos and the MDA Produce-IT© softwares. In addition to identifying technical solutions to merge the databases and indicators of the two softwares, the team is also preparing a training kit. The PHAROS + Produce-IT package software has been field-tested in various UNIDO projects, such as the PHAROS workshop for leather industry, held in Bogota, Colombia, March 2002 ([see UNIDOScope 12-18 May, 2002](#)), Uganda in March, 2002, and in Uganda again in August. The Pharos + Produce-IT package will be an

innovative tool for entrepreneurs to carry out detailed business, costing and production efficiency analysis, carry out company benchmarking, introduce continuous improvement practices and achieve significant improvements in their business and production performance.

An initial 25 copies have already been licensed to the Regional Centre of Manufacturing Excellence (RCME) of NE Lincolnshire in UK, funded by the UK Department of Trade and Industry (DTI). The RCME will use the software to carry out detailed benchmarking in some 1000 diagnostic analyses it is undertaking within the region. Data will be also made available to UNIDO to benchmark enterprises in developing countries against UK firms. There is also the opportunity to promote the new package within the whole RCME network in the UK. PHAROS + Produce IT is already used in the Food Manufacturing Management work-based degree of the Centre of Vocational Excellence (COVE) at the University of Hull, UK. A proposal is currently being submitted to COVE for the software to be used in a vocational skills development course.

The final version of PHAROS + Produce IT is expected to be ready by December 2002. A programme with the Mexican Chamber of Industry (CANACINTRA), scheduled to begin towards the end of 2002, will implement the PHAROS + Produce IT methodology and the package in 10,000 enterprises. Another prospective user is the Lithuanian Export Agency, which has requested assistance in benchmarking through UNIDO software and methodology. The [UNIDO/EU UEMOA](#) Project is also likely to find PHAROS + Produce IT a valuable tool. The Arab Regional Centre for Entrepreneurship and Investment Training ([ARCEIT](#)) in Bahrain will include the training on the new package in its activities.

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## PHAROS user Survey

*Vienna, Austria, 23 August, 2002*



In July, 2002, questionnaires were sent to enterprises and educational organizations where the [UNIDO – PHAROS Business Navigator software](#) had been installed during the period 1999 – 2002. The objective of the survey was two-fold: to obtain user evaluation of the software, and gather user proposals on where improvements could be made in the next PHAROS release.

As at August 7th, responses had been received from 51 of the 76 enterprises surveyed. These represented users in Chile, Colombia, Egypt, India, Kenya, Russia, Slovakia, Thailand, Uganda, UK, USA, and Zambia (12 out of 22 countries surveyed), and a broad range of industries: food, textile, clothing, wood processing, plastic products, electro technical, electronics, metal processing, leather and shoe production, metal processing, education and consulting.

The survey indicates that customer satisfaction is high. Of the respondents who said they were using the software (82%), all considered PHAROS a "useful and effective tool for managers". The suggestions for improvements (112) for the next version of the software, indicated a good knowledge of the software gained through usage. The 17 major suggestions have been selected and prioritized. Improvements users can expect to see in the next version of PHAROS include: the simplification of data import from external software into PHAROS; additional flexibility in customization; increased security and authorization; expansion and clarification of the definitions of business objectives accordingly to UNIDO continuous improvement methodology; the introduction of product costing; detailed manufacturing measurements to Industrial Engineering and TPM standards; the simplification of self-benchmarking and comparison with national and international industrial performance levels. Speaking of the next version of PHAROS, Director of GOLEM Austria, UNIDO's partner in the development of the software, Serge Golovanov said, "of the feedback we received from users, our overriding consideration is to keep the software simple and easy to operate".

The straightforward nature of PHAROS and the fact that it is simple to learn and use, requiring very little support, were at the top of the list for many PHAROS users, including Rudy Umans, President, Aurora Business Consulting Inc., Florida, USA. In his general comments Mr. Umans referred to the fact that "although USA is considered a highly advanced and developed country, ... the business failure rate is still on average about 70% in the first two years. Some of the most important causes for premature business failure are the lack of cash flow, too late or not recognizing failing business trends within the organization, caused by procrastination or pure arrogance". Bearing this in mind, with respect to UNIDO's activities in developing countries, he said "... it would be good if UNIDO could and would emphasize the importance of business planning in general and strategic planning in particular. Industrial Development starts with business planning and understanding basic business skills. PHAROS especially, is a great monitoring and/or educational tool for entrepreneurs and small business owners to avoid costly mistakes".

Peter Balasov, General Manager, MELLI Interiors, a furniture factory in Bratislava, Slovakia was another who considered the "easiness and simplicity of use" an important feature. "Nothing similar is known to us since we had installed it in 1999. We still use PHAROS for monitoring of the company performance, ... we gradually improved our internal procedures for measuring business processes, evaluating major results and overall business performance. Looking back I must say that important consequences of PHAROS installation besides these were not only in the possibility to view the company performance easily at a glance but in the introduction of systematic approach to improvement of our business, overall quality of both production and management as a routine working procedure. We look forward to get new version of PHAROS with its enhanced features", said Mr. Balasov.

In addition to a new version of PHAROS, the Austrian company GOLEM, which works together with UNIDO on its development and distribution, is currently working with Mike Dillon Associates (MDA) Ltd to merge PHAROS and MDA's productivity measurement tool [Produce-IT©](#) ([see story this issue](#)).

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## Cleaner Technology Promotion

### *Part XI - the project structure: the international reference centre*

This article is part of a series that started in the issue of 9 - 15 June, on UNIDO Cleaner Technology Promotion which looks at the background of and justification for projects in India and China, the strategy and methods used and the specific outputs expected. The last installment looked at the structure chosen for the execution of the project and the role of UNIDO as the national executing agency.

This week we look at the role of the international reference centers responsible for technical support outside India. As mentioned in the last installment of the series, the reason for having the two tasks separated and not undertaken by one executing agency is to increase project flexibility. Within India, the NCPC / NPC plays the role of national implementing agency with responsibility for project implementation at the national level, while in Gujarat and Karnataka, the State CPCs and various service providers implement the project activities, guided by the national implementing agency and supported by the international reference centre.

Under the terms of reference of the project, the international reference centre is selected and contracted by, the donor. The main contractor for the International Reference Centre is the Company [Basler & Hoffman](#). The secondary contractor is [Weyer and Partners](#). The core tasks of the International Reference Centre are to: build up the capacity of the national and local partners; evaluate the cleaner technology options available for the selected sectors and identify the benchmarks (as "Best Available and Economically Attractive Technology" - BAEAT); support, methodologically as well as technically, cleaner technology assessments, the adoption of cleaner technologies, as well as CDM- and eventually POP-related projects; support in establishing cleaner technology specifications, assuring that the technology identified meets these specifications. Assure that successful cases of adoption of the technology exist at the industrial level. Assure the quality of the technical aspects of the work of the national implementing agency as well as the service providers; build up capacity in the local partners on international environmental conventions, especially on the Kyoto Protocol's CDM and the POPs Convention; identify, contact and supervise appropriate Swiss institutions for technical assistance, training and other consulting services required by the Indian partners in fields in which the international reference centre itself does not have the required experience and know-how; assist in the training of the Indian partners (this could include software training); identify technology suppliers and support in establishing business relations to Indian buyers. Priority will be given to Swiss technology providers. However, if Swiss technologies are not available or non-competitive, the international reference centre will turn to technology providers in other OECD countries; establish relations with other technology transfer related instruments established in Switzerland; organize and run study tours in Switzerland to technology providers and technology users; undertake international networking; co-ordinate its technical support with UNIDO; and participate in the preparation of annual operational plans of the project and participate in the sessions of the national board.

[OTHER PARTS OF THE SERIES](#)

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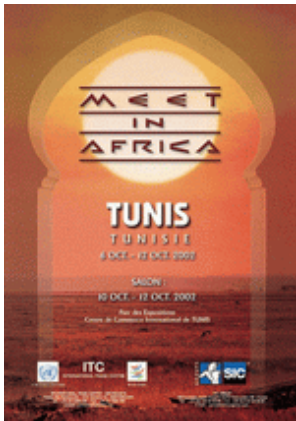
## COMING SOON

**Youth Employment Summit, (YES) 7 - 11 September, 2002, Alexandria, Egypt.** Hosted by the Government of the Arab Republic of Egypt, the mission of the Youth Employment Summit is to seed a civil society movement to stimulate and inspire the developments of programs and policies in all countries to ensure that the world's youth have access to the education and training programs, skills-development opportunities, resources, and credit that they need to build productive and sustainable livelihoods. The Goal of the Summit is to launch a Decade Campaign of Action in



Alexandria in 2002, so that an additional 500 million young adults, especially youth facing poverty, will have productive and sustainable livelihoods by the year 2012. YES is working to create a knowledge base on youth employment. [Learn more about YES Pilot Projects](#)

**The Youth Employment Summit site is at**  
<http://www.youthemploymentsummit.org/index.html>



**Meet in Africa, 6 - 12 October, 2002.** MIA is an ITC (International Trade Centre) eight-day event which includes the third General Assembly of AFLAI, (African Federation of Leather and Allied Industries), buyer-seller / joint venture meetings, seminars (6 - 8 October) and a trade fair (10 - 12 October).

UNIDO will hold an Expert Group Meeting to launch a concrete proposal for trade development in the leather industry in Africa, as part of the MIA event ([see story](#)). To register for Meet in Africa 2002, go to the meeting site at <http://www.intracen.org/mds/sectors/leather/welcome.htm>

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**The Global Environment Facility (GEF) Second Assembly** will be held in Beijing, China, from October 16 to October 18, 2002. Governments are encouraged to send ministerial or other high-level representatives who are familiar with the GEF and the operations financed by the GEF. Assembly participants will review the general policies and operations of the GEF. **The GEF Council will meet on October 14 and 15, and a consultation for nongovernment**

**organizations will be held on October 13.** A complete list of meetings and side events, as well as information about registration and travel arrangements, is available via the GEF 2nd Assembly page <http://www.gefonline.org/assembly/assembly.htm>. ▲ **TOP**

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